

Maison Rustique,
OR
THE COUNTRY
FARME:

Compiled in the French tongue by
Charles Steuens and John
Liebault Doctors of
Physicke:

And translated into English by RICHARD
SVRFLET Practitioner in
Physicke.

Also a short collection of the hunting of the Hart,
Wilde Bore, Hare, Fox, Gray, Cony; of
Birds and Faulconrie.

The Contents whereof are to be seene in the
Page following.



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John Norton and John Bill.
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THE CONTENTS.

THere is contained in this last edition whatsoever can be required for the building or good ordering of a Husbandmans house or Countrey Farme : as namely to foresee the changes and alterations of times, to know the motions and powers of the Sun and Moone, upon the things about which Husbandry is occupied, as to cure the sicke labouring man, to cure beasts and flying fowles of all sorts, to dresse, plant or make Gardens as well for the Kitchen and Physicke use, as also in quarters, with many faire and cunning portraictures, to make compariments of diuers fashions in euery quarter: with a large description of the herbe Nicotiana or Petum, as also of the root Mechoacan : to plant, graft, and order Orenge trees, Citron trees, and such other strange trees : to order Bees : to make Conserues, to preserve fruits, flowers, roots and rindes : to make Hony and Wax : to plant and graft all sorts of fruit trees : to make Cider, Perrie, drinke of Ceruises and oiles : to distill waters and oiles, or quintessences of whatsoever the Husbandmans store and increase, with many paternes of alembicks for the distilling of them : to seed and preserve Silke wormes : to make & maintaine Meadow grounds, Fish ponds of running and standing waters : to take Fishes : to measure and till Corne ground : to bake bread : to dresse baked meats : to brew beere : to trimme vines : to make medicinable wines, with a very large and excellent discourse touching the nature and qualitie of wine in generall : and after that, another speciall and particular one of all such wines as grow in Galconie, Languedoc, Touraine, Orleans, Paris, and other countreies of France : to plant woods of timber trees and undergrowth : to make a Warren : to breed Herons : and to imparke wilde beasts. And lastly in the end a brieue discourse of the nature, manner of taking and feeding of the Nightingale, Linnet, Goldfinch, Siskin, Lark, and other such singing and melodious birds.



TO THE RIGHT
HONOURABLE, SIR
PEREGRINE BARTIE Knight,
Lord Villoughbie, Baron of Willoughbie and
Eresbie, Lord Gouvernour of her Maiesties
towne of Barwicke, and Lord Warden
of the East Marches.



AS Darius in his deepe affecting desire made choise of many such subjects and captaines, as Zopyrus; and Eacus after that the pestilence had vnpeopled *Thessalia*, did with that the swarmes of pismires (whereupon as it is said, the *Myrmidons* took their names) might be turned into men : So I am vndoubtedly persuaded (right honourable) that you hauing made your chiefe and special choise of the things which are from above, and struing therein to set vp your rest of contentation ; would with like delight haue welcomed some such thing, as had concerned the dressing and adorning of the soule : rather than any course, countrey and domesticall discourse (such as I am here to offer vnto your Honour) being commonly esteemed but as a tale of a turfe, or matter for a mattocke. And indeed I could haue wished that the Heauens had stoupt as lowe to haue reuealed vnto you some of her sacred mysteries : as the earth hath advanced it selfe heerein, and opened her mouth to shew vnto you

THE EPISTLE

but assigne such a diuine power to the ordering and disposing of euery thing concerning the same, as should both for name and shape excell all the rest of the inferiour regents, more than any Emperour that euer was, did excell his least viceroy: And therefore could not finde how better to expresse such rurall god, than by calling of him *Pan*, and attributing vnto him the comprehending of all things, as one in whom nothing was omitted or wanting that can be wished for; as also by acknowledging the seuerall sorts of inferiour gods, in such a maner, as was to make them commanders of such petie dominions and bounded particulars, as manifestly appeare vnto all to be the members of his vniuersall iurisdiction. For so they haue thought good to tie *Eolus* to his windes, and *Bacchus* to his wines, *Pluto* to his lake of infernall torment, and *Ceres* to corne, *Siluanus* to the woods, *Flora* to flowers, and *Pomona* to apples, &c. From the earth likewise it is that there are so many Emperours, Kings, Queenes, Archdukes, Dukes, Marqueses, Earles, &c. being all called Princes of the earth, as not only begotten and borne of earthly matter: but also for that according to the largenesse of the lands which they holde in their possession; so is their power, magnificence, and renowne. Furthermore, of or from the earth is ministred matter to defend or offend, feed or famish, cherish or starue, make blinde or restore sight, to ouerturne or build vp great towers; to giue or take away light, to procure health or sicknesse, foes or friends, peace or warre, pleasure or paine, sorow or mirth, taste or distaste, sleepe or watchfulnesse, fores or soundnesse, barrennesse, or fruitfulnessse, life or death: And what not? Yea, if you should desire to looke vpon the counterfet of beauty, or to know diuine *Pandora* her manifold other graces, you need not farre to search, seeing herein irreprehensible shape, surpassing fairenesse, infinite riches, rare attire, robes, ornaments, issue, abilitie, vtilitie, wildome, and gouernment: seeing it also (as the center of the world) attended with so many glittering globes which the heauens do containe; euery one readie and prest to applie themselves, and whatsoever is in them in all seruiceable sort, for the effecting of her affaires. For who is he that vpon such grounds can restraîne as absolute-
ly

*Hesiod. lib. 1.
Oeconomy.
Hump.*

DEDICATORIE.

ly to giue sentence with it; against all sorts of creatures (not in-
habiting the highest heauens) as euer was giuen with *Helena* Ouid. in Epist.
for beautie, *Penelope* for chastitie, *Aeneas* for pietie, of *Themis* Virg. in Aeneid.
Isacles for fastnesse of memorie? And finally, this sacred god, Plut. in epist. de vit.
desse, as she sheweth her beautie, in being clothed in her gay-
est colours, and her perfection in her naturall kindnesse; by
pressing out of her neuer drying brests (though euermore con-
ceiued) euen millions of streames to feed (as with sweet milke)
both the yong and olde fruit of her wombe: so if you please to
call to minde such names, as the Grecians in their wisdome
haue giuen therunto, which are *γῆα*, *γῆν*, or *γῆ*, of the verbe *γαίω*
to be glorious or to excell; or the names afforded it in the
Holie tongue, which are *אֶרֶץ* and *כָּרָא* (the one hauing re-
lation to that kind of earth which bringeth forth food for man;
and the other to that which feedeth cattell) you shall cleerely
see that there can not too reuerend an estimation be had of the
earth; and that it is to faile and come short of the scope of the
Creatour (by whom first and principally all names are giuen)
to account thereof in any base and vile maner. Now seeing the
earth is so diuine a substance as hath beene proued, and that
euery man, as also his labours, are so much the more or lesse
to be regarded or honoured, as the subiect is whereabout he is
occupied: I cannot doubt but that this so renowned a Grace
shall be vouchsafed to haue conferrd all due and worthy dignity
and grace vpon such as take paines like deuoted fauorites and
seruent true louers, to make her admired and honoured of all.
Especially the same falling out not vpon any light and wanton
fancies, that yong and youthfull yeeres might breed; (her last
and worst age hauing alreadie very deeply seized vpon her:)
but rather of iust affection (if not compulsiue duty) pricking
them forward (so much as lieth in them) to plucke off her
stiffe, hard, and drie-grown slough, that so she might receiue
as it were a second birth, to the doubling of the threed of her
liuely and lusty dayes. And that vpon both the sorts of them,
as namely those which shape their course to the purchasing of
this haue through the straits of painfull toile: and the other
who endure hard stormes, tilld by learnings loadstone, they
haue also discouered the same by skilfull precept. And the
rather

To the courteous Reader.

W E see it in common experience (gentle Reader) that such Cookes as can contriue and make of some one stufte (and that in it selfe little regarded and lesse vsed) either by adding of some few things (and those not costly), or else by their labour or maner of preparing many both pleasant and hole some dishes, are had in high account and estimation. And that that Musitian which can varie most vpon a plaine song, is reputed as chiefe in his profession. Then plie thy selfe and let nothing hinder that Liebaule for like, but far greater art, should reape of thee the like affection and intire deuotion of a friendly heart. The learned man seemeth to me to haue made this long digression and turning aside out of his direct way, namely the affaires of his particular calling, vpon so ne deepe touch wherewith he had felt himselfe moued to labour the relieuing of the miserable state of mankind, which (either through ignorance or sinister employment of the gifts of his minde and nature, or other goods) he found euery where either pinched with penury, yea worne out with want, and (as it were) fast shut vp in prison farre from all sufficiency: or els loosely and lewdly running riot; not only ceasing from the duties which he should and could do, but also following such practises as lawfully he neither could nor should doe. For canst thou possibly auoid him who soeuer thou art? If thou be one of great place and possessions, he teacheth thee to charge thy selfe as thy reuenues will liberally reach, taking heed of prodigalitie; and stirreth thee vp to the knowledge of the ordering and dressing of ground or whatsoeuer other thing: that so thou mayest not onely see what is to be done and how, but also iudge thereof when it is done. If an inferior person and hauing nothing but what thou labourst for, lacking also skill, and so suffering thy field to grow barren: he teacheth thee all good meanes for the making of it fruitfull. If for lacke of will pouerty come vpon thee as an armed man, know that there is neuer a precept of painfull toile and laborious husbandrie thorowout the whole booke, but it soundeth an alarm, and proclaimeth an open defiance against thee as a sluggard. If through skill ioyned with will thou reape the plentifull increase of a rich haruest, but abuse it, so the malicious vexing and troubling of thy neighbour in the law,

To the Reader.

law, or to the corrupting of the honest and chaste lines of maides, or any of thy neighbours wits, he calleth thee from such courses to the labours of thy ground: for scarce to take thy lawfull recreation at lawfull delights (such as are hauking and hunting) will hee afford thee any leasure: If a farmer, he teacheth thee kindnesse, by deuising some thing to gratifie thy lord withall; and gentlenes in louingly intreating thy seruants. If thy neighbour inioy any goodly commoditie of grasse, corne, or other dead thing, or any liuing thing that is excellent, because he would not haue thee to looke vpon the same with a repining, greedy and couctous eye; he calleth thee to the providing of such of thine, by teaching thee how to doe it. If thou be a seruant, he willeth thee to be painfull and pitifull; that so all thy businesse may be well done and in due time: and the beasts wherewith thou art charged, may be tendred of thee in all mildnesse. And finally, that all vn-honest and disgracefull wayes may be far from thee, he hath taken the paines to instruct thee in so many things, as that if thou wilt apply thy selfe thereto, and to doe them well: thou shalt not finde the leasure to lend a thought to the euill that might allure thee. And that he might not be mistaken and thought to forget that woman was made for a helper, he hath called her to her taske, and that neither little nor consisting of a few or base things, hauing committed to her (besides many other matters) the cure and charge of families health. But leauing to speake any more of her charge in particular, I could wish all such of that sex as are religious, to looke before they leape, and to be wise according to sobriety and gravity: Sobriety, not meddling aboue their place and reach in matters of Physicke: and grauitie, as not hauing any thing to doe in the matter of Fukes, either for vsing or preparing of them; seeing they argue, if not plainly prooue, a light, a loose and verie sinfull life. And finally, seeing that the whole earth was once a Tempe, an Eden (that is, a place of all pleasures and delights) and the assigned possession and naturall inheritance of man and woman to labour and liue in with exceeding ioy and felicity; and that through their sinne it was cursed, and they cast out of the most pleasant, commodious, and beneficiall part thereof: I could wish them ioyntly to record such their former felicity and the losse thereof, to the end they may apply their hearts vnto wisdom, and learne that though they labour, yet if they wallow in sinnes, they doe but throw downe twise as much as they build vp, destroy and marre more than they make

and punished the wickednesse of men, was the first that planted the Vine, and made his sonnes dressers of Vines. *Syracke* valuing at a high price the plaine and simple life of the husbandman, taught him first how he ought to till the earth with the plough, to prick the ox with the goade, to fat kine, and to feed all sorts of beastes. *Abraham* delighted himselfe beyond measure in the Shepherds life: *Saul* in keeping of Asles: *Dauid* in keeping of sheepe, in so much as that both these were called from the folde to the bearing of the royall scepter. *Elisau* also and *Amos* of poore shepheards, were made Prophets, and faithfull interpreters of the word of God. To be brieft, the most worthie amongst our forefathers, euen such as are renowned in holie Scripture for their vertue and excellencie were first of all labourers, and afterward by God taken from the plough, the cart, and feeding of cattell, to be employed in a more excellent calling: this countrie life being not onely more holy, innocent and iust; but also more pleasing and acceptable vnto God, & that which receiueth moe blessings then anie other from him. But let vs passe ouer the sacred Histories, and come to the profane. This profession through the sweetnesse, pleasantnes, and libertie found therein, hath so effectually allured and drawne vnto it the good liking of men, as that verie manie great worthies haue left and forsaken their townes, theaters, pillars, images, and all manner of stately buildings and monuments of magnificencie, despised their purple robes, imperiall crownes, and sweete perfumes, and addicted themselues to husbandrie. *Cyrus* the great King of the Persians in whom shined the glorie of all Maiestie was neuer better contented, then when he could busie and occupie himselfe in trimming vp and contriuing some one or other comely plot of delight and pleasure, and set some certaine number of trees in ranke and order chesse or checker wise. *Diocletian* the Emperour, of his owne accord, and without any manner of compulsion, forsooke the imperiall scepter, and that for the exceeding pleasure he tooke in the artificiall contriuing and quartering out of plots, and other matters of gardening, which he manifested to be the greater, in as much as he could not withhold his owne hands in helping forward of the worke. Many both Senators and Dictators, as also Consuls of Rome, commaunding and gouerning one of the most flourishing states of the world; haue taken themselues then to be most eased, and at greatest leisure, when they haue bene most seriously playing the husbandmen: and neuer so well contented and pleased with themselues, as when being let loose and freed from publique affaires, they might haue their full swinge and free scope to attend the husbanding of the earth. Euen so for certaine (as *Plinie* saith) the earth (in no part behinde with due thankfulness for such honour) was neuer so fertill and fruitfull in all kinds of fruits, as when it was adorned with a purple plough, and vouchsafed the honour of inioying a triumphant & victorious plough swaine.

Many

Many Kings, Emperours, and Monarches, as well Grecians as Romanes, haue from all times had in so great reputation the champion life, as that to defraud their tedious times and irksome occurrences, being the greatest part of their life, they would withdraw themselues into the fields, and therein sport themselves with singular delight in handling, trimming and drelling of plants with their owne handes, whereunto they further gaue this honour, not onely to call them by their owne names, as the herbe Gentian, Lysimachie, Teucrium, Armoise, Eupatorie, and many others, doe witness: but also which is more marvellous, they vouchsafed to take their surnames from the sayd plants, as witness the Fabij, Lentuli, Pisones, Curiij, Cicerones, and diuers other noble families amongst the Romans. Now then, if the vse and practise of this science hath bene so greatly beloued, valued, and cherished for the incredible pleasure and profit contained therein; certainly the treatises and writings concerning the same put forth by many learned men in diuers languages, haue not purchased any lesse credit or estimation among the common sort of people. Weigh and consider I pray you how greatly the bookes of husbandry written in Greeke by *Orpheus*, *Hesiodus*, *Musaeus*, *Hieron*, and *Archeilus*, are esteemed? How greatly the workes of *Mago* written in the Punick toong were accounted of throughout the whole world, which (as histories make mention) were carried to Rome as an exquisite and rare treasure after the ruines and ouerthrow of Carthage? Yea and at what a high price, are the Latine workes of husbandrie written by *Columella*, *Varro*, and *Cato*, valued, which haue bene vouchsafed this honour as to be translated into French? What reckning haue the *Italians* and *Spaniards* alwaies made of workes concerning husbandrie? All this ought to giue vs sure and vndoubted knowledge and perceiuerance, that the skill of husbandrie, is one of the most necessarie, profitable, and acceptable things in the world, as well in the vse and practise of it: as also for the contemplation, writings, and treatises extant touching the same. This is that Science, to the practise whereof though I be not yet called, notwithstanding the pleasantnesse and excellencie of the contemplation thereof hath so farre possessed and carried me away, by reason of the affinitie which it hath with that condition, which I make my profession, as that these yeeres past, I haue brought to light and published a certaine French treatise, called the country house, which to speak the truth, is not altogether of mine own doing, but in part the inuention and first draught of the deceased *M. Charles Stenens*: and yet so much reformed for order, and augmented and increased for quantitie by my labour in euerie edition which I haue reuiewed and augmented euerie yeere for the space of these eightene yeeres, and that so carefully and with such diligent and curious examination, as that I haue made it (as it were) altogether new. Yea I dare boldly affirme that more then three of the best and greatest

M. Io. of Mayerne surnamed Tur-
quet, *Physician to Mounseur*
Liebault.

Foundation of this Countrey house
So beautifull, was layd
And parts aloft eke reard so high
As could, while STEVEN stayd

Aliue, but death, disdainfull death
(O death what wrong thou didst)
Him caught and kild before that he
Attained to the midit.

So that the worke which promised
A building fully finisht,
Enlarged with goodly galleries
And pillars of the finest,

Imperfect stayd and vnatchieu'd,
If learned LIEBAULT
Had not repair'd in better sort,
And mended all the fault.

For putting to his helping hand,
And quintessence of skill,
With plants and fishes, birds and chafe,
The void roomes he did fill.

And

And many other mysteries,
So worthy commendation:
As that who seeks to adde thereto,
Can scarce scape reprehension.

The same vnto a certaine
backbiter.

If scolding ZOLVS I thee call,
I vouch nought but a troth.
And if thou shouldst the same gainsay,
Thou shouldst but come out froth.

For all men know, see, and affirme
The mischief of thy toong:
Thy pride, and thirsting after praise,
Thy maners mixt among.

The chased Hart, the hunting dogs,
Gainst hard stiffe standing trees,
Doth not crush, till he hardly prest,
Grow waspish like the Bees.

The wilde boare apt to teare in two
And kill, enrag'd by chafe,
Without the same doth spare to some
Or shew an angry face.

b 3

But

But thou worfe than thefe fauage beafts
To hatefull glory bent:
To hurt LIEBAULT in historic,
Thy pen and inke haft spent.

But wotft thou what they fay abroad:
Thy booke thy felfe deciphers:
And with thy head a Friers hood,
For bayes due to good writers.

The fame vnto a certaine
Printer.

Celestiall fire who boldly stole,
In fine the gods did punish:
Then Countrey houle purloine not thou,
Lest whipt like affe thou languifh.

Io.



IO. LIEBAULT, to the Reader,
health.



Had not purposed (friendly Reader) to reperuse
or amplifie this my Countrey Farme anymore,
in respect of the editions already so oft by me
augmented, within these eighteen yeeres, du-
ring which they haue bene printed in all coun-
tries. Notwithstanding, many occasions haue
made me to alter my purpose. The one whereof is
for that the time doth continually bring some new thing, and that the
spirits of the men of this age are so fine and subtile, and so full of in-
uention, that not many things which haue bene liked of heeretofore
can content them, for either they do quite alter & change the things,
or els the me:nes of doing, for those which are better, more appro-
priate, and more beautifull than those of former time. This may ea-
sily be found out to be true in casting of beds, banks, quarters, and o-
ther gardenning works used heere in France, which are without com-
parison better fashioned, and filled with more beautifull and pleasant
proportions, than those of olde time: the maner also of grafting of all
sorts of trees and little plants, which is practised now a dayes, is a
great deale more easie and handsome than that of olde time. Another,
because that other countrey men which within this two yeere haue
translated into their owne language this our worke, may seeme unsat-
isfied with our former augmentations, hauing foisted into their
translations some things of their owne braine, being ready (as it may
seeme) by this their fact to accuse our worke of a maim, and my selfe
as no such industrious and diligent searcher for things necessarie, as
I might and ought: but the trueth is, that their additions and sup-
plement is so sleight, and so farre from the purpose, that euery one of
sound iudgement will say, that they had rather a desire to fill paper,
than to enrich the worke: and assuredly I do not in any thing finde my
selfe reasonably dealt withall and censured by them. And withall
(howsoeuer I know that they haue bestowed no slender portion of ho-
nour vpon my booke in turning it into their owne language) I would
haue them to vnderstand, that neither for dexteritie of inuention,
nor maner of deliuerie, I will enue give place vnto them in any thing
whatsoeuer. The third occasion is for that diuers Printers pricked
forward

To the Reader.

for ward rather for their profit, than for my credit, haue undertooke to print my worke vnder a supposed name, deuised by the Printer and the towne (as the party which hath sent word of the same from Luneville by Iohn Curtois can testifie) in which respect I find not my selfe displeased, saue only in regard of the wrong they offer to my Printer, as also of the disgrace which I my selfe sustaine by their worke, by reason they haue done it in an ill fauoured letter, very bad paper, and so slender corrections to the presse, as that hereby my booke will loose in a small time, the good account that it had got in all Europe for the space of eightene yerres. And thus much for the three principall causes moouing me to reuerse my booke, and to bestow therein some houres defalked from my other affaires. By the which I haue for this time enlarged it with many precepts and instructions concerning the motions of times: the diseases of husbandmen, the feeding, handling and guiding of all sorts of beasts: many draughts to make compartments and proportions in casting of quarters and other works of gardening: many new wayes of grafting all sorts of fruits: a more ample manner to make ciders and drinks of apples: the nature and qualitye of wine in generall, and in particular of such as grow in France: the nature, manner of taking, and keeping of birds that sing melodiously. I haue yet many other matters to take paines in, as being the subiect of my undertaken worke, and those so abundant and plentifull, and so full of consideration, as that my pen was not able to deliuer it: but in the meane while (friendly Reader) I would haue thee to rest satisfied with the gaines of this voiage, with hope that in time I shall put thereto that which is remaining, especially if I perceiue that this my already bestowed labour is welcome & acceptable vnto thee: and then also I intend to put it forth in Latine, that other nations may not need to take the paines of translating it into their native language. Expecting therefore and waiting for that which is behinde, take in modest sort and good part this my labour, and excuse me by reason of my other affaires employing me in a higher vocation, if thou finde any thing either set downe by the halfe, or wholly omitted, or else not well polished in this my Country Farme.

Farwell.

A

A Caueat or lesson of instruction vnto the Reader, by F. ANTH. LANGVIER, C.C. Doctor of Diuinitie of Ries, wishing health and saluation vnto him.



He husbandmans profession (friendly Reader) is principallie occupied about two things, that is to say, the tilling of the grounde, and the keeping of beasts: the tilling of the ground for the producing and bringing forth of nourishment; and the keeping of beasts to turnish vs with flesh, butter, wooll, hides, and other things necessarie for the vse of man. The riches of husbandrie (saith Hesiodus) is the aboundance of beasts. For this cause Homer made Pluto to be the sonne of Ceres and Iason. The husbandmans life in truth hath alwaies beene accompted and esteemed as the most harmles of all others: which was the cause why the great Lord and Creator assigned (before the fall of mankind) this pleasant countrie life and habitation vnto our first parents, which was called Eden: Which is as much to saie, as a place of pleasure (saith Saint Bernard) replenished with all sorts of plants, trees, and shrubs, as also a fountaine of cleere water. This surpassing garden (after the opinion of manie) was situate vnder the Equinoctiall line, in some temperate place: as others saie, in the East without the region of the two Tropicks Capricorne and Cancer: or else out of this worlde, and of all troublesome of the aire: not admitting that during the time of mans integritye, there was any pollution in the aire, or any excessiue qualitye of colde or heate, but that it was altogether pleasant and well agreeing with the nature of man. Some men are of minde that this garden was a portion of east Asia, and that afterwarde it was destroyed by the floude, in such sort, as that there shoulde not remaine the least print or note of the knowledge of the same, which in my iudgement is the soundest opinion; for otherwise it would in these our daies be founde out, knowne, and frequented through the painfull pilgrimages of many, as well by sea as by lande. Adam our first father was placed in a champion ground, after he was created and fashioned of the earth of the helde of Damascus, to serue his Creator, and to the end that all his actions might redound to the glorie of his soueraigne Lorde; nor to toile in it with paine and griefe, which shortly after were laide vpon him and his posteritie. This is the reason why the olde writers haue cald the husbandmans trade, the life of libertie and innocencie: whereunto also they (as well the Grecians as Latines) haue composed their Bucolicke songs, framed of a more plaine and simple verse then any other peece of Poetrie whatsoeuer, which thing they

benefite and good of all, by which not onely our native countrie of Fraunce, but all other nations, as Flanders, and Germanie which haue turned this treatise of the Countrie farme into their owne language, are, and euer shall be beholden and indebted vnto him: if (at the least) they will not be reproched of ingratitude by the Phrygians and Athenians, who contented not themselues with the carying of a honorable regard towards such famous men as had bene authors and inuentors of husbandrie: but withall prouided and established by their lawes, as a priuiledge and dignitie bestowed vpon the verie oxe which treadeth out the corne, that who so shoulde slaughter any of them should be put to a cruell death: for thus *Eliaui* writeth of them. Being nothing else but that which *Lysander* the Lacedemonian (being come to visite *Cyrus* the yoong king of Persia, and beholding the manner of the ordering of his garden, and being answered by *Cyrus* when he had asked who was the author of it, that no other but himselfe) vttered in his replie saying: O *Cyrus* it is not without cause that men doe speake so much good of thee. And *Alexander* the great (saith *Baptista Fulgus*) to the end he might not be condemned of ingratitude, as also to leaue behinde him a president to al succeeding princes vnto the worlds ende, did reward *Abertoni* which was but his garden waterer, with the kingdome of Sidonia. And I hope also that not onely ecclesiasticall persons together with the prince, but also all other estates of the worlde, (after the example of *Anachorites* the Grecian, and *Hermite* the Egyptian) will holde out the fauourable finger of protection towards the author thereof, will wish him all happinesse and felicitie, and earnestly desire that he may liue long for the weale publicke, and to the end that being as yet but in the flowre of his youth, we may receiue manie other works from him, replenished with his rare knowledge, and perfected by his earnest endeavour and diligence.

Farewell.



To the right Honourable Mounseieur de PIERA,
 Counsellour, and Secretarie to the King, and assistant
 in the Chancery of Languedoc, holden at Tolosa,
 P. AIRALL his most humble seruant
 wisheth all health.



Here comming vnto my hands not many dayes past, a brieue and short direction teaching how diuers sorts of seeds are to be sown: (in respect of the good minde which I haue alwayes borne to the weale publicke, and common commoditie of all, following the example of many emperours, kings, princes, and other great persons, who wearied, and (as I may in some sort say) pierced thorow, by discharging of matters weighty and of great importance, were wont to refresh and solace themselues with the honest exercise of indefatigable husbandry:) I purposed right Ho. to set it in such order as you heere doe see, and to put it forth vnder the protection of your name, thereby to communicate and make it common to all the fauorites of so profitable a profession, as thinking that it would become more commodious vnto them in this forme than in any of the former: for that being in any moneth, they shall by and by see what seeds may be sown while it lasteth, and in what age of the moone, with the taking of the paines to reade all ouer the whole masse of such instructions as are set downe in the booke following. I had a great and longing desire to amplifie it much more than I haue done: but hauing read ouer diuers books intreating of this argument to that end, they could not afford me wherewith to satisfie my intent and purpose: because that sometimes they do not only conceale the state of the moone (which is a thing diligently to be looked vnto and obserued) but (which is more) the very name of the moneth: contenting themselues for the most part briefly to set downe the seasons in which such seeds are to be sown. Wherefore, my good Lord, I pray you accept my good will in as good part as if the deed had bene done: And by your absolute and perfect skill in this arte (as well as in many others) of your courtesie fulfill and make vp whatsoeuer shall be wanting in this one particular, or in any other thorowout the whole worke, and that in as willing, large, and liberall maner, as I doe humbly beseech and intreat you thereunto. From Tolose
 the 24. Octob. 1582.

A TABLE TO KNOW THE BEST TIME when to sow diuers sorts of feeds.

Some may be sown at all times of the moneth & moon, as are these:

- Assparagus.
- Coleworts of all sorts.
- Spinage.
- Lettuſe.
- Parſneps.
- Radish.

He that will
sowe seedes
must know
that

Others would be sown in a certaine
moneth and moon; as there must be
sown in February the moone being

all sorts. Spike.
Garlicke.
Borage.
Buglosse.
Chernile.
Coriander.
Gourds.
Water Cresses.
Margerome.
New: Palma Christi.
Flower Gentle.
White Poppie.
Purslane.
Radsib.
Rocket.
Rosemarie.
Sorrell.
Double-marigolds.
Tyme.
Anisse musked.
Violets.
Blites.
Full: Skymworts.
White Succorie.
Fennell.
Parsley.
Holy Thistle.
Cole Cabbage.
White Cole.
Greene Cole.
Cucumbers.
Harts borne.
Samapier.
Olde: Dicks graine.
Spinage.
Cabbage-lettuce.
Melons.
Onions.
Parsneps.
Larks heele.
Burnet.
Leeks.

You must
sowe in
March
the moone
being

Garlecke.
Borage.
Buglosse.
Chervile.
Coriander.
Gourds.
New: *Margerome.*
White Poppee.
Purslane.
Radish.
Sorrell.
Double *Marigolds.*
Tyme.
Violets.
Masked *Annise.*
Blites.
Full: *Skirwoorts.*
Succorie.
Fennell.
Apples of lone.
Maruellous Apples.
Artichokes.
Basil.
Thistles.
Blessed *Thistle.*
Cole Cabbage.
White Cole.
Greene Cole.
Curans.
Cucumbers.
Harts borne.
Ole: *Sampier.*
Diers graine.
Spinage.
Gilliflowers.
Hyslope.
Cabbage-lettuse.
Melons.
Magnets.
Onions.
Flower Gentile.
Burnet.
Leeks.
Sauorie.

In May, in the old of the moone: Blessed thistle.

In June, the moon being

{	New:	{ Onions.
		{ Radishes.
{	Olde:	{ Cucumbers.
		{ Melons.
		{ Parsneps.

In Julie, the moon being { Full: White Succorie.
Old: Cabbage-lettuse.

In August, the moone being full: White succorie.

Herbes growing of seeds that are sown may be transplanted at all times (except Chervile, Arago, Spinage and Parsley, which are nothing worth when they are transplanted) ever observed that such transplantation be in a moist or raimie weather: for otherwise you must looke to them to water them.

Understand and know
that the choise and
age of seeds is double,
Some doe growe better of
new seedes, as Leekes and
Cucumbers.

for after you have
chosen them, ripe,
full, heavy, comely,
grosse, of a good co-
lour, & not falling to
powder through rot-
tenesse or bruises.

Other some
do grow bet-
ter of olde
seedes, as

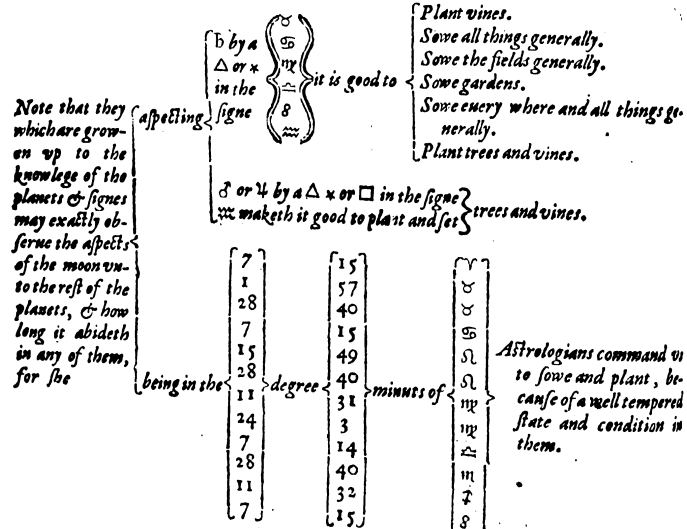
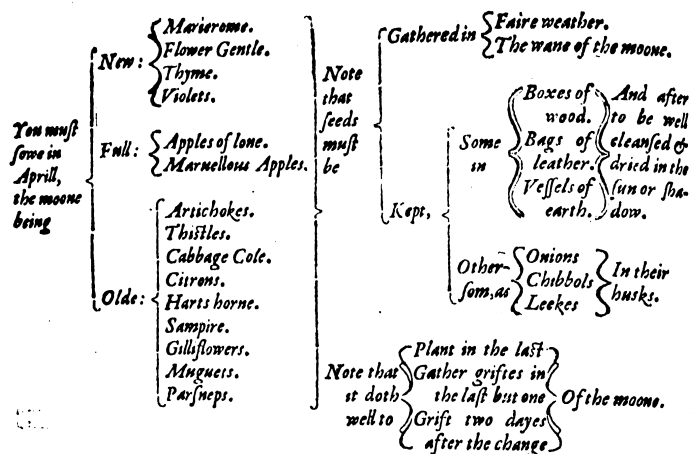
Coriander.
Payley.
Saurie.
Beets.
Origannum.
Cresses.
Spinach.
Poppie.

Knowe further that you must prescribe from the colde

Lettuſes,
Artichokes,
Baſill,
Thiſtles,
Cabbage Cole,
Diers graine,
Melons.

fifteene dayes after they put forth of the earth.

*Know that seeds doe thrive and prosper a great
deale better when they are sown upon such
dayes as are but warme, and not very hot or
colde, than in hot, colde or dry dayes.*



THE FIRST BOOKE OF THE COUNTRIE FARME.

The first Chapter.

What manner of husbandrie is imreated of in the discourse following.



Ven as the manner of building vsed at this day, for the couering and reit of men, is countries can- not like vnto that of old time: so wee see the manner of the labouring of the earth for the nourishment and sustenance of the same, to differ greatly, according to the Countreys, soile, groundes, and situation of the places wherein they are seated: yea there is not so much as their language, apparell or household- stuffe and working tooles, but they chaunge after the fashions of countries, which notwithstanding do not hinder but that in euerie thing we may be as well fitted as they which went before vs. By this we may see our late kinde of husbandrie to attaine and bring with it the like issue and effects, which that of the Auncients did, which is nothing else but to liue of the encrease of the earth well husbanded and tilled by vs.

Wherefore I haue thought it impertinent and vnseemely to tie my selfe to the seuerall sorts of labour vsed of men in times past, and that because that countries inhabited by diuers sorts of people, haue according to the seuerall variety of them, euerie one afforded many particular and seuerall sorts of liuing; as also for that it hath alwaies bene the custome of men (to the end they might the more easily fit and apply themselues to the good liking of others) to compose and frame themselues according to the maners of the Countreie, without affecting either by the reading of old writers, or their owne ouer reaching curiosity (the ruine & ouerthrow of all good wits) so many new inuented fashions of building, tilling, speaking or writing: seeing, that by such meanes in seeming to reforme things without the perfect knowledge of them, men haue bene brought oftentimes vtterlie to spill, spoile, and marre the same. And therefore I would not haue you to maruell if the frame and toile vsed about our French Countreie Farme, be not altogether like to that of former and auncient daies: for it is my purpose (following the Prouerbe, which saith that we must learne the maners of our auncient predecesours, and practise accor- ding

*The name of the
countrie house is
a ferme, meefe,
or field inheri-
tance.*

ding to the present age (to lay out vnto you the waies, so to dwell vpon, order, and maintain a ferme, meefe, or inheritance in the fields, (name it as you please) as that it may keepe and maintaine with the profit and increase thereof, a painfull and skilfull husbandman and all his family: whereupon it commeth to passe that the countrie inhabitants do call it at this day, the onely or principall and greatest gaine that is: because no other thing bringeth more gaine vnto the master thereof then the earth, if it be well husbanded and reasonably maintained.

The second Chapter.

A briefe shew of that which shall more largely be described in that which followeth.

*The Summe of
the first Booke*

THE better to helpe the memorie, and as it were by the way of pointing out of our French husbandrie, I will propound and set before you a chāpion place seated in such a coast or corner as you may finde, not as you could chuse, and there we will prepare without extraordinarie costs or charges, a house with all such appurtenances (or verie neere such) as are fit and requisite for our time: as good *Cato* hath drawne and described for his, in that treatise of husbandrie set downe by him for the common wealth of the Romans. And in the same place we will intreate of the state and ducie of the farmer, his wife, his people, cattell, flying fowles, and such other things.

*The Summe of
the second Booke*

At the one side of this house, even iust in the place whereupon the sunne riseth, and in one part thereof we will place the household garden which neere vnto the borders of his quicke set hedge shall containe a frame of railes in forme of an Arbor for vines to runne vpon for the furnishing of our household store with Veriuce, and other necessarie hearbs for the house: and we shall not altogether neglect or forget to provide and plant in the same place herbes fit for medicine. And yet furthermore in this garde also you shall plant things to make your profit vpon, as Saffron, Teazill, Woade, red Madder, Hempe, and Flaxe, if it seeme not better to referue this part of husbandrie for fieldes that are full of fennes or waterish places. In the other part we shall make a garden for flowers and sweete smells, with his ornaments and quarters, garnished with many strange trees. About the hedge we shall set for to make pottage withall, pease, beanes, and other sortes of pulse: as also Melons, Citrons, Cucumbers, Artichokes, and such like: in which place we shall intreat of Bees.

*The Summe of
the third Booke*

Next to our gardens we must dresse some well defended piece of ground or green plot for fruits, and there place our nurserie for kernels and seedes, and there plant such stocks as whereon we intend to graft. After or next hereto our square of olde growne trees and such

as

the Countrie Ferme.

as have beene transplanted, taken vp and remoued; and together with these things we will write of silke wormies, & prescribe the waies to distill waters and oyles as also to make Cydres.

Next in order to our foresaid greenplot lying neere some one of other little brooke, we are to lay our meadow grounds or pastures for feeding, compassed about with Osier, Elme, Aller-tree, and Withie; and by the borders of such hedge we will provide some poole of standing water or running spring; and next in order to these the great and large meadowes for the prouision and reuenues of the Lord.

Betwixt the South and the North we will appoint and set downe corn-grounds, and teach how to measure them, and describe their fashion and manner of tilling: in which place we will speake of making and baking of bread; and ouer and about the moitie or halfe part of a hanging thing, and the moitie of a but or little hill.

In the place which is neereft vnto the South we will plant vine, and withall declare the ordering of the same: we will speake of vintage, and the making of common and medicinable wines. And thereto we will adde the diuers sorts of wines which growe in our countrie of Fraunce.

Betwixt the North and the East we will place our warren, either vpon some hill or in some other place fit to hunt in, and in the higher grounds we will plant small wood and great timber-trees, not forgetting in the meane time any thing which may appertaine to the ordering and gouerning of wood, or concerning carpentie. We will also make mention of parkes for wilde beaults, of the hunting of them, but that in a fewe wordes (for there is no neede that a good householder should trouble his braine with much hunting) and of the breeding of herons. Finally, we will briefly describe the order and manner of taking of birds. So that after all these things there shall not much remaine further to be added hereunto; either concerning the pleasure or profit of a countrie ferme, especially such a one as a man ought to desire, which would liue carefully and within the compasse of reason, vpon the labouring of his land.

The third Chapter.

What things are requisite before we goe in hande with building of this countrie ferme.

AS concerning the proprietie of inheritance (whereof manie Authors both Greeke and Latine haue intreated so exactly and curiously) I do not at all intend to incommber my selfe therewith, supposing that this countrie ferme and the land belonging vnto it, is either descended by succession, and that there is an intent to make it in such case; as may serue most commodiously to the ease

B 2

and

and good liking of the owner : or that (if you haue purchased and bought it with your money) you haue cleered it from all incombrances and claimes before you goe about the building and fitting of it in euerie point as you would haue it. For like as some say, that the first foundation of a good house must be the kitchin, that is to say, the reuenues and grounds thereto belonging for the maintenance of the same : euen so the first point and principall care of an housholder, before he build or trimme vp his house, is to be thinke himselfe how he may make the state intier and absolutely vnto himselfe, and so to haue nothing to doe with such as are vnder age, creditours, rentors, or others in superiour place, which may interrupt and command him from his intended purposes and necessarie affaires. He must also see that all such charges, rites, and customes as law doth require be fully answered, and by name that it be cleere of all former sales, bargaines, and statutes, which is the safest manner of purchasing in these daies: for there are found a farre greater number of foolish buyers then of foolish sellers. Let there be past a yeare and a day before he make any exchange, raising and moouing of new debts, for the cleering of his inheritance, and let him not lay out to the value of a penie, before he haue fully ended all things, measured and bounded his grounds from his neighbours, and assured his peace euen against the most waiward and troublesome. To be short, let him be free from all manner of courts and sutes: and if it cannot be otherwise but that one or other controuersie do still hang vpon him (seeing as some men say) that lands doe vnauidably inferre and bring with them strife in the law) yet let it be of such nature as that he may be plaintife rather then defendant : I meane in respect of duties to be performed to the chiefe Lord and other impositions by the Prince, in discharging whereof euen to the vttermost penie, capon, or whatsoener else it be, he ought to be no lesse carefull and diligent, then in mending one tyle in the roofof his house, which in course of time being left vnrepai red and vnput in againe, causeth others also to fall, and so causeth great annoiance to the lodgings vnderneath.

The fourth Chapter.

The seating and situating of the countrey farme, with other his appurtenances.

HOWsoever it be that euerie man in all things inquireth after his owne commodity, and straineth himselfe to come as neere to perfection and excellencie as possible he can, notwithstanding the well instructed & modest housholder contenteth himselfe with that whatsoeuer it be that commeth of the hand and grace of God, and accounteth for great bountifullnes and liberalitie such pit-

tance,

tance, grounds, and seate as falleth vnto him, assuring himselfe that choice and perpetuall fruition belong no more to him, then Empires and kingdomes vnto princes. Wherefore if the place wherein he was borne, which he enioyeth by right of succession or purchase, be not naturally so fit and conuenient, as that he may thereby be drawne and allured with the loue of it : then he must endeouour so to fit it by his skill and endeouour, by his labour so carefully to amend and correct it, that it may be sufficient for the maintaining of him and those that belong vnto him, and the erecting and setting vp of an house. For he should not learne to lust after or desire any more (if the prouerbe be true) then a wheele-barrow for the first hundred yeeres, and a banner for the second hundred yeeres.

If I should heere go about but once to imagine such a situation of a countrey house, as should be so perfect and exquisite, as that nothing should be wanting therein, I might iustly seeme to my selfe to be voide of all reason. It is very true that if any such place could be founde, where the aire, water, and earth did all afford their best and most desired fauours and qualities, it would much auaille and make for the purpose : but so it is, that neither emperours nor kings could euer attaine the skill to content themselves otherwise then with the situation of their owne countries : some of them sometimes being too hot, too cold, very subiect to corruption and putrefaction; other some lesse profitable for the bringing forth ; and some againe of a meane and indifferent condition, and contrariwise. Notwithstanding although the place be not so fertile as a man could wish ; neither yet so comodious as that great husbandman *Cato* doth desire it, yet it must be provided & foreseene aboue all other things that it haue the benefit of a good aire : for suppose that the grounds were very fruitfull and endued with all the best properties and qualities that a man could possibly wish to be in a champion ground ; yet notwithstanding if the aire be pestilentiall and infectious, or not found, it should argueno thing but great foolishnes in a man there to imploy his cost & paines. For where a man is in continual danger of sicknes or of death, not only the gathering of off fruits, but also the life of the workman is continually hazarded : or rather which is more truly said, death is there more certaine, then any profit. Wherefore (if it be possible) you must make choise of a place farre from marishes, farre from the sea shore; and where as neither the Southren nor Northren windes doe ordinarily blow, and which lieth not altogether open to the South sunne, nor yet vnto the North : but principally see that it be placed neere vnto some one or other good and honest neighbour, seeing it is an insupportable thing to be daily haunted of a brawling and wicked neighbour : let it not be placed neere to holds or townes of garrison, thereby to auoide the outrages of tyrannie and inrodes of souldiers : let it

Farre from ri-
uers and brooke.

in like manner be farre from rivers and brookes which are subiect to overflow, and that in respect of the vnauoidable charges for there- pairing of such ruines and spoile, as such overflowings do cause. And yet I could willingly wish and greatly desire, that it might not be farre off from some smooth and gentle streame, able to beare a ship, to the ende that victuals may with the lesse cost be transported thence to other places for your better commoditie sake, as also neere some great good towne, that so the things of readiest sale, may be sold for the best aduancement and making of the most of the reuenues of the same. Although to wish to haue a ferme in euery point so perfect and well seated as that nothing should be wanting vnto it, were (as hath beene saide) an vnreasonable thing: as it is also to expect or looke for grounds and fieldes so well conditioned, as a man could desire in a ground of speciall and principall praise and commendation. It is true that besides that necessitie doth beget skil, and prouoke and stirre vp men to take all possible paine, industrie and care: it doth also procure that there should not that discommoditie be found to offer it selfe, which shall not be recompenced and counteruailed either by one or other commoditie: as for example in hot places there are growen good wines & fruites of long continuance: in cold places great store of sweete waters, and sometimes sea water, which greatly increaseth their profit: in others for the most part, when the earth is barren in the vpper parte, it containeth some good things vnderneath, as it falleth in stone-pits, mines, & such other things, which make the change for the better. So then we are to hold our selues content with such estate and condition as the place shall afford, where we must dwell and settle our habitation: and if it be not such as some curious man in his desire, or one that is hard to please, might require and looke for, then we shall straine our selues to mende it by the meanes set downe hereafter.

It behooueth vs
to content our
selues with that
which God and
nature affor-
deth.

There are verie few farmes to be found so seated as that there is not something to be supplied, as want of water in high and ascending places, such as are the countries of *Beaux* and *Campaigne*, notwithstanding that their groundes there be strong as it happeneth in rising and mountainous places: too great store of water in falling grounds & long vallies, such as are to be found in some places of *Sanoy*, *Daulphine*, *Amuergne*, and *Gascoigne*, in which places there is more pasture then tillage: other quarters are giuen by nature to be sandie, as towards the towne of *Eslamp*, *Saint Martin de l' Archant*, in *Solongue* and in the countrie of *Lands*, which notwithstanding cease not to be moist and waterish, other quarters are chalkie and clayie, as towards *Rheims*, *Troy*, and *Chalons* in *Campaigne*: other some are stony, as towards *Saint Lou de Serans*, *Tonnerre*, *Vezelay* in *Daulphine*, and in the *Pirene* mountaines, where is to be found great store of excellent mar- ble:

ble: and some are rockie, which are most fit for the countries aboua- ding with vines. Howsoeuer the case stand, the building cannot hap- pen in so inconuenient and strange a place, but that a man may make choise to take the best quarter for the sunnes shine, as that which is most for the health and wholefomnes of the inhabitants, and apply it euery way for his vse and ease.

Rockie grounde
good for the
bearing of
vines, and so
for such coun-
tries as abound
with vines.

If therefore a high and flatte place as *Beaux* or high *Francke* do want water, you must for a supply make pooles right ouer against your courts, and cesterne in your gardens: and as for your grounds you must draw furrowes therein in such sort, as that the earth cast vp by the way may retaine moisture a long time: and if the grounde proue it selfe strong, you shall not neede to manure and dung it so oft, neither yet to let it lie fallow more then euery fourth yeare. If you cast pits, you must dig them of a conuenient widenes and length, that is to say, foure square: but somewhat more long then wide after the fashion of the pits *Aranzues*, which are in vse in the gardens of *Prouence* and *Languedoc*; with their trough laid to the brinkes of the pits, to receiue such water as is drawne: but if the water be so lowe in the ground, that such kind of pits cannot be made, then there must pits be made to go with a wheele, and those so large as that at euery draught you may draw vp halfe a pipe of water at the least, which you shall empty into particular troughes and keepe them for the vse of your people and cattell: but aboute all other things you must haue a speciall care to gather and keepe well all raine water, either in cesterne or otherwise.

A high and flat
country.
Pooles.
Cesterne.

Pits called
Aranzues.

The cesterne shall be set in such a place, as that it may receiue all that commeth from such spouts as are belonging to roofes or lower lofts of the house. It must be firmly and close ly pauered with clay and mortar, and after drawne ouer and floored with the same mortar, to the ende that the water be not made muddy or talt of the earth: and if there happen any clift or chinke, you must stoppe it with cement made of cleane haire, tallow, vnquencht lime, and yelkes of egges well beat and made into powder, and then all of them well mixed together. The throat or passage for the water out of it, shall be such as that appointed for the pits or wells. Some cast into their cesterne eeles and other fresh water fish for to be fedde and kept there, to the ende that the water may become the lighter by reason of their moo- uing and stirring of it, & that so it may the more resemble the nature of running water; but indeed such water is nothing wholefome for men, as neither yet for beasts: it were farre better to straw with green herbes all the bottome of the said cesterne, and cast in little pebbles of the iuer vpon them, for by this meanes rather the water would be made better.

To make a Ces-
terne for to
hold and keepe
raine-water.

Moreouer for the discommoditie of wood, you shall make leane the

Wells that
never drie.

Wells of good
water.

Fountaines.
To find out
the heads of
fountaines.

from grounds apt to boile, as red sand, or gray rocke, and not from those sides which by and by are dried vp. Aboue all, to the end we may haue welles containing water of a good relish, and such as will neuer drie vp, we must make choise of a sandy, blacke, grauelly or clayith ground, or such a one as is full of pebbles, and especially that which is mixed of pebbles and sand together; but neuer of that water which floweth from fulkers clay, mire, muddle, or springeth from the grounds, where fallowes, roses, reeds, and other such plants which are ingendred of a watry humour do grow: for although that such places do yeeld great store of water, notwithstanding that water is naught worth, and will easily be dried vp. Wherefore as much as lieth in you procure that your wells be far off from such ditches as wherein they lay the dung of itables, cattell or swine-coates to rotte, or any other place which may annoy in regard of the pissing of beasts, if they be not well digged and made very deepe. True it is that wells will be a great deale the better if they consist of a high rising water, and not such a one as lieth deepe in the earth. For howsoever that such wells be lesse hote in winter and in summer lesse cold, yet notwithstanding it shalbe infinitely better because it hath more helpe of the sun and aire, which are the two things which do greatly amend and make better the water; and if necessity force the water to lie so deepe and low, we must seeke to helpe the inconuenience by drawing but a little and oft, for the iumbling and stirring of the water will rectifie it, and amongst other things you must haue speciall care not to keepe it couered.

Fountaines in like maner rising from such places of mountaines, are had in request, as well for the profit of the water, which is a great deale better and more pleasant than that drawne out of wells, as also for the beautifying of the country farme. And for to find their head or spring, we must vse the like meanes, as we haue laid downe for the finding of wells, excepted that we must make chiefe choise of such as breake forth vpon the North at the bottome of high and great mountaines, hauing hollow places, and compassed about with plains, for in such plaine grounds the water gathereth it selfe together and distilleth through the earth: now this kind of provision of water is when you desire it in great abundance: But if you stand vpon and desire the best and most excellent water, you must make choise of high places and such as are not ouershadowed, the fall whereof doth enioy the sun-rising, for water out of such fountaines is a great deale more light and pleasant in taste, and by how much it runneth the swifter and longer way in the aire, and sun before it come to the bottome, so much it groweth the better, as when it falleth from high rocks, it is as it were beaten and broken in falling through the downright places of stones, and craggednesse of the rocks. We must also see that such mountaines be full of Dogs-tooth, Plantaine, Fox-taile, wilde penny royall

royall, transmarine Sage, which is called Adiantum, Milfoile, Chamelion, and generally all other herbes and plants, which grow without being planted, and are by nature greene, well branched, good and thicke, and well flowred.

The time most apt in all the yeere, and affording greatest perceiurance for the finding out of the heads of wells and fountaines, are the moneths of August or September: for then it is easie to knowe the greatnes of the head, when the earth by the great heat of Sommer hath no moiture of raine left remaining in it, and then also we may gather assurance of such as will neuer drie vp altogether.

If it happen that the head fountaine be somewhat too farre from the farme, you may force the water to come thither by little riuers, or rather more conueniently by chanelles and conduits made of lead, woode, or pot-earth: the best are made of aller tree, firre tree, or pine tree, out of which distilleth perrofen, because that such trees haue an oilie humor and hot, which easily resisteth the hurts which water might cause: next to them are those which are made of pot-earth, if that the water carried along in them were not the cause of breeding obstruction. These must be two fingers thicke, and sharpe at one end the length of halfe a foote, to goe the one of them into the other: the woort sort is those made of lead, because the water carried along by them, purchaseth from the lead an euill qualitie, and that because of the ceruse thereof, so that it oftentimes causeth bloudie fluxes and other such like diseases, if we beleue Galen and them which for this cause call the inhabitants of Paris, squinters, because they vse fountaine water, which runneth through leaden pipes: which point notwithstanding seemeth not to be without all doubt, seeing that ceruse cannot breed, nor be made of lead without vineger, & for that we see also diuers countries do drinke of such waters, without being troubled with bloudie fluxes: whatsoeuer it is, we must set well together and foulder the pipes with a compound made of vnquenched lime and the greafe of a hogge, or of perrofen and the whites of egges, or of lyme, whites of egges, oile, and the filings of iron, because that all these things do hinder corruptions and rottennes which the water might cause. If any mountaine do hinder the laying or bringing along of these pipes, we must make them waie: if any valley, we must reare arches, such as are to be seene in a village neere vnto Paris called Arcueil, and that because of those said arches; or raise pillars and other matter to support those water passages.

But it is not sufficient to haue found out those heads of wells and fountaines, but we must further consider of the goodnes and wholesomnes of the water, as Aristotle teacheth vs: For seeing the greatest part of our life dependeth vpon the vse of this element, it is requisite that the master of the household should haue care to procure good water

The best time
to finde out
spring heads.

Chanelles or pipes
to conuey foun-
taines along.

what waters
are best.

water, in asmuch as water must be the most of his seruants drinke, and that the bread which he and his family do eate is kneaded therewith, and the greatest part of his vittails boiled therein. The best and most wholesome water of all others is raine water falling in sommer, when it thundreth and lightneth very much; and yet notwithstanding raine water causeth collicues and obstructions, especially that which is kept in cisterns newly made, and that by reason of their mortar wherewith they are ouerlaid: it doth also corrupt very quicklie (that onely excepted which falleth in Maie) and being so corrupted it marreth the voice, bringing hoarfeness and a little cough: next to this in goodnes is the fountaine water which falleth from the mountaines, and runneth along amongst stones and rocks: next to this in goodnes is well water, or that which issueth at the hanging parts of the mountaines, or that which springeth in the bottome of a valley; the fourth different sort of waters is that of the riuer: the worst of all the rest is that of the poole & marish grounds, & yet that which runneth not is worse then all the rest and more apt to infect. The water of snowe and ice is the most vnwholesome of all, because it is the coldest and most earthie, as not hauing beene prepared by the heate and vertue of the sunne. And as concerning the water of wells and fountaines (seeing it is not found good alwaies and in all places) we shall knowe them to bee good, if it haue neither taste, smell, nor any colour whatsoever, being notwithstanding very cleare, and of the nature of the aire, taking quickly the colour of any thing that one shall cast into it, being also cleane, warme in winter, and colde in sommer, easie to make hot, and as soone becomming colde againe: in which peason, beanes, and other such like things do boile easily, and which being put for some space in a brazen, copper, or silver vessell well scoured, leaue no discoloured parts or spots in the same, and which when it hath beene boiled in a caldron, made very faire and cleane, doth not make any settling or shewe of filth in the bottome: if such as vse to drinke it haue a cleere voice, a found brest, and the die or colour of the face be neate and liuely; finally that which together with the rest of the markes, is very light, and by consequent as principall of all the rest shall that be iudged, which excelleth in the foresaide markes and qualities; and for to know which is the lightest, weigh asmuch with asmuch of euery sorte of water, or else take two, three, or fower clothes of one and the same webbe, length, and breadth, according to the quantitie and sorts of water which you would compare together, and in euery one wet a cloath, distill the clothes, or let the water drop out of them, and then weigh them, for the cloth which was moistned in the lightest water will then weigh lesse than the rest. It is true that the lightnes of water is not so truely tried by weight as by drinking, not causing at such time any burdensome weight in the places about the

short

short ribbes, and passeth through the body speedily: as also in being quickly hot, and quickly cold.

Drie places and countries abounding with mountaines do commonly bring forth stones, which is easily perceived by the rough and boisterous handling of the earth, and also by the stones lying vpon the vpper part thereof, which otherwise might haue fallen and beene cast there: in manner as sometimes it falleth out that men finde vpon vntilled groundes the liuely shapcs of fruites, and come gathered together and growne vnto the stone, which is to bee seene neere to Mommirall in Brie, where woode is growne vnto the stone: besides that the hearth, will make quicke and speedie triall heereof. This will doe you seruice in the inclosing either of your parke or of your vineyardes, and other such like commodities, besides the profite you may make of it by the selling of millstones and stones to build withall. But looke well to your selfe and take good heede of quarries and casting of stone-pits, and of their deceits, which oftentimes re-

And as for the earth (taken and vnderstood generally) it beareth all manner of corne, fruits, hearbes, timber-trees, mettals, stones and other things, and this hath beene giuen vnto it even since it was first made, and heereupon olde writers haue iustly giuen vnto it the due name of mother: but although in respect of the cold & drie substance and nature whereof it consisteth, it may be called all of one temperature, yet it purchaseth and getteth contrarie qualities, according to the severall situations it hath in diuers places, as also vpon occasion of affinitie, intercourse and participation it hath with thinges of repugnant qualitie: and hence do rise the diuers sortes of the same, and so diuerse, as that euery ground will not beare euery thing but one or two at the most. For this cause to auoide both cost and labour, see aboue all things, that you proue either by your owne triall and experience, or else by such inquirie as you can make of your neighbours, what kinde of fruits, what kinde of corne, and what sortes of trees doe prosper best thereon. Some places in France and the free countie of Beaux beareth no other graine then rye, which is contrarie to the nature of the ground new broken vp: another loueth nothing but wheat: Solonge loueth March corne, and sometime Melling: Touraine worthily called the garden of France, is found most plentifull in gardens and fruit trees, as that part called Brie or Braye, (because it is situate betwixt the riuers of Marne and Seine) doth bring forth fruites, and corne for sustenance: and that quarter which lyeth betwixt Marne and the riuer of Aube, bringeth forth an infinite deale of hay: notwithstanding the diligence of the Farmer, may by his indottrie overcome the weaknes of a ground, euen as well as all sortes of wilde beausts may be tamed by the painefulnes of man.

In

*Waters and
marish places.*

In waterie and marish places, it will stand vs vpon to make our profit of the water, which you shall oftentimes by sluices turne from his naturall courses, into your pasture groundes and ponds of running and standing water, for the profitting and helping of the same: about the brinckes and edges of the most commodious ones, you shall set rankes of such trees and profitable plants, as you know to like and prosper in the water. And you must especiallie obserue and marke the diuersitie of the bottome and vndermost parte of the ground, which in watterie places is often found to differ much and to be somewhat strange, and according to the nature thereof, to set such trees as may best agree therewith.

*The vnder
parts of waterie
groundes.*

*Islands of
Flanders.*

Your house being seated in such places will be most strong and pleasant in sommer, but of greatest maintenance, preservation, and safetie, if you inuiron it round about with water, after the maner of an Islet, as it is practised in manie places of Flanders, who make the vse thereof familiar among them, to reape thereby the benefite of fish in his season, the flesh of wild fowle, trees aswell for fruite, as for fire and building, besides the helps of their excellent pasture groundes; but in deed your owne health as also the health of those of your familie, is impaired heereby, especially in winter. Wherefore it will be better to build vpon high ground, as the auncient Romaines did, and to leaue the waters below, for the comforting of your sight, if so be you haue not the meanes of closing in all the same round about, for your breed of young colts and other cattell, all which will like veriewell vpon such groundes except it be your cattell seruing to furnish you with wooll.

*To build on the
top of high
ground.*

*Wilde groundes,
Deserts and
Bull-rushes.*

If your farme doe for the most part consist of wilde groundes and deserts, you shall make them arable by labour and paines, and recover them, deluing them diligently and raking them often: for the bulrush, brakes, and such other herbes will soone be kild, when the earth is often turned. But and if you desire with more haste and certainty to destroy them, you shall burne the ground the two first yeeres, and sow therein lupines or beanes, to the end that together with the curing of the disease of your fieldes, you may reape some profit and commodity.

Stonie groundes.

Stonie groundes are mended by taking away the stones, and if the quantitie be great it wilbe best to cast them together in manner of some small hillocke in certaine places of the ground: and so by that meanes the rest wilbe cleansed and freed: or rather when the daies of handiworkes shalbe got good cheape it wilbe best to digge the earth verie deep, and there burying the stones before-hand, aiterward to couer them with the earth.

Parished ground.

If the farme consist most of Forrests and woodes, you shall make thereof arable ground, by plucking vp the trees altogether, as also their rootes: but and if there be but small store, it will be enough to cut

cut them downe and burne them, and then to till the ground. And such groundes are wont the first yeere to bring forth much, because that the moisture and substance, which before was spent in the bringing forth and nourishing of trees, bushes and herbes, doth prepare it selfe wholly for the good of the corne that is sown vpon it; or for that it hauing bene fatted & growen better by the leaues and herbes of many yeeres, which of it owne accord it brought forth before it was tilled, becommeth afterward sufficient to nourish and bring forth great abundance of fruites: and so it commeth to passe also, that being robd of her former nourishment in time it groweth leane, loosing the freshnes and moisture which was maintained by the conuert, and therefore continueth not so fruitfull, as it was at the beginning.

Sandie places may be made better by dung and marle, which yet notwithstanding euen without such husbanding, by meanes of some current of water running vnder the earth in some countreies ceaseth not to yeeld good profite to their owners: but these craue rest, which is the principall remedie to helpe their weake and feeble estate, and also to be sown with varietie of graine, as after rye, some kinde of pulse. The way to know such groundes is common: when the great sande is fast and yellowish, it is then found to be good for corne; and when it is white and drie, it is good for wood and wilde fruits.

But it behooueth the Farmer to apply himselfe vnto the nature and temper of his field, and according vnto it, to sow and plant in euerie place such things as are best agreeing with them, as Pulse, Millet, Panicke, Ryce, Lentils, Fatches and other things which doe not require great store of fatnes.

The strong, hartie, and fat soyle is good for Vineyards, and is apt to beare great store of wheat-corne, foreseene that the yeere be drie, especially in the moneth of May, but small store of any other increase: yea and if the times be much giuen to raine, they will beare but a little corne, and great store of chaffe.

A rawe, rough, & tough soyle is hard to till, and will neither bring forth corne, nor any other thing without great labour, howsoeuer the seasons be temperate in moisture & drinesse. To helpe the same, you must labour it most exquisitely, harrow it and manure it verie oft with great store of dung, so you shall make it better and lesse subiect to the iniuries of the sunne, windes, and frost: but especially desire that they may not be watered with raine, for water is as good as a poyson to them.

The clay and strong ground, as that in Bresse, and other places of *Parois*, craueth great and deepe furrowes when it is eared, and euerie where else, as euen in the verie places where stones lye deepe and ouer couered againe with good earth, and this to the ende that the water may the better bee conueyed away which is naturally mixt therewith,

therewith, and cannot so easily depart, by reason of the clammy slime-
nesse of the earth. This plot is not so fit either for trees or vines, ex-
cept it be for some fruit trees, and those well husbanded and nour-
shed. If you build there, then do it vpon some high ground, and neere
enough vnto the riuier, and cause the Eastern and Northren quarter,
because such places are subiect verie much to putrefaction, and verie
vnwholesome.

To build vpon
a high ground.

Territories and
fields lying in
Croye and Ar-
doise.

The nature of
the earth must
be knowne.

An old pro-
uerbe, as of
compulsions
cometh no good.

The territories of *Croye* and *Ardoise* are more sound and whole-
some, though they be more barren: but it must be made better and
much mended, and imployed onely to that which it delighteth in: for
the baylisfe of the husbandrie ought to know the nature of the
ground, and not to force it to beare that which is contrarie vnto it,
notwithstanding whatsoever you doe vnto it for the bettering of it: for
of forced grounds there comes as much profit, as there doth of
beasts, by violence vied towards them. For suppose you may com-
pell them, yet it shall be to your great cost and charges by reason of
their hurts, maladies, and otherwise, for such cattell commonly stand
not in good plight & state. The old Proverbe also saith that a house-
holder should giue greater heede vnto his profit, and the holding out
or continuing of that which he hath vnder his hand, then to his plea-
sure and rare commoditie.

Euerie countrie fit for good vineyardes is stonie and granily, or
full of pebbles, and is found to be better on the South quarters, or on
the descent of the hill, lying on the side towards the riuier, this place
is not so good for come: in the plaine or flat places thereof you must
make it better and dung it. Make your buildings there on the sloping
side, which looketh into the Southeast, where you may not remooue
your selfe farre from the riuier, for the reason afore giuen.

Good ground, a
fruitfull coun-
trie of France.

The fruitfulness
of Aquitaine.

The inconueni-
ences of the sou-
therne winde in
Languedoc,
Prouence and
Guyane.

The best soile, is that which is blacke, crumbling & easely turned
ouer, that is to say, which easely falleth into small peeces in ones hand,
and feeleth light, sweete, and fat in handling, like to that which is
founde in the countrie of *Tourraine*, *Maine*, and *Anion*, which are
fertile in all manner of fruitfulness and abundance of goods, rich in
hills, valles, pasture-grundes, vale-grounds, vinyards, and all sorts
of fruits: but vpon good cause they giue place to *Prouence*, part of
Languedoc, and *Guyenne* and the better places of *Aquitaine*, all which
by reason of the heate of the South Sonne, bring forth not onely in
greater abundance, but their fruits of all sorts of better qualities, and
more forcible. This is the land of promise in our France, and hath no
discommoditie, saue that of the Southern winde which they call
Anis-trail, which, except it be tempered by the Northren windes, doth
almost euery yeere ingender vnhappie calamities both in men and
beasts. Wherefore in this countrie the dwelling places and buildings
must be set vpon a hill, and the South winde shut out and denied all

entrance

entrance by lights, except when it shall be needfull in the depth of
winter.

But to speake generally, the soile may be knowne to be good and
to beare great store of fruites by these meanes: as, if it be somewhat
blacke, or somewhat yellow: if it cleaue not, when it is ill tilled; if it
become not myrie when great store and abundance of raine shall fall
vpon it, but drinketh vp all the water that shall fall, and therewithall
keepe this moisture and refreshment a long time: if in winter time
it become not hard in the vpper part thereof; if without being hus-
banded or mended by great labour or fatnes of dung, it bring forth
flourishing herbes, timber-trees, straight, thicke, hauing great armes,
and abounding with store of their severall fruits, and thole good and
well relished in their kindes, and if it yeeld great fruitfulness of come:
if by being watered or rained vpon, it become blowne vp, and as it
were stretched out and blacke, and not hard bound or turned white:
if the water springing forth of it be sweete; or if the greene soddes
therof being broken in peeces and steeped two or three howres in wa-
ter that is sweete and of a good taste, do not marre or make woorse the
taste of such water, which must be tried by tasting of it, after that it
hath been strained and clarified. For naturally water issuing out from
a spring, or wrung from something that hath bene steeped in it, retain-
eth and carrieth with it the taste of the earth: and on the other side,
if the earth steeped in water, the same water doe after such steeping
yeeld a sweete and pleasant relish: if cast vp, and two or three daies
after throwne into the said ditch againe, it gather on a heape and rise
higher then the said ditch: for in doing this it shewes it selfe to be a
fatte earth, and whereas one shall do nothing but pare the said ditch,
without doing any more, it will be but indifferent; but and if he come
not to touch the edges of the said ditch, it will be light earth: further-
more if it be watered with raine, it yeeldeth a pleasant smell. On the
contrarie the earth must be iudged of no valew, if it haue not all these
signes of goodnes; and principally that which is cleauing like glue,
like potters clay, chalkie, whitish, which shaketh and trembleth, which
is too hard, rough and strong, which is watie and marriish, which
hath a salt or bitter taste, which bringeth forth trees & hearbes that
are bitter, colde and thornie, as brambles, ferne, bryars, wormewood,
iuniper, lauander, broome, butchers broome, and other such like: as
on the contrarie side, rushes, roses, small grasse, three-leaved grasses,
thornes, danewort, wild plumbe-trees, & such other things do shew
the goodnes and fruitfulness of the soile, for the things aboue named
are not found or nourished any where almost but in the sweete veins
of the earth.

The signes of a
good and fer-
tile ground.

Naughtie
earth.

C

The

The fifth Chapter.

The building and inclosing of our countie farmes.

Pease being purchased, then buildethine house, saith the wise and prudent householder; and the author of the Latine Georickes doth highly prize and valew those great farmes and houses, whose appurtenances and expences are great: but he counsaileth men to vndertake and deale with so little, as he knoweth well to doe. For as great cages make the birdes neuer a whit the better, euen so it is not so safe and sure a course to haue a costly and large building vpon the ground, neither yet to haue so faire and large fieldes, neither yet so great quantitie of groundes, as that they must be either all ill husbanded, or else if for the carefull tilling of one part of them, all the rest be left & let goe vntilled, as neither to couet greedily, or aspire to possesse other great & stately farmes, when he is not able to husband and till that which he hath already in possession, if so be perhapes that a man long not to bring himselfe wilfully into the danger of the lords of such farmes, rather then to aduance or further their owne profite, like to those bad carters, which will not see or suffer either horse or man to stand still, vntill by continuall toile and vncessant labouring of them about the groundes of his farme, he bring to passe that both landes, horse and men be not able to holde out, but become little woorth, which is the cause that a Lord letting his place and demaines to farme, must make account that the earnest desire and watchfull regarde he hath to vpholde and maintaine his groundes in good plight, will not be accomplished or manifested by deed of indolence or posting ouer of the charge to another, but rather it standeth him vpon in his owne person to see such as are to labour therein to be set to their worke, ouerlooking euer and anon the companie, & ordering viced by the bailiffe of his husbandrie in the handling of his businesse, that so he may preuent the mischiefes aboue named. It is also saide of some men, that the eie of the master doth fat the horse: and that matters are neuer so well cared for or looked to as by himselfe. For there are but few either hindes, day labourers, or labourers by great, which doe not loue their masters profit a great deale lesse than their owne, and euerie day are behind hand in one duetie, or piece of worke or other, which ought to haue bene done.

Better therefore is a small house of good stufte, not sumptuous, well seated and well fitted (but let it haue of euerie thing a little) than so costly a place and of such large roomes, as that either they become enuied of their superiours for it, or else at length causeth the master to sell it againe: for the good Romane husbandman saith, that a householder must so diminish the charges of euerie thing by his labour,

Great cages make not their birds good.

The eie of the master fateth the horse. No steward like to the lord himselfe.

The office of a good householder.

the Countie Farme.

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bour, as that he may euermore haue moe things, and more to sell then to buie, and that he euerie day become more strong and powerfull then his field. For seeing that the Lord and it must needes combate wraitle, and incounter the one with the other; if the field be too strong, then the Lord is wronged. Euerie place in the field is also oftentimes to be looked vnto, and if neede be, speedily repaired, because the decay of any part of it, or of any thing which is to be vfed in it, being let alone and neglected onely one yeere, draweth on another losse as great as it selfe, and costeth thrise as much to make it vp againe, as and if it had bene looked vnto within a moneth or fifteene daies after the decay did fall and happen. And their wordes in this case are of no value, which say, that groundes troden vpon and trampled with manie feete, are halfe eaten and spent: or that ground lying farre off, doth breede nothing but flagons and bottels. For I would haue the matter to be more commonly there then at home at his house, & that he should so dispose of his estate, as that there may be both for all necessities of foode and so forth, and somewhat to spare: otherwise his house and demaines should minister more vnto his seruants then to himselfe, and his charges should exceede the increase and reuenues; and that as well in tarrying at home, as also when he goeth abroad, he make it his chiefe delight to vnderstand, and see the gouerning of whatsoeuer belögeth vnto him, not troubling his minde with hunting, banquetting, much companie keeping, drunkenness, & welcomming in of euerie commer, & so to giue himselfe exclusively to his delights and recreation of his spirit.

The placing of such building as is made, is most fit to be on the edges of some great hill, vpon some small hill, or the top of the hill, if the cuntry bee tempestuous and full of mountaines: for by this meanes he shall reape the libertie of the aire and a goodly prospect, he shall be safe from the annoyances of foggie mistes, he shall not be oppressed with cold in winter by reason of ice, nor ouer hot in sommer, and the waters and floods which runne downe from the top of the hills shall not threaten, much lesse doe harme vnto the foundation of his dwelling place, as also he shall not bee too much subiect to the windes and raines of the whole yeere: he shall procure his principall lights to stand vpon the sunne-rising in the moneths of March and September: for the windes blowing from those quarters are drie, more hot then cold; but verie wholesome, as well for the bodie as for the spirit of man; and the sunne which commeth to enter betimes in the morning into the house, doth diminish and waste the darkenes and grossnes of the aire: adde further, that looke by how much his house shall be set more vpon the saide eastern point, by so much the more easily it will be able to receiue that winde in sommer, and bee lesse beaten in winter with frosts. The barnes shall be open towards

There must not any thing be let go to decay: but it neuer so little.

Grounds in husbanding waste what they yeild in increase.

The seating of the dwelling house.

the sun-set in respect of their greatest lights, and withall shall haue one light seruing toward the North, for the cause aboue named: but all houses for beaſts, shall haue their windowes towardes the South and borrowing ſomewhat of the Eaſt, for that the windes blowing from thence will keepe them ſound at all ſeaſons and times. It is true that as for ſtables for horſes it is neceſſarie to make them a light ſeruing towardes the North, to open in the hot time of ſommer, during the vehement heate thereof, and that at the houre of their eaſe & reſt, which is noonetide: for at this time and houre, if you giue them not ſome breath of aire to coole them withal, the heat of the noone ſunne which would ſtrike in, and their owne, which is alwaies in the ſtable, as alſo their breathing and preſſe of the whole companie of horſe being there together, would ſet them in ſuch a ſweate, faintnes of body, and loathing of their meate, as that the very ſtable would wearie, weare and ſpend them as much as the plough it ſelfe. And as for the reſt of the buildings, or the baſe courts, it maketh no great matter vpon what coltes or quarters you diſpoſe them, howbeit if you ſo contriue them, as that they may marke vpon the North, they cannot but be to good purpoſe. Theſe inſtructions for lights and windowes are not ſo ſtrictly inioyned, as that the differing qualities and conditions of countries where ſuch building muſt be made, may not moue you to diſpoſe them otherwiſe: for ſeeing there are found in ſome countries ſuch windes as are almoſt ordinarie, and may bee ſaide to haue gotten as it were a habit, and thoſe blowing from ſuch quarters as lye vpon the ſea or marſhes, or ſuch other, and therefore bring with them ſome noyſome qualitie, or at leaſt little profitable: it muſt needes be permitted in ſuch places to alter and change the former directions. And to ſpeake the truth, ſeeing that by the meanes of windowes and counter-windowes, you may cut off the entrance both of ſunne and whatſoeuer windes, it ſhall be left in your free choiſe, to make ſuch lightes as may ſeeme moſt neceſſarie in your owne iudgements, being euer more directed againſt ſuch annoyances as the aire might bring from that place whatſoeuer, from whence it cometh.

And although that euerie one build after his owne humour, yet the cauſe ſhould ſo ſtand as that reaſon ſhould rule euermore: & ſurely ſuch a man ſhould be eſteemed but of a ſlender iudgment, which hauing a place and commodities belonging thereto, did not fit things in ſuch ſort, as that on the one ſide of his chamber he haue a light open vpon the court and forepart of his ſtarne by which they muſt enter that come to it, and another open vpon his gardens and principal grounds. Wherefore that he may know the more eaſily to prepare his buildings as it were anew, or elſe repaire it after his owne fantaſie, it wilbe meete and conuenient for him to doe in manner as followeth.

Draw

Draw a great court and wide, and that verie ſquare euery way, in the middeſt thereof cauſe to be caſt two fiſhpoudes at the leaſt, one for geefe, duckes and other cattell, the other to water, ſteepe, or ſofter Lupines, Oſiers, Roddes and ſuch other things, as alſo for the rotting of your dounge: and ſomewhat more to the further ſide, a well with two or three troughes of hewen ſtone to water your cattell & poultrie at, if you haue not the benefite of a running water or ſome neare river either great or ſmall. Make alſo two dunghills; the one to containe and rot all your new dung, and to keepe it till the yeere following: the other, that from it you may take the old and rotten dung and carrie it out into the fields. Theſe two dung-hills muſt be far from them, and on a ground falling from the forenamed fiſhpounds and well, if ſo be that the place will afford it, or elſe at the leaſt caſt deepe within the earth and pained in the bottome before hand, leaſt that the earth ſhould drinke vp the moiſture: for dunghills-muſt of neceſſitie be kept in continuall moiſture, to the end that if peraduenture amongſt the ſtraw, litter, ſtubble, or chafe which is brought thither, there be the ſeedes of any hearbes or thornes mixt among, they may rot, and not budde or bring forth any weedes, when the dung ſhall be ſpied vpon the ground. And therefore expert and ſkilfull ſeruants do couer with clay the dung which they caſt out of the ſtables, to the end the wind may not drie it vp, or that the ſunne or wind ſhould cauſe it to ſpend all the moiſture and turne it into duſt.

This court containing two acres ſquare ſhalbe compaſſed in with a wal of eightene inches thicke, and tenne foot high from the ground, for the reſting of your buildings vpon that are within: and to meete with the danger threatned by the cues, and ruynes procured by raine, it ſhalbe ſtrengthened with chaines on thoſe ſides which lye next vnto waies, as alſo with good rafters, according to the greatnes of the commodity of your place and other ſtuſſe.

In the midit of the walle, and in the forepart, which is the part lying vpon the ſun-ſet, you ſhall make your gates and their porch, and in like manner a couer ouer head, to keepe the ſaid gates from the ſun and raine, which otherwiſe would beat full vpon them and overthrow them, as alſo for the ſpeciall vſe of your ſelfe and your familie, as to giue them place and ſhelter in the time of raine, or when they pleaſe. And the gates muſt be ſo high and wide, as that a cart laden with haie or corne may go in with eaſe: you ſhall raiſe it halfe a foote aboue the ground, and defend it on the outſide or vpper ground with a threshold well and ſidie laide, and in ſuch ſort, as that vpon the running downe of water, it may not rot, which they would doe if they ſhould come cloſe to the ground, and that the cues may not caſt them of their hooks with leauers or crowes of iron ſtanding on the out ſide, which they might the more eaſilie doe if they ſhould be cut ſhort of

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the

Stables.

The baſe courts.

Reaſon muſt haue place before whatſoeuer elſe.

Of the lightes to be made in building.

The forme of building.
Fiſhpounds.
Dunghill.
Well.

The welle of the court.

The doore of the houſe.

the earth, and not haue the helpe of the threshold.

A partition.

Over against the porch toward the trade waie, you shall make a partition of tenne or twelue furlonges well inclosed with ditch and quickset, hedged round about, for the feeding of your tired, weary or sick cattell, which cannot keepe, or goe in company with others, as also wherin they may rest and chaw the cud in faire weather and in time of great heat.

The farmers lodge.

The farmers lodge shall be built neere to the side of the porch vpon the left hand, and shall haue the daylight comming in vpon the side toward the street, westward; notwithstanding that his windowes shall lie vpon that side of the court which is Eastward. His kitchin shall be raised two or three steppes above the ground, to the end it may be freed of the moiture wherwith the court aboundeth in winter: it must also be high built & great, to the end that the floore lying next above may not be so subiect to the danger of the fire, and to the end that all his frundes and seruants may at all times easilie bestow themselves therein; the ouen shall be set without the roome hauing the mouth in the inner side of the chimney of the said kitchin, and lower then the mantle-tree, not far about the hearth.

The farmers ouen.

At the entrance of the said kitchin and in such place thereof as shall be least subiect to the sun and most coole, you shall haue a dairie-house or small vaulted roome paved, and lying slope-wise and with a gutter, to serue for the huswifes dairie, and therein shee shall doe all her businesse about making of butter and cheese, and the said gutter or sinke shall serue for the auoiding and conueying of all such washings as she is to make about her milke vessels. On the other side of the said kitchin shee shall haue the like house of office or vaulted room, which shall also be for the huswifes vie and serue for a pence, to keepe her prouision of victuals in: and vnderneath this a little cellar, and the place for the comming out shall be in steede of an vp-right table, set as you go into the kitchin.

The farmers chamber.

On the other side of the kitchin shall be the farmers bed-roome, and one other ioyning to it for his maide seruants and children, and a third ioyning close vnto it, for to keepe foule linnen. To the wals of which roome you shall goe forward to ioine a fourth which shall be sufficient large, and the doore to goe into it shall stand in the court without, and it shall serue for fewell, working tooles, and other necessarie thinges. And the vpper part or loft of this roome shall serue for garners to lay fruits, al manner of pulse, corne, hearbes, and rootes in, that are to be kept.

Garners.

*Stables for horse.
Lodgings for men seruants.*

Vpon the right hande as you go in shall be stables for horses, reseruing also a sufficient great lowe roome bounding the great porch, for the Carter and other men seruants, as also for the keeping of col-lers, cart-saddles, traits, thicke clothes & other furniture for horses, & along

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along at the end of your horse stables, you shall make houses for oxen and kine. And ouer the saide stables, lofts and roomes for haie & prouander for cattell, adding to the end of these great houses a little one, to keepe calues in of both kindes, which you haue wained; with intent to bring vp for further seruices: at the ende of all these beast-houses, and close to the same you shall appoint a dogge-house, if you like not better to place the same in the midst of your base court vnder some small shed laide ouer with boughes, conered with strawe, open at two places, to the end the dogges may take sent and breath on two sides, for this watch thus placed will serue for the whole base court.

In the place right ouer against the porch of the farme, shall open the doore of your owne house, which by a staire of eight steps at the most shall bring you to the first storie of the same: the entrie where-into shall be like vnto a plaine vacant alley of an indifferent widenes, with an outcast at the further end, vpon the garden, and that with a descent of a like paire of staires vnto those at the entrance. Vpon the right hand of this entrie shall be your kitchin, storehouse, buttery, and a place of recourse or lodging for two or three serving men. Betwixt which kitchin and butterie, there shall be a winding staire, which shall haue his foote into the kitchin, and thereby you shall go vp to the corne lofts there about: neere vnto your kitchin you shall make roomes to stampe and presse your grapes in. The first storie shall be of such length and bredth as your appointed platforme laieth out vnto you, borne vpon a raised vault from the ground, well staid vpon bearing pillars, and furnished with casements to take the aire at, vpon both sides, and that to the ende that you may haue an vnderstorie of like length and bredth to that above, which shall be a halfe-cellar, and a halfe-vault, which beside that it will preserue your lodging from earthquakes, will also serue you to couch your wines and cidres in, without any feare of rotting the hoopes, as also to hang your bacon and other powdred prouision, your oyles, candles, yea & your wood also: and your fruits likewise during the frost. Your lodging or mansion shall haue no more then this one storie, about which you shall raise no other saue onely your garners and galleries, keeping your house thereby of a lower pitch: and so lesse subiect to the rage of the windes, which will saue you a great deale of charges, when as you shall not be forced to vie the helping hand of tylers every howre. Vpon the left hande of the saide ally or entrie shall be your hall, through which you shall passe into your chamber, and out of your chamber into your wardrobe and inner chamber: and at the end heereof, if the bodie of your house shall haue compassed in place inough, you shall make a chamber to lodge strangers, the way into, as also out of which, shall be by a turning staire on that side toward the court; that so such

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strangers

The chiefeſt
lightes muſt be
toward the
Eaſt.

Garner.

The North
winde good
for the keeping
of corne.
A linnhouſe.

Turkie hens
and cockes.
Eſants.

Sheepcotes and
ſwineſties.
Lambcotes.
Cotes for wea-
thers.

Cotes for ſowes.
Cotes for goats.

Barne.

ſtrangers may be at their libertie, not moleſting or troubling you by their paſſing in or our: and this iſo be that your good liking and inclination mooue you not rather to build for the entertaining of your friends and other ſtrangers on the other ſide of your hall. You ſhall make your faireſt lightes and frames towards the eaſt vpon your garden, reſeruing onely halfe windowes for the ſidelying vpon your court, ſeeing they ſerue for no other thing, but that you may haue an eie vpon your folke, and to ſee who be commers and goers to your lodging, and at the end of every ſuch little chamber you ſhall make a priue, for the neceſſarie vie of euerie of the two ſaide bodies of the houſe. Whatſoener roomes ſhall be ouer head or aboue your alleys, hall, chamber, wardrobe, and chamber for ſtrangers, ſhall be for garners, that ſo you may lay apart and by it ſelfe, your Rie, Wheate, Pulle, and fruits, and caſt aſide your foule linnen, and they ſhall all of them haue prettie windowes vpon the north ſide, for that quarter is moſt coole, and leaſt moiſt: which two things are of great force long to preferue and keepe graine. At the end of your roomes for the treading and preſing of your grapes, you ſhall ſet vp your hen-houſe, and roomes for other fowles, faſhioned ſquare like a towre, but yet more long then wide or broad, in ſuch fort as that the loweſt roomes ſhall ſerue for water fowles, as for geefe and ducks by themſelues; and the vpper for thoſe of the year, together with their pearches and baskets to laie in: and you muſt make vnder the hen-loſt, ſome ſe-
parated rome for turkie chickins and turkie cockes: and vpon high vnder the floore that is ouer them, you ſhall contriue a cloſe roomes after the faſhion of a lettuce therein to keepe your ſeaſants. As for your peacockes you ſhall giue them libertie to roult euerie where. Neere vnto the ſame place you ſhall make your ground Doue-houſe (if the lawe will permit you ſuch a one) in faſhion like a round turrett in the midit of your court.

Set your ſheepe-cotes and ſwine ſties vpon the ſouth, in ſuch manner as they may haue no open place but vpon your court, and vnto the principall ſheepe-cote you ſhall make a partition of verie high hurdels, to drawe the lambes from the ewes, as alſo the rames in like manner: and cloſe vnto theſe ſhall you make your ſwineſtie, raiſing two incloſures of wals wel dawbed on both ſides, the one for the ſowes, and the other for the hogges. In like fort you ſhall deale with goates making ſeueral cotes for them; and the vpper parts of all theſe ſhall ſerue for garners to lay their meat and whatſoever foode neceſſarie for ſuch cattell.

Right ouer againſt theſe ſheepe-cotes you ſhall make your barne, with his great doore of the widenes of the middle baie, and that to giue light to the threſhers: ouer the porch of the ſaide barne (if the lawe will not permit you to builde a douchouſe on the ground) you ſhall

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ſhall make you a place to keepe birdes in, of the ſame bredth with the porch, and as high as you will, the loweſt part of it ſhall ſerue for birds to keepe themſelues in, when either the raine or too much heate of the ſunne ſhall annoy them. One of the ſides of your barne, all along for the ſpace of three baies ſhall ſerue to put your rie and wheate in, and the other ſide for almuch length ſhall containe your pulſe or March corne: the middle part is that which is of the bredth of the porch, with his rooffe aboue.

And betwixt the ſheepe-cotes and ſwine ſties, right ouer againſt the porch of the barne, you ſhall make a place of a competent height in manner of an appentice to ſet your ploughes, great carts, draies, rumbrels, waines, and other inſtruments and furniture for husbandry, if you pleaſe not rather to make the ground worke of your place to keepe and nourish byrds in, to ſerue for theſe purpoſes, when as your authoritie will not beare you out to build a douchouſe on the ground, bicauſe you hold not in fee farme, or coppiehold.

Vnder or vpon the ſide of your turneſtaires according to the bredth of the bodie of your houſe, your farmer ſhall haue a way into the gardens: but you your ſelfe ſhall haue your way in by another winding ſtaire, which you ſhall make to deſcend from aboue, from your alley that is ouer them: the one of which gardens, as that one the right hand ſhall be for pot-herbes, and the other for quarters and pulle, together with a place for Bee-hyues.

At the end of a great ally which you ſhall make from your winding ſtaire to the wall of your orchard, running betwixt the two gardens, without any manner of partition, except two hedges of quickſet, ſhall be your orchard ſeparated from your other gardens, by a wall continuing al along the two ſides of the incloſure of your place. And in the middeſt of the ſaid great ally, there ſhall be wels to water by pipes and ſpouts, ſo much as is needfull in the gardens, if it like you not better to conuey ſome fountaine that way, or elſe to ſeek for the heads of ſome ſprings, or elſe to make a celterne wel mortered to receiue and keepe raine water.

The Orchard ſhall make the fence on the ſide toward your houſe, and by it you ſhall make your waie into your feeding or paſture grounds, lying along by the ſides of ſome greene and flouriſhing water bankes, along the ſides of which brooke as alſo about your ponds of ſalt and freſhwater fiſh, you ſhall plant willowes.

Where you enter into your orchard out of your garden, you ſhall on the one ſide make a nurserie for ſeedes and kernels, and one the other ſide for ſtockes and plants, and in the midit the rankes of remooued and grafted trees, and at the end belowe you ſhall plant by ridges your Oliues, which may for their better proſpering take the benefit of the coolenes and moiſture of ſome ſmall brooke.

The

The back gate.

The false gate (otherwise called the backe or fildes gate) on that side toward your meddow, made for your owne going in & out alone, shall be set out and garnished with tow Cheurons, set vpon one maine timber and no moe, and fower or five battlements above, and shut with a strong doore: for that way you shall go into your house priuily, and in like sort goe forth againe, when it seemeth good vnto you, without your seruants their priuie, and for your auoiding of the noisomes of the beastes houles and of your great court. And to this end you shall haue a speciall passage from your stable or garden not farre from your house wherein you treade your grapes, to driue your cattell by continually.

The building must be according to the revenues of the house.

Notwithstanding all which, yet my meaning is that your cost and courie in building should be according to the revenues of the grounds or value of the profits, and that (as saith *Cato*) the dwelling house be not set after seeking of groundes, nor groundes caused to goe seeke houses and roomes: for great plots of building and inclosures of pleasure, cost much to build and maintaine: and buildings which are lesse then were requisite for the profits of the groundes, are a great cause of much losse in the fruites of the same.

The sixth Chapter.

The dutie of a father of a familie, or householder.

The father of a familie must haue skill in matters of husbandrie.

After I haue thus disposed of roomes and building, I wish and desire that the Lord of the Farme may be a man of great knowledge, well acquainted, and giuen to matters of husbandrie: for who so is ignorant of them, hauing had but small practise in the, as also he which doth take his chiefest delight in other things & spendeth his time other wise, must of necessity commit himselfe to the mercie and discretion of a farmer, which will mocke him to his face, and will impair his groundes and house also, heaping thereto a world of quarrels and suites which he will raise; or else he must trust to some other accomplisher of the busines either in gouerning or waiting and attending, & he asking counsell of other the farmers thereabout, they will make him beleeue things to be not so good by the halfe as they are. And indeede wee reade for a certaintie in the Romaine histories, that the earth was neuer so fruitfull, as then when it was allured and wonne by the industrie of the famous Romaine citizens, and deliuered out of the tyrannous handling of grosse-headed peasants, whom wee see before our eyes, notwithstanding that they are altogether ignorant, to growe rich at our costes and charges, and to the great spoile of the ground which they husband and till. There is nothing comparable to the ouer-looking eie of a prudent and discrete

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erect Lord, and one that is accustomed to husbandry, and which looketh after and contenteth himselfe with such estate as may stand with his profit, and keepeth to himselfe the principall charge, which is a watchfulnesse and earnest desire to preferue his goodes, and hath alwaies care of his companie, and farmeth not, nor yet renteth out any thing but that which he will haue nothing at all to doe withall, except a little oversight: neither yet would I haue him in so doing, that he should passe any bargain by the way of Notaries or by writing: for by this meanes he robbeth himselfe of his libertie. Let him learne well to know and vnderstand the natures and choise of men, cattell and groundes, and let not that worke possibly fall out, which he himselfe knoweth not to doe, if he should stand in neede, or else to giue directions in and to commaund vnto others; at the least let him vnderstand the times and seasons when, as also the manners how things were accustomed to be done. For as a man which seeth not any place, whereby he may giue light to another, can neuer lighten him so well: euen so that Lord of a farme which vnderstandeth not, neither knoweth the seasons and proper times for to do any thing belonging to his gouernment & iurisdiction, neither yet the ordering of things, to execute euery thing accordingly, shall neuer know so well what to commaund, and doth nothing to the workman but trouble and greeue him; and it is the manner of men to mocke at such a commaund and will things to be done which are nothing to the purpose, but must afterward be vndone againe, or else abide without any profit. This is it which the great husbandman *Cato* hath written, that the ground is very ill intreated and greuously punished, whose Lord and owner knoweth not to teach and commaund that which is to be done: but must depend and relie wholly vpon his farmer.

I meane all this while, that the abode of the owner of the farme is *7* hee beeth key vpon his inheritance, and that he haue the royaltie and chieftie of the whole, and that he doth withdraw himselfe from home, and secretly returne thither againe, when it shall seeme good vnto him, to keepe his people continually in doing of their office and charge: this is the cause why among the rest of his buildings, we haue counselled him to provide a backe gate in the end of his inclosure. Let him not go to see the towne, except it be vpon his earnest affaires, and let him commit his suites to be followed (which without great losse he cannot let passe and neglect) by some faithful attorney, to whom he shal giue nothing but the onely counterpaine of his euidence: and being in the towne let him not goe to see any man therein, except it be in winter, or at such time as when his haruest is in, and his seedetime and first order be dispatcht, to the end, that by one and the same meanes he may attend vpon his causes in controuersie, and goe about the getting in of his debts: I wish further that he carie himselfe pleasant and courteous where,

vnto

Men cannot
abide to bee
roughly in-
treated.

vnto his folke, not commanding them any thing in his choler: for boisterous and rough handling wil preuaile as little with men, as with stiffnecked iades. Let him speake familiarly vnto them, let him laugh and iest with them sometimes, and also either giue them occasion, or else suffer them to laugh and be merrie. For their vncessant paines are somewhat mitigated, when they are vouchsafed some gentle and courteous intreatance of their maister towards them. Notwithstanding I wish him not to be too familiar with them for the auoiding of contempt: neither would I haue him to acquainte them with his purposes, except it be sometime to aske their counsell in a matter, and let him not spare sometimes to seeme to doe after their aduise, though he had determined the same course before: for they will worke with more cheerefulness, when they thinke that the matter is caried according to their inuention. Let him maintaine the cause of his neighbours, and not to arrogate vnto himselfe or take any thing vpon him as commanding them, let him also relieue them in their necessities. And yet let him not lend them except it be some small thing, and such as he had rather loose then aske twise, except it be in their extreme neede and necessitie. Let him patiently and quietly beare their tedious and troublesome natures, whom he knoweth to enuie and repine at him, neuer falling out with them, or giuing them euer any iust occasion of displeasure: but winking at that which he knoweth of their nature and naturall inclination, let him pleasure them to the vttermost that he can, and seeme to be at one with them, as if he had neuer vnderstood any thing to moue him to the contrarie. And thus he may purchase peace and rest.

The seuenth Chapter.

The office of the farmer.

TAke vnto you for your farmer a man of indifferent yeeres, not sickly, but lustie and strong, and of the same countrie and soile that your farme lieth in, if it be possible, and him such a one, as whom you haue knowne of long time, or else by the report of honest men haue heard of, to be a good man, and his wife also to be a thriftie huiuswife, and his children well nurtured. Such a one as hath no farme or inheritance neere vnto your house, who from his youth hath bene hardly brought vp, and well experienced in matters and busineses belonging to husbandrie, or otherwise by meanes of great diligence and good will toward the same, hath attained the mysterie of husbandrie. One who is a sparing and sober minded man, not poore and very needie, a gadder to townes, quareller or haunter of alehouses or tavernes, not suffering any thing to goe backward, or by little and little to come to nothing: one that will rise first and goe to bed last,

not

the Countrie Farme.

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not haunting markets or faires at townes if it be not vpon verie urgent necessities, not admitting of new waies or pathes, and breaches into his groundes, or suffering any incroachment to be made vpon the least part of the inheritance belonging to the Farme: for an inch of ground lost in one yeere is worth a foote within two yeeres after, which will not vndertake to lodge any guest if hee bee not the very friend and familiar of the Lord of the soile; which is giuen to haue himselfe & all his family cloathed rather for profite then for pleasure, as namely, to saue them onely from the winde, colde, and raine, for which purpose shall serue garments and lleeues made of skins, caps, clokes with hoods or callockes of canuasse. For by this meanes there shall be no day so boisterous and cruell, wherein they may not worke abroad; one which will not haue any other to his seruant, but such as is fit for the busines belonging to the farme, and for the worke and profit of his maister. Not giuen to play the marchant for himselfe, nor to lay out his matters money in cattell and other marchandise. For such busineses doe turne away and hinder farmers from attending vpon the affaires of the house, and cause them that they are neuer able to render any sound account vnto the Lord of the farme: and againe if they be demaunded such moneyes as they owe, they shew you nothing but layings out and costs in stead of pence. Such a one as will make no bargaines when he is in drinke. And for writing and reading it skilleth not whether he be able to doe it or no, or that he should haue any other charge to looke vnto besides that of yours, or else that he should vse another to set downe in writing such expences as he hath laid out; for paper will admit anything. Again you shall not put him to make reckonings of long time, neither yet of moe things then his memorie may well carrie away. It behooueth that he bee skilfull in all things, for which he hath tooles, instruments and handie worke to exercise himselfe with and in, about his matters of husbandrie. As also that he knowe to gouerne and amende all such tooles as he hath the handling of, or which his folke vse: otherwise if there should but neede a handle to a spade, or a naile to a horse or rumbrell, there must presently be admitted into wages a naile-smith for the cart, and a shoo-smith for the horse. This his knowledge shall also serue him to iudge if he be well dealt withall by such craftsmen, as to whom he shall of necessity be driuen sometime to commit, either to be mended, or else new-made, the instruments requisite for his busines. He must haue tooles and instruments, twise so many in store, as he vseth to haue workmen, to the end they neede not to borrow any thing of their neighbours, for otherwise he shall lose more in daies workes not fulfilled, then would pay for the buying of his iron tooles. Again let him at the first time doe his worke so well, as that he need not to go ouer it the second time. For in attempting to mend that

Husbandmens
apparel.

To know so
write and read
is not necessarie
for a farmer.
Paper endurable
all things.

A farmer must
haue much
knowledge.

The eight Chapter.

*That the farmer must haue knowledge of the things foretelling
raine, winde, faire weather, and other altera-
tions of the seasons.*

*The foretelling
of raine.*

YOur farmer, although he neede not to be bookwise, notwithstanding by longe and assured experience must haue some knowledge in the things foreshewing raine, wind, faire weather, alterations and changes of the aire, of all the parts of the yeere and of the qualities of the tyme, of tempests, lightnings, thunders, coldes, frostes and haile, that so according to the fitnes of the seasons hee may begin himselfe, and let all other his workemen to their labour.

He shall knowe before hande that it will be raine by these and others such like signes: if the moone when she is verie newe haue her hornes obscure: but if the higher horn of the faide croissant be more obscure and darke then the lower, it will raine about the last quarters: but if the lower be more darke and obscure then the higher, it will raine in the first quarters; and if it bee blackish in the midst, it will raine at the full moone: if the croissant or bodie of the moone hang sagging and looke toward the west, it is a signe of raine: or if the moone being in the full be compassed about with vapours, and haue one or two blacke and thicke circles about it: or if the moone haue a pale face and colour, he shall marke whether the fourth, or as some will haue it, the fift day of the age of the moone be raine: for in these daies lieth the manifestation of whatsoever shall follow in the whole course of the same, whether it be vnto windes, or vnto raine or vnto faire weather. He shall also see before that it will be raine, if the sunne be red at his rising, and by and by afterward become blacke, if round about the beames of the sunne at the rising thereof, there appeere a little darke cloude: if at the rising thereof it seeme hollow and as it were sunke, or if it haue some red clouds about it, mixed with other blacke ones, or some what grayish, or if it haue a circle about it like to that of the moon: if at his rising it cast forth certaine beames or clouds toward the west or southwest wind. If at the rising or setting thereof it haue his beames maimed, shortned, faint, and weake: if when it riseth it haue his beames troubled and incombred, and yet not through the occasion of any cold: so if when it riseth it cast forth his long and stretched out beames crookedly and overthwart the clouds, notwithstanding that as concerning all the rest it be verie cleere and bright: if before it rise it cast and put forth certaine beames: if at the rising thereof the clouds be red as well in the east as in the west: if when it setteth there appeere neere vnto it vpon the left hand a little small cloude,

cloude, or if in setting it shut vp it selfe in whitish cloudes, like vnto fleeces or cardings of wooll, and that they do spread themselves broader and broader, it will raine within a few daies: if the other planets be also compassed about with a circle, it is a signe of raine: if the starres do not twinkle or giue their accustomed glimces, or shewe more great, or haue about them some small circle, it is a signe of great store of water. It is also a signe of raine if it lighten in verie faire goodly weather, and when the skies are cleere and beautifull: if in sommer the lightnings do exceede the thunder in quantitie: if it thunder at high noone: if vpon the tops and highest parts of the hills there fly scatteringly and in wandering sort, thicke and grosse cloudes: if after that raine is ceased, there rise a sharpe and colde wind; for thereby the raine will begin againe afresh: if little birdes haunting the fennes, be continually washing themselves in the water: if the crowe do wet her head at the brinke of the water, or wade into it, and crie verie much toward euening: if the rauens sound out her song from the hollow of her throat, & boast hirselfe of hir wings: if the geese cry & fly more then they haue bene accustomed: if the bees will not flie farre from their hives: if the heron wander and whirle about to and fro in the midst of the fields all fadde and lowring: if oxen eate more then ordinarie, lie downe vpon the right side, looke toward the south, like their hooves all about: if the kine looke vp into the aire, and drawe in the same: if the asses braie: if cockes crowe at all houres, and chiefly at euening, when they are vpon their perches; for the crowing of the cocke at an vnusall houre, as at nine, ten, eleven a clocke at night, signifieth indifferently change of weather from drie to moist or contrarie: if the salt become moist: if the common issues or priues doe stinke more then vsually: if such creatures as are gentle take not so good rest and continue not their peaceable courses as they did before: if the woolues yell and runne neere about houses: if spiders fall downe not being blowne downe of the winde: if dogs tumble and wallow on the earth: if pigeons come late home to their house: if flies, waspes, and hornets, fleas and knats bite more keenly then ordinarily they are wont: if the sound of bells be more loud and shrill, and heard further off then they were wont: if the cranes forsake the valleies and returne at a verie good houre: if in sommer it lighten when it thundreth not: if asses, old and yong mules without present occasion do rubbe their cares a great while: if the tezill gathered and hanged vp in some part of the house do shut vp and close his prickles, as taking a new shape, and casting off all his roughnes: if the sparrow crie carely: if the little frogs croope more then ordinarie: if the soote of the chimney fall hastily and in great quantitie: if the ashes clutter together into bals: if the oile sparkle in burning lampes: if the three leaued graske do close vp it selfe and gather together his leaues: if the

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swine

swine do play a long time, and runne to and fro, shaking and tearing what they haue taken in running: if the wormes come out of the earth: if the cat after that she hath a long time liked the sole of her foote and trimming the haire of her head, doe reach the saide sole of her foote oftentimes ouer her eare.

Signes fore-
telling great
Raine of raine.

Likewise he shall foretell great abundance of raine, if the cloudes be darke, deepe, and thicke, if the drops of water falling from the skies be somewhat whitish, and make great bubbles and great fals heere below: if the raine fall mildely, and begin to fall with small drops: if the water fallen vpon the earth in great abundance without any winde, be incontinently drunke vp of the earth: if the waters of the fennes and standing pooles grow warme without the heate of the sunne more then ordinarie: if hens with their chickens by and by in the beginning of the raine doe flie vnto their houses: or if in the morning they come forth late and as it were not vnconstrained to their feeding: if the heavenly bow (called in Latine *Iris*) do stretch it selfe towards the south, or if it appeere double, triple, or fourefold in the heauens, and if it appeere after it hath rained, the feare of future raine is not quite abandoned.

Signes fore-
telling snow.

He shall foresee times of snow in winter, if he perceiue that the cloudes of darke ones become as it were whitish, chieflie when the north winde bloweth: if round about the Sunne or the Moone there come diuers pale circles, or halfe red ones: if in the time of great cold the aire grow thicke, and somewhat rebared of his sharpenesse: if it make a drie colde without any frost: if together with many signes of raine, there appeere many alio of cold approaching.

Hails.

He shall iudge in like sort of haile, if in the spring or Autumne, he see that the cloudes of blacke and darke ones, become whitish: or if about the moneth of Aprill together with many signes of raine there be mixt darke and whitish clouds.

Signes fore-
telling winds.

He shall giue good heed to the tokens foreshewing future winds, and they are these: if the sunne at his setting be red: if the sunne set amongst reddish clouds: if the sunne all the day long, or a great while before his setting haue carried a purple colour, and setting seemeth greater then ordinarie: if the moone haue a red face: if the cloudes in a faire season and beautifull skie bee carried on high: if the cloudes appeere in the heauens gathered together as they were flockes of sheepe: if forrests and the high tops of mountaines doe make a noise: if the starrs of heauen runne euerie waie: if they seeme more grosse, and of greater light then vsuall: if it thunder in the morning, or in winter: if in the spring time it thunder more mightily and after then it lighteneth: if the sound of bells be sometimes heard very easily, and by and by not to be heard: if the sparrowes do sing and chirpe beyond measure: if the dogs tumble themselues vpon the

the ground: if the webs and small threads of the spiders doe flie in the aire: if the duckes doe spread and flicker with their wings often and a long time together: if the heron crie toward night as he is flying: if the flame of the fire cast forth many small sparkles: if the wood do crackle and breath out winde more then ordinarie.

He shall foretell the hapning of any thunder, brightness, lightning and tempest, when he shall see that in the morning and euening in sommer, or in the beginning of Autumne the sunne yeeldeth a greater heate then ordinarie; and when there appeareth in the aire a verie thicke and deepe cloude: if the winde called *Typhon* causing whirle-windes doe blow ragingly, and that the aire be full of many thicke and darke cloudes: if the daies in sommer or autumne be more frequent & hot, then the season of the yeere can naturally beare, and that sometimes at the sun-set there appeare a rainebow toward the West: if there flie in the aire many aire impressions and burning flames.

The signes fore-
telling thun-
der, lightnings,
and tempests.

He shall be assured of faire weather when he shall perceiue that the sunne sheweth it selfe cleane at his rising, or cleere and shining at his setting, hauing about it many small cloudes apart one from another, and withall somewhat red and pleasant: when the sunne in the time of raine setteth, hauing his face red and drie: and when the day-breake, which men call the morning, shall appeare of the naturall colour of white: and in deed the Prouerbe (A drie euening & a white morning, setteth the pilgrime a walking) teacheth as much; if when the moone is three or foure daies old, it shew it selfe pleasant & cleane without spots or clouds: if when it is in the full it be seen cleare, & that that part of the heauens called *S. Iames* his way appeer cleer & bright: if at euening there appeere many lightnings not accompanied with thunders, or cloudes: if at euening or morning (at what time of the yeer soeuer it be) the dew fall in great abundance: if the northern wind blow strongly; if the owle after sun-set doe come forth and whup all the night without ceasing; if the little flies before sun-set do swarme together, and sport themselues in the sun-beames; if the crows flock together in great companies and call with a full voice; if the crowe call early in the morning: if the bats doe come forth of their holes at sun-set, and flie vp and downe in the open aire: if the cranes flie high and doe not betake themselues verie quickly to a lower pitch: if water foules do haunt somewhat far off from the side of the water.

And although that the parts of the yeere ordinarily haue their beginning and ending at a certaine time, as the spring beginneth about the seuenteenth of Februarie, and endeth about the seuenteenth of May, and so consequently of the other: notwithstanding, for as much as these parts and seasons doe square and fall out of order, sometimes sooner, sometimes later, the good husbandman shall haue ouer and aboue the common, certaine signes and tokens to foresee the be-
ginnings

Signes fore-
telling the be-
ginning and en-
ding of times.

ginnings and endings of the time of the yeere as they may fall out extraordinarily. As if he know that water fowles forsake the water, or that the house-nightengall, especially the male, doe sing more then any of all the rest: if the cranes flocke together, and returne vnto the place from whence they are come: if the geese fight together for their feeding place, being in great leanenes; or if the sparrow more then ordinarie call betimes in the morning, hee shall say that winter is at hand. In like manner, if he see that the western winde begin to blow, and that the cold rebareth: if the swallows do returne in flocks: if the ducks haue their breast-bone white at the ende of winter, he shall iudge, that the spring will be verie quickly: for such creatures do sensibly feele and obserue the bounds and approches of seasons, howsoever out of coultre and extraordinary that they be.

Signes fore-
boding cold.

If in winter in the beginning of frosts, he perceiue that the birds haunting standing waters, do betake themselves to foulds and riuers, which are not so apt to freeze, or that the snow falling from the skies is but in small and thinn flakes: if at the beginning of frost there fall some small, round & white haile: if the little birds do hide themselves in the bushes, and seek for their living neere to townes and villages: if the fire giue a more shining flane, and make a hotter coale: if that woollen or linnen dript in water doe by and by freeze: if the vtmost parts of the body become suddenly cold: if in winter the things which were wont to be moist & wet, are espied to become dry: if the drops of water coming from the roofes of houses do fall one a good while after another, he shall hold it for firme, that cold is neere at hand, or else that that which is already will be very violent & of long continuance.

A long winter.

He shall prognosticate the length of winter, when he shall see that the oakes will be full of acornes, or when the ducke at the end of winter shall haue a red breast bone, or that the hornets doe appeere before the end of October; or that cattell which goe together in herds do trample the earth to mire.

The beate of
Summer.

He shall iudge great sommer heat to ensue, if he see that the rams and old sheepe doe couple together oftentimes in the spring: for so indeed of the constitution and temper of one part of the yeere, a man may easily iudge what will be the temper of another: for ordinarily, if one part or quarter of the yeere be cleere, faire weather and dry, it must needs fall out that the other should be rainie: as for example, a rainie winter doth commonly follow a drie autumn: in like manner, a drie spring commeth after a rainie winter: and so consequently the other parts of the yeere do carrie themselves in heate, cold, moisture and drinesse. Generally, he shall be able to prognosticate of the state of the whole yeere, following the prognostications of auncient fathers as concerning the day whereupon the first day of the feast of the Natiuitie or new yeeres day doth fall. For if it fall

vpon

vpon the Lords day, the winter will be milde and cleere, the spring delightfome, windie, & moist; there shall be peace; cattell shall be at a good price; all maner of good things shall abound; olde things shall die. If it fall vpon a Munday, the winter shall be indifferent, the spring in like manner; the sommer windie and thundering in diuers places; the time of haruest temperate; wine shall abound, but not honie; diuers diseases shall raigne; some great Princes and Nobles shall die. If it fall vpon a Tuesday, winter will be windie; darke and snowie; the spring cold, drie and moist; the sommer windie and moist; Autumne verie inconstant; women shall die; there will bee great danger to such as are vpon the sea; vprores will happen betwene the people and their superiours; some fruits will be deere. If it fall vpon a Wednesday, winter will be verie sharpe; the spring verie bad; a good sommer and a cold and moist haruest; wine, come, and fruits will abound, if they be not spoiled by men of warre; yoong folke and children shall die, and cattell likewise. If it fall on a Thursday, the winter will be good, windie, and rainie; the spring windie; sommer good and rainie; autumne moist; wine, come, and fruits will abound; great Princes will die; there shall be peace betwixt cities and their Princes. If it fall on Friday, winter will be constant; the spring good; sommer inconstant; and haruest time indifferent; the good things of the earth will abound; sheepe will die in some countries; there will raigne paines in the eies, and there will some tumults and vprores be made. If it fall vpon a Saturday, the winter will be darke, cloudie, and sharpe; the spring somewhat windie; the sommer moderate, and haruest time drie; the fruits of the earth will not be plentiful; fishes will be in great plentie; there will fall out perils vpon the waters; great spoiles by wilfull fires will be committed, and wars will raigne.

In like manner according to the disposition of the sunne and the twelue daies of the feast of the natiuitie, he shall be able to foretell the inclinations of yeeres; for if the sunne be altogether beautifull and cleere vpon Christi day, the yeere will be good and peaceable; if vpon the second day, gold and wheate will fall of their former valew and price; if vpon the thirde day, Churchmen will fall at variance; if vpon the fourth day, yoong folke will haue troubles; if vpon the fifth day, all goods will increase; if vpon the sixth day, gardens will prooue fruitfull; if vpon the seauenth day, there will be great dearth and famine; if vpon the eight, abundance of fish; if vpon the ninth, a good season for cattell; if vpon the tenth, great heaumes of times; if vpon the eleuenth, great foggie mists and mortalitie; if vpon the twelth, vprores and warfare. Wherefore if the sunne shine in those twelue daies, and that continually, all these things will come to passe.

He shall likewise prognosticate and foreknowe the disposition of

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the whole yeere, by the disposition of *S. Pantles* day, which is the twentieth fifth of Januarie: for if this day be faire, cleere and smiling, it promiserh great abundance of the fruits of the earth: if vpon this day there be any mistes, there will ensue great death of cattell: if it raine or snow, we are to feare a great dearth: if it be windie, there will bee warres and seditions among the people.

The knowledge
of the disposition
of every mo-
neth.

He shall know how every moneth in the yeere will be inclined, by observing the inclination of the day of the natiuitie and of the festiual daies following: in such sort as looke what weather it is vpon the day of the Natiuitie, such weather will follow in the moneth of Januarie, and so consequently the other monethes will carrie themselves, and answere suitably to the other of the twelue festiual daies.

A forward or a
backward
yeere.

He shall bee carefull to foresee whether the yeere will fall out forward or backward: if after vintage there fall raine, especially before the end of the moneth of October, the yeere will prooue forward: if it raine about the end of October, it will prooue indifferent: but if it begin to raine shortly after in Nouember, the yeere will prooue backward: and then it will behooue the good farmer to sowe in greater quantitie, for that before the mid time, much of the corne doth rot and spoile in the earth.

A good or bad
yeere.

He shall not be ignorant of the tokens foretelling whether it will be a good or a bad yeere, and proportionably to this he shall learne to vnderstand how haruest hath bene gathered rounde about him and in neere adioyning countries, whether their countrie corne hath bene accustomed to be carried: as also in such countries as from whence they haue bene wont to haue some brought, to the end that by buying before hand or euer that scarcitie pinch, he may either by keeping of his store, or else by husbanding of it sparingly and thriftily, reuerue such corne as he shall know to be likely to prooue deere, and that not only for the maintenance of his familie and his seede, but also to the ende he may take his best time and place to sell his owne for his most profit.

Signes fore-
telling fruit-
fulness.

He shall know a fruitfull and fertile yeere, if he see in the oke apples, commonly called gals, a sic ingendred and bred: if the haruest time be beautifull and faire weather, the spring reasonably hot: if there fall good store of snow in his due time and season: if trees beare but small store of fruits: if rivers & floods doe nourish but small store of fish: if the broome be fruitfull and abundant in bringing forth of flowers: if the walnut-tree from his beginning to flourish, be more laden with flowers for the bearing of fruites, then with leaues: if the masticke-tree doe bring forth his fruit well liking and fed: if the wilde onion or sea onion called *Squilla*, cast forth a faire and great flower, which withereth not so speedily.

A barren yeere.

On the contrarie he shall feare a barren yeere, when he shall see that

that the nut of the gall shall bring forth a spider: if any comet appeere in the firmament: if the spring and sommer be too moist; if the earth and aire be full of spiders, wormes, woodsecre and other such like vermine: if the wallnut tree haue moe leaues then nuts: if the deaw and frost come in vnseasonable times: if birds in great flockes doe leaue and forsake the Islands and woods, and betake themselves to the plaine fieldes, townes and villages: if the crow continue not to abide in the woods: if there fall out great store of beanes and likewise of fruits and fishes: If there happen any great eclipse of the Sunne at such time as the corne is in flower, for the eares thereof will haue no corne in them, which also falleth out in like manner, when the seede which is sowne, is either a leane, a light, or a halfe rotten corne.

He shall know whether corne will be deere or cheape for the present yeere, and in which of the monethes thereof. Let him choole out at aduerture twelue graines of corne the first day of Ianuarie, let him make cleane the fire harth and kindle a fire thereupon; afterward let him call some boy or girle of his neighbours, or of his owne house; let him commaund the partie to put one of these graines of corne vpon the harth made very cleane and hot; then he shall marke if the laide graine doe leape or lie still: if it leape a little, then corne shall be reasonably cheape; but if it leape very much, it shall be very cheape: if it leape toward the fire more or lesse, corne shall be more or lesse deere: if it lie still and leape not, then corne shall stand at one price for this first moneth: he shall doe in like manner with the second graine for the moneth of Februarie, and so in order with the rest of the graines for the rest of the monethes as they follow. Furthermore for the better preservation of himselfe and his familie from diseases as well contagious as others caused of distemperature and ill disposition of the aire, it will be good that he should haue some foresight to discerne what diseases in likelihood may ensue. But the most certaine and sure token is, if at the end of the spring or during the sommer it raine ordinarily, and that in great abundance, and accompanied with great and vehement heat without any winde at all: or if the southerne winde blowe, or that as yet there haue not fallen any raine at all, if the aire be full of fogs and mistes: if the sunne endure any eclipse, or if there be seen in the aire any comets or fire flames: if the trees doe seeme to flame and burne: if that the time of haruest, and winter bee verie foggie and yet notwithstanding rainie; if bread set abroad in the open aire doe in the night time drawe moisture vnto it, and become mouldie: if dogs run mad: if that it be found that wolues run into some townes being mad: if birds forsake their nests, egges and young ones: if there be a great death of sheepe: if that fennes be full of frogs: if wals be full of sowes, and such other like vermine: if vpon the way a man cannot but meeete with wormes, lizards, serpents and moules

Tokens fore-
telling corne
to be good cheape
or deere.

Signes fore-
telling a sickle or
sound yeere.

crept out of their holes and lurking places : if birdes fall dead out of the aire : if in the nut of a gall be found a spider : if yongue and old folke be troubled with the pockes and meales : if women with childe be brought in bed before their time : if in sommer after raine there be to be seene in the fennes great store of frogs hauing pale or ashy coloured backs and yellow bellies : if grounds planted with roses or with violets, doe bring forth and yeelde flowers in the beginning of Autumne.

He shall prognosticate great death of cattell, if he see that the leaues of the elmetree and peach tree doe fall before their time. And I would that all men vnderstood that I haue set downe these things without any mind to derogate from the good and almightie prouidence of God, who bindeth not himselfe to the orders and lawes whereunto he hath bound and tied nature : but altereth the same, euen according to his owne good will and pleasure, as being Creator of all things, and as vnto whom all honour appertaineth.

The ninth Chapter.

That the farmer must haue the knowledge of the motions aswell of the Moone as of the Sunne, and of the power and operations of them both in matters of husbandrie.

Notwithstanding that the consideration and obseruation of the motions, faculties, and effects of the starres, and chiefly of the two great and admirable fires of the whole world (called God by the mouth of *Moyse*, lights) that is to say, the Sunne and the Moone, doeth appertaine rather vnto some excellent Astrologian, then to a simple husbandman : notwithstanding forasmuch as the greatest part of matters of husbandrie, as beasts, plants, trees, and hearbes doe take their generation, nourishment, growth and perfect consummation, by the liuely inspiration, action, casting forth of beames and woonderfull moouings of these two organes and principall instruments of all the worlde : it is very expedient that the farmer and gouernour of a husbandrie should haue that knowledge gotten by long experience, which teacheth their vertues and powers in matters of husbandrie, to the end he may handle, manage, and order the same, according to the motions of those two great gouerners. So then to speake of the Moone in the first place (which by reason of being neereſt vnto vs of all the rest of the planets and celestiall bodies, doth worke her effect in like manner vpon vs as concerning our bodies, aswell as vpon the rest of earthly things) it is most certaine that in lesse then in one moneth it runneth all that course and way which the Sunne is in running all the yeere long : and that it hath no

The Sunne and the Moone great lights.

Of the Moone.

light of it selfe, but that it taketh and receiueth it all from the Sunne, giuing his reuerberations and reflexions vnto the earth, with more vehemencie when it is further off from the Sunne : as on the contrarie looke how much it commeth the neerer vnto her coniunction with it, so much the lesse light and force doth it impart vnto the earth. Heereupon it commeth that we say that the Moone increaseth or decreaseſh, not that indeede it doth increaseth or decrease (saue then when it is in his eclipse) being continually inlightened by the Sunne : but this his brightnes onely which it casteth and spreadeth vpon the whole face of the earth, doth onely increaseth and decrease. And this shining brightnes according as it is longer or lesser time, hath likewise more or lesse force to mooue the humours of natural things to worke their effects. For by how much the more that this light increaseth, by so much the more doth the moisture thereof spread and communicate it selfe abundantly throughout the outward parts : as on the contrarie by how much it waneth and groweth lesse, by so much the naturall humiditie and moisture doth withdraw and betaketh it selfe vnto the inward parts. This is the cause why men call the Moone the mother nurse, regent, and gouernesse of all such humidities as are in earthly bodies.

The cause of the growth and wane of the Moone.

Wherefore to speake first of fiede-beasts, the well aduised farmer shall not kill at any time whatsoever his porkes, muttons, beeces, kine, or other beastes, of the flesh whereof hee would make his household prouision for the sustenance of his family, in the wane of the Moone. For such flesh as is killed in the decrease of the Moone, falleth away and impaireth euery day, and also craueth much fire and time to make it ready withall : neither ought any man to maruaile or stande astonished at this, if he consider well that a sauage or other such like kinde of meate doth grow lesse by a quarter when they are boiled. Neither shall he make accompt of or buy any horse-flesh or other which was soled or brought forth in the decrease and olde age of the Moone, for that they are more weake and faint then the rest ; moreover they come to no growth, neither is their flesh of sufficient waight when they be killed. He shall neuer fish his pooles, fish ponds, ditches, or waters with salt fish, in the decay of the Moone : for both fish and other beasts of the water, especially they which are covered with shels or thicke scales, as craiesfishes, crabs, oysters, muscles and such like are found verie much impaired in their substance and leane in the olde age and wane of the Moone : and contrariwise grosse, fat, and full, when she is in her force and full. The faulckner shall chooſe rather the full moone to ſlie in then the wane, for that haukes and all birdes of the praie, are a great deale more nimble, sharpe, and catching about the full Moone then in any other time. The horse and beast subiect to any maladie of the eyes, is better at

case)

case in the decrease then in the increase or full of the Moone. He shall make provision of fats or of the marrowes of the bones of mutton, hart, beeſe, and others, if he have neede in the full of the Moone, not in the declining. Hee shall geld his bore pigs, rams, bull-calues, or bulkins and male-goates, when the Moone decreaseth: he shall set egges vnder hens or other foule in the new of the Moone, and principally in the first quarter.

Fruit-trees and others.

As for trees and other plants, the wise and discreet farmer will plant his fruit trees and others in the new of the Moone, and yet not before the first quarter. At the same time he will have regard to cut downe and loppe woode for his fell: but contrariwise such as he mindes to keepe for to build withall, when the Moone decreaseth being sure that all matter (be it to builde house, presses, bridges, and other things) being cut downe in the decrease of the Moone, lasteth a long time, and is found marvellous good, and yet better when it is cut downe rather at evening then in the morning, which thing may also be applied to hewen stone and millstones, when they be cut out of their quarries and pits. He shall plant his vine in the increase of the Moone, when it is fower or five daies old: he shall cut the leane vines, & such as are planted in a bad soile, in the increase likewise of the Moone, but those which are more fat in the going away of the Moone, seeing that thus they wil bring forth more grapes then if they were cut in the increase, inas much as then the moone itaying vpon them to soften them & make them fat, cannot chuse but cause abundance of cluſters and leaues: but cutting them the Moone being old, the wood becometh bound, and applieth it selfe onely to bring forth great store of fruite. He shall clenſe, prune, and cut at the foot, fruit-trees toward the latter end of the Moone, for so they will become better laden with fruit: he shall make his nurseries of kernels the Moone being ouer the earth.

To cleanse trees.

To gather fruites, Grapes.

To sow corne. To winnow or fanne, to ſearce and laie vp corne vnder locke. To grinde corne.

As for fruits, he shall gather apples, pearces, and other fruits, as also his grapes in the decrease of the Moone, because thereby the wines will be the better & longer kept, which otherwife would be in danger to ſowre & rot in the moneth of March following, being the time that men are wont to cut their vines. And which is more, he shall gather and carrie into his house whatſoeuer he would haue to indure and laſt long, at ſuch time as the Moone shall decrease. He shall ſow his corne, as wheate and other graine, he shall weede, fanne, ſearce, and gather together his corne vnder a locke, he shall grinde his corne the better to keepe it in ſlowre, in the end and old of the Moone: it is very true that the bread increaseth and profiteth more, if it be ground, the Moone increaſing and being new. He shall mowe and cut downe his corne with ſythe, the Moone waſting. He shall pull line, and pulſe at the ſame time: and yet indeed all pulſe gathered or reaped in the growth of the moone are of eaſier digeſtion.

As

As concerning hearbes he shall ſowe them the moone being new, and gather them whiles the moone increaseth in her light, as being then of farre greater force, then in the waſte and wane: at the ſame time he shall gather cowcumpers, gourds, mellons, citruls, pompi- ons, and all rootes which grow in the head, whether they be leekes, garlicke, radishes, turneps, lillies, ſaffron or ſuch like; except onions which muſt be dealt withall cleane contrarie: for they become a great deale more groſſe and better fed in the declining then in the augmenting or full of the moone, during which time they haue no ſuch force of greatnes of bodie; notwithstanding if they be ſowen or tranſplanted in the wane of the moone, and towards the latter end, they are a great deale more ſtrong, ſharpe, and biting, then if it were in the growth or full of the moone.

Onions ſowen in the wane.

Furthermore he shall cut downe his medowes for the feeding of his cattell, when the moone is new, he shall dung his groundes and make them fat in the increase of the ſame, in as much as the moone giueth no leſſe power vnto the dung to ſoften the earth, then it doth to trees, and ſeedes to budde, growe, and multiplie every one in his place, he shall water his medowes in the decrease of the moone.

To mow medowes. To dung them.

And he shall not be content to know what force and efficacy every quarter of the moone hath vpon beaſts, trees, plants, hearbes, fruits, and other things contained in this inferior world; but shall also be carefull to obſerue what power every day of the moone hath, not onely vpon beaſt and plants, but also in the diſpoſition and gouerning of man, to make his vſe thereof in the time of neceſſitie, and in time & place as occaſion offreth: following ſuch inſallible obſeruati- ons, as haue bene long continued, and which our fathers neuer attained vnto, and they be ſuch.

In the first day of the moone *Adam* was created: if any man fall ſicke vpon this day, the ſicknes will be long, but the partie shall reco- uer: the dreames which he dreameth in the night shall be found ioy- full: the childe that is borne this day shall liue long.

In the ſecond day *Eue* was created: it is good to take any voyage vpon this day, either by ſea or land, and the trauellet shall haue hap- pie ſucceſſe in all the places where he shall lodge and ſojourne: this day is good for the increase of poſteritie. It is likewise happie and fa- uourable to ſuch as shall haue any ſuits vnto princes, or other great perſonages: likewise it will be good to build and ſet vp vpon, as also to make gardens, orchards and parkes, to till the earth and ſowe it: a theft or robbrie committed this day will not long be vnfound out, for it cannot be concealed: if any one fall ſicke he will be quickly healed: if he dream in the night time, he muſt not reſpect it, for it ſhall come to no effect: the childe borne vpon this day thrueth and groweth iollicke.

In

In the third day *Cain* was borne: vpon this day no man is to enterprise any worke, either in gardning or planting, except that which he purpoſeth to looſe: who ſo falleth ſicke ſhall vndergoe and beare it with great paine and griefe vnto the ende, but by little and little keeping good order of diet, he ſhall recouer his health: any dreame dreamed this day or night ſhall come to naught: likewise the childe then borne ſhall be of long life.

In the fourth day *Abell* was borne: this is a good day to begin a worke in, to make milles in and to go vpon the water: a fugitiue or runaway, as alſo a loſt or ſtraied beaſt, ſhall be quickly found: the partie falling ſicke vpon his bed, ſhall hardly eſcape it: if the dreame be good it ſhall come to paſſe: if on the contrary it be euill, it ſhall not come to paſſe: the childe borne this day ſhall prooue a traitour.

In the fifth day *Lamech* was borne: if vpon this day any partie haue committed any thing by hap or accident, and ſlie for the ſame, he doth but looſe his labour by ſuch flight, for he ſhall by and by be puniſhed aliuē or dead: robberie committed this day ſhall not bee found out: who ſo ſhall fall ſicke vpon this day, ſhall neuer riſe again; the dreames dreamed ſhall be doubtfull: the childe borne ſhall die very quickly.

In the ſixth day *Ebron* was borne: it is good vpon this day to ſend children to ſchoole, and to go a hunting: theft or robbery committed this day ſhall be quickly found out; likewise the ſickneſſes which ſhall be taken, ſhall be ſoone healed; the dreames which a man ſhall dreame on that day are not to be diſcloſed; the childe that ſhall be borne, ſhall be of long life.

In the ſeauenth day *Abel* was ſlaine by *Cain*: it is good on this day to let blood, forſeene that the moone be in a fit ſigne; into what coaſt or quarter ſoener that a malefactor or theefe doth ſlie, both he and the theft committed ſhall be quickly found out: the ſicke ſoone healed: the dreames certaine and true: good to buie ſwine, and to make foode of all manner of beaſts: the childe borne ſhall be of long life.

The eighth day *Meſuſalem* was borne: it is good for traueilers: the patient taken with a diſeaſe, ſhall languish a long time: the dreames therefore ſhall prooue true: the childe ſhall not ſhew any good ſignes in the iudgement of Phyſiognomie,

In the ninth day *Nabuchodonosor* was borne: this ſaide day is indifferent: the dreames of the night come to paſſe incontinently; the partie that ſhall fall ſicke will eſcape, if he die not within eight daies, and therefore ſhall not languish or beare it mournfully; the childe borne vpon this day, ſhall be of a long life.

The tenth day *Noe* was borne: all good things done this day ſhall proſper; the dreames ſhall be of no effect; who ſo vpon it ſhall

ſhall fall into tribulation and aduerſitie ſhall not neede to feare; for it ſhall not long indure: likewise he that falleth ſicke ſhall die within ten daies, if he be not well ſuccoured: the childe borne vpon this day ſhall trauaile many farre coaſtes and countreies.

The eleuenth day *Samuel* was borne: it is good to change ones houſe in: a good and ioyfull dreame ſhall fall out to be true, and come to paſſe within a few daies: the partie lying down ſick vpon his bed, ſhall there continue a long time; and yet notwithstanding hee ſhall eſcape: the childe borne vpon this day ſhall be of a good ſpirit, apt and forward to all good ſciences, and of a long life.

The twelfth day is very dangerous, and therefore we muſt not doe any thing in it, for vpon this day was *Canaan* borne: who ſo ſhall fall ſicke therein, ſhall be in great danger to die within twelue daies: the dreames thereof ſhall be true according to their ſignification: the childe borne this day ſhall be altogether hypocritically inclined.

In the thirteenth day it will be euill to begin any worke: who ſo falleth ſicke vpon that day ſhall continue long languishing: the dreames thereof ſhall be accompliſhed within nine daies: the childe borne that day, ſhall liue long.

In the fourteenth day God bleſſed *Noe* & his works: he that falleth ſicke that day, ſhall amend againe quickly: the dreames thereof will be doubtfull: the childe borne that day will be perfect in all things.

The fifteenth day ſhall be indifferent, that is to ſay, neither good nor bad: the ſicke ſhall not die vpon his ſickneſſe whereinto he fel that day: the dreames thereof will be certaine, and accompliſhed within ten daies: the childe borne thereon ſhall not be ſubiect to women.

In the ſixteenth day *Iacob* was borne: for this cauſe it maketh good to buie and tame horſes, oxen and other cattell: the ſicke ſhall be in great danger of death, if he change not his aire or houſe: dreames ſhall come to paſſe: the child ſhall not liue long.

In the ſeuenteenth day *Sodome* and *Gomorrhe* was deſtroyed: it is ill to attempt and do any thing: phyſicke taken will do no good vnto the patient: the dreames will be verified within three dayes: the childe will not be prosperous in all things.

In the eighteenth day *Iſaac* was borne: it is good to be at leiſure, and to go about buſines: the ſicke ſhall be in danger of death: the dreame ſhall be true: the childe ſhall not traueile farre but he ſhall get great goods.

In the nineteenth day king *Pharaoh* was borne: this day is dangerous, wherefore it will be good to auoid company and drunkenneſſe, and to liue peaceable without dooing any thing: the diſeaſed will ſoone recouer: the dreame will prooue true: the childe will not be malicious or a mocker.

In the twentieth day the prophet *Iſaie* was borne: this is a good

day for the dooing of all things : the disease will continue long : the dreame true and apparent : the childe which shall be borne will be malicious and a mocker.

In the one and twentieth day was borne King *Saul* : it is good to reioice and cheere vp ones selfe in faire and honest apparell : good to buie prouision for sustenance : the theft committed will be founde out : the taken sicko in great danger of his disease : the dreame vaine and vnprofitable : the childe borne, subiect to indure great troubles.

In the two and twentieth *Iob* was borne : it is not good to goe about merchandise, nor to enterprise or vndertake any charge : the sicke shall be in danger to die of the sicknes that he shall take this day : the dreame shall be true : the childe borne shall be good and honest.

In the three and twentieth day was *Beniamin* borne : whatsoever a man doth vpon that day, it shall turne to his honour : the disease shall be long, but not mortall ; the dreames false ; the childe borne, a dissembling wretch and ill fauoured.

In the fower and twentieth day *Iaphet* was borne : it is an indifferent day, that is to say, neither good nor bad ; the sicknes will hold long, but the patient will recover : the dreame will be of no effect ; the childe that is borne will be milde and courteous, and will loue to make great cheere.

In the fife and twentieth mortalitie entered into Egypt : the sicke will bee in danger of death, the sixth day after the beginning of the sicknes ; the childe that is borne therein shall be subiect vnto many dangers, perils, and aduersities.

In the sixe and twentieth *Moses* deuided the sea, the same day died *Saul* and *Jonathan*, for which cause the day is verie dangerous, and not good to doe any thing in ; he that falleth sicke vpon that day, will neuer escape ; the dreames will prooue true ; the childe borne will not be any man of great prosperitie or pleasure, that is to say, neither poore nor rich.

In the seuen and twentieth, it is good to take paines in all maner of businesse : the sicknes will be variable ; the dreames will be doubtfull ; the childe borne will be mild and louely.

In the eight and twentieth, all good things will be good to be done : the sicke shall be recovered of his sicknes ; the childe borne shall be slothfull and negligent.

In the nine and twentieth day *Herod* caused the children to be slaine : this is a dismall and vnhappie day ; wherefore there must nothing be done that day, nor yet vndertaken : the dreames will be very certaine ; the sicke will turne sound ; the childe borne will liue and keepe societic in peaccable manner among men.

The

The thirteenth and last day, is good to doe all things in : the sicke shall be in great danger euen vnto death, but if he be well and carefully looked vnto, hee will recover ; the dreames will be turned into ioy within the fift day ; the childe borne will be subtil and deceitfull.

As concerning the Sunne (which is the other instrument of the whole world, performing the greatest part of his actions really and in deed, during the day whereof it is the author, as the Moone doth hers during the night, as being then, when she is in her force and vigour) it by his naturall heat, influence, actions, and casting forth of his celestiall beames, giueth vnto earthly bodies their forme and vegetatiue life, accompanied with certaine powers and vertues ; so farre forth as enerie naturall bodie is capable, and deserueth or requireth it. Which operations of the Sunne in these earthly matters, are wrought and effected by certaine his motions, accomplished in the fower quarters of the yeere, which is that time wherein the sunne dispatcheth his whole course. Wherefore the wise and prudent husbandman shall giue heede to the fower quarters of the yeere ; which are the spring, sommer, autumn, and winter, to the end, that according to the motion and power of the sunne in these fower quarters, he handle, manage, and gouerne all his affaires of husbandrie : and this is the thing that we will more particularly handle at large in the Chapter following, by the workes that the husbandman must do in euery seuerall moneth of the yeere.

The tenth Chapter.

The particular workes that a husbandman must be careful to doe enerie moneth in the yeere.

Furthermore, to the end that his people may not liue idle, and that they may not loose one small minute of time ; which being imployed about some one or other worke, he shall dispose of his workes so, as that they may euery one haue his certaine time, and he shall know at his fingers endes what things is to be done euery moneth and time of the yeere.

In the moneth of *Januarie* chiefly toward the end, he shall cut downe his wood, which he appointeth for building, or other worke, when the moone is vnder the earth : for the brightnes of the moone maketh the wood more tender, and the wood which shall be cut at such time, will indure a long time without rotting. He shall dung the fruit-trees, not letting the dung touch their roots. He shall graft all such great and little trees which bud betimes, as rose-trees, damaske-plumbe-trees, abrecke-trees, almond-trees, and cherrie-trees. He shall digge the earth for the casting in of nuts, almonds, and the kernels

nels of abreckes, peaches, and plums, and such others, in grounds that are cold and moist in the two first quarters of the moone. He shall cut his vine in faire and beautifull weather. He shall plough the grounds that are drie, light, whit, leane, sandie, full of rootes and great herbes, and which were not eared in October. He shall giue the second care vnto those his grounds that are most barren, and scatter vpon them the chaffe of beanes, wheat or barely. Hee shall cutte downe the boughes of the willowes for railles for vines and stakes for hedges. He shall prepare props and thicke square lathes to vnderfet his vines. He shall cut and take away the superfluous boughes of the trees, the moone decreasing. He shall turne the vppermost of all the dung made since *S. Martins* day vndermost, and contrarily to the ende it may be well rotten, when he shall carrie it out to spread it vpon his field and meadow. He shall furnish afresh or make new his carts, tumbrels, ploughes, & other his instruments necessarie for his husbandrie. He shall make provisions of verie sharpe iron tooles to cut and cleanse his trees and vines. Aboue all things; let them beware of sowing, because the earth as then is to open, heauie, full of vapours, and like vnto wooll not well carded.

Februarie.

In Februarie in the new moone he shall transplant vines of two or three yeere, which shall now alreadie haue taken good roote, but hee shall not touch them of one yeere which will not bee remooued, because of the small strenght which they haue as yet got. He shall carrie dung out into his corne fields, vineyardes, medowes and gardens. He shall cast trenches for the planting of new vines. He shall cut the rootes of the vines and set square lathes or props for the defending of them. He shall prune and clense the trees of whatsoever is superfluous. He shall cleanse them from wormes, filthines, and worme eatings, canker, and rottennes, which are to be found in the drie leaues. He shall make readie his garden grounds to sow and set therein all manner of hearbs. He shall giue the earth her second earing for the receiuing of beanes, barley, oates, hempe, millet, and such other feede of small pulse. He shall ouerlook his vines, especially those which he knoweth to be weake and tender. He shall repaire the hedges of his gardens. He shall plant woods for timber trees and talwood. He shall also plant the slips of oliue-trees, pomegranate-trees, quince-trees, fig-trees, poplar-trees, willow-trees, elme-trees, osiers, and others, as well fruit trees as wilde ones which haue rootes. He shall cleanse the doue-house, hen-house, and place where the peacocks and geese make their haunt: because that these cattell in the ende of this moneth begin to be hot and to tread. He shall ouerlook his warren to stoare it anew, and to hand some vp the earths. He shall buy Bees; he shall make cleane their hiues verie carefully and kill their kings. He shall buye falcons, sparrow-hawkes, and

and other birdes of the praie, which he shall put into Mue, in the end of this moneth.

In March, even in the beginning of it, he shall sow lyne, woade (if it were not sowne in Februarie) oates, barley, millet, pannick, hempe, peafon, lentils, rare euerlasting, lupines, small kindes of corne, as the fetch, fassels, & other such like bitter kindes of smal pulse. He shall giue a second earder vnto new plowed fallowes, which are now by this time wel amended & dunded, so as that he may make them readie to sow: he shall weede his corne: he shall get griftes to graft, when the sappe beginneth to climbe the trees, and before that they put forth any buds. He shall plant these fruits, great nuts, chesnuts, almonds, small nuts, filberds, and the stones of oliues, & apereckes, & diuers other fruites. He shall sowe diuers nourceries with the kernels of apples, pearces, mulberries, and such other like fruits: he shall plant such herbes as are set lowe and close by the ground, as the slips of artichokes, thistles necessarie for vse, sage, lauander, rosemarie, strawberrie, gooseberrie-bush, roses, lillies, citruls, cucumers, millions & pompions. He shall trim vp his gardens as wel for the kitchin or commoditie, as that which is drawne into quarters, or for pleasure, and shall sowe therein whatsoever necessarie seedes: he shall cut and vncouer the rootes of vines and fruit trees, to the end they may bring forth more fruit: he shall put dung to the rootes of the trees: he shall gather vp the lop-pings to make fewell of.

In Aprill about *S. George* his day, you shall set abroad your citron *April.* and orange trees, as also all such other trees as you had kept within house from *S. Martins* day, from which he shall remooue the earth from foote to foote, taking from them such roots as are put forth towards the vppermost part of the earth, as also al superfluous boughes, not suffering any one branch to excede another either in bredth or height. He shall plant, if he haue not alreadie done it, oliue-trees, pomegranat-trees, citron-trees, and mulberie-trees, and shall prune them carefully. He shall graft the fig-tree, chesnut-tree, cherrie-tree and orange-tree. He shall cut the new vine, for at this time it endureth best to be cut. He shall be carefull to feede his pigeons, because at this time they finde but little in the fields. He shall put horse to his mares, the hee-asle to the shee-asle, and rams to the ewes: he shall make cleane the hiues of the honie flies, and shall kill the butterflies, which abound when Mallowes are in flower.

In May he shall water the trees that are newly planted, he shall *May.* sheare his sheepe, fill vp his wines, gather great store of butter and make much cheese, geld his calves, & begin to looke to his bees and filke wormes, of which he shall gather together a great number: he shall weede his corne, cast the earth off his vines the second time, vncouering and freeing their rootes from the earth about them, to the

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end that the heat may not hurt them, he shal take away all the greene branches and tender boughes which beare no fruit, he shall crop the ouer ranke boughes of trees, he shall graft such oliue-trees, as must be grafted in the bud.

In Iune he shal make ready his threshing floor, & cause it to be thoroughly cleansed of straw, durt & dust: he shall cut downe his medowes, mowe his barley, crop his vines, thresh his corne to sow in seede time.

In Iulie he shall mowe his wheare and other graine vsed to make pottage of, he shall graft in the bud: he shall gather from apple-trees and pearc-trees the faulty apples & pears, and those which do overcharge the trees: he shall dig his vines againe the second time, and plucke vp from them the grasse called dogs tooth: he shall lay ceuen and fill vp the earth where it is any where cleft or broken, to the end that the Sunne may not burne before hand the vine: hee shall cut downe such wood as shall serue for his fewell all the yeere long.

In August he shall pull his line and hempe: gather such fruities from off the trees, as he meaneth to preferue: he shall take away the leaues from about such grapes as are slowe and backward, to the end they may receiue and reape the more heate from the sunne: he shall make his veriuice: he shall dig the earth to make wels, or to finde the heads of fountaines if he haue neede: he shall thinke vpon making readie his wine vessels, and other things necessarie for his vintage.

In September he shall giue his land that commeth to be tilled againe, after it hath bene fallowe the last earder: he shall sowe his wheate, malling, rie, and such like corne: he shall gather his vintage: beat downe nuts: cut downe late medow grounds, to haue the alter crop: he shall gather stubble for the thatching of his house, and for fewell to the ouen all the yeere: he shall cut away the branches of madder, and gather the seed to sowe in the beginning of the March following: he shall gather the leaues of woade, and order them in such sort, as that they may be made vp into bals, and he shall cause them to be dried in the Sunne, or at a fire not very hot: he shall cut downe rice and miller.

In October he shall make his wines and turne them into vessels: he shal bestow his orange, citron, & pomegranat-trees, in some couered place, to auoide the danger of the imminent cold: he shall make his honie and waxe, and drine the old bees.

In Nouember he shall couch his wines in his cellar: he shall gather acornes to feed swine: he shall gather chefnuts small and great, and such garden-fruits as will keepe: he shall take radish out of the earth, taking off their leaues and putting them vnder the sand, to keepe them from the froit: hee shall lay bare the rootes of artichokes and couer them againe very well, that the froit may not perish them: he shall make oiles, he shall make hiues for bees, panniers, dung

dung pots, and baskets of offer: he shall cut willowes for to make frames to beare vp vines, and shall binde the vines, and draw the climbing poles from the vines.

In December he shall oftentimes visite his fields, thereby to let out the water, which may stande in them after great raine: he shall cause water to run through the old medowes, and dung them if neede be: he shall make prouision of dung to manure his fallowes that are broken vp and tild: he shall couer with dung the rootes of the trees and herbes which he intendeth to keepe vnto the spring: he shall cut off the boughes and heads of willowes, poplars, saplings, and other trees, to the end that their boughes may more speedily put forth and grow so soone as winter shall be past: he shall cut downe his wood as well to build withall, as to make his fire with: he shall make ready his nets to catch birds, and to beate the hares, when as the fields shall be icie or couered with snowe, or overflowne with waters in such sort, as that a man can doe no worke in them. He shall also occupie himselfe (as long as he pleaseth) in making a thousand pretie instruments and necessarie things of woode, as are platters, trenchers, spindles, bathing tubs, dishes and other things requisite for household store: as also harrowes, rakes, and handles for these tooles: he shall repaire his teames, yokes, ploughes and all other instruments necessarie for the fitting and garnishing of cattell going to cart or plough, to the end that all may be in good order, when they are to goe to labour: he shall also make prouision of spades, shouels, pickaxes, peeles, hatchets, wedges, sawes, and other furniture fit for a countrie house store.

The eleuenth Chapter.

The condition and state of a huswife.

I Doe not finde the state or place of a huswife or dairie woman to be of lesse care and diligence, than the office of her husband, vnderstood alwaies that the woman is acquited of field matters, in as much as shee is tied to matters within the house and base court (the horses excepted) as the husband is tied to doe what concerneth him, euen all the busineses of the field. Likewise according to our custom of *France*, countrey women looke vnto the things necessarie and requisite about kine, calues, hogs, pigs, pigeons, geese, ducks, peacocks, hennes, sealants, and other sorts of beastes, as well for the feeding of them as for the milking of them: making of butter & cheefe: & the keeping of lard to dresse the laboring men their victuals withal. Yea furthermore they haue the charge of the ouen and cellar, and we leaue the handling of hempe vnto them likewise: as also the care of making webs, of looking to the clipping of sheepe, of keeping their fleeces, of spinning and combing of wooll to make cloth to cloath the familie:

family: of ordering of the kitchin garden: and keeping of the fruites^r herbes, rootes, and seedes: and moreouer of watching and attending the bees. It is true that the buying and selling of cattrell belongeth vnto the man, as also the disposing and laying out of money, together with the hiring and paying of seruants wages. But the surplussage to be imployed and laid out in pettie matters, as in linnens, cloathes for the household, and all necessaries of household furniture, that of a certainty belongeth vnto the woman. I meane also that she must bee such a one as is obedient vnto God & to her husband, giuen to store vp, to lay vp and keepe things sure vnder locke and key, painefull, peaceable, not louing to stirre from home, milde vnto such as are vnder her when there is neede, and sharpe and seuer when occasion requireth, not contentious, full of wordes, toyish, ratling: nor drowfie headed. Let her dispose of her stuffe and implements vnder her hand in such sort, as that euery thing may haue his certaine place, and that in good order, to the end that when they be to be vsed, they may be found and easily come by and deliuered. Let her alwaies haue her eie vpon her maides, and let her be alwaies first at worke, and last from it, the first vp, and the last in bed: let her not suffer to be lost or purloined, nor the least trifle that is: let her not grumble at any time for any seruice done to the Lord of the farme; for the valew of the least crum of bread denied, or vnwillingly granted or giuen vnto him or his, may loose the quantity of a whole loafe afterward: let her not trouble her braine with the reports and speeches of others, but let her acquaint her husband with them in good sort and manner. Let her gratifie her neighbours willingly, neuer attempting to inueigle or draw away any of their men seruants or maids from them, neither let her keepe company with them, except when she may do them good, or helpe them, or when she maketh some mariage, or assemblies of great company. Let her not suffer her daughters to gad and wander abroad vpon the Sabbath, except they be in such company as is faithfull, or that she her selfe be present with them. Let her compell her sonnes to be foremost at worke, and let her shew them the example of their father, that this may be as a double spurre vnto the men seruants. Let her not endure them to vtter or speake any vnchaste word, oath, or blasphemie in her house: and let her cause tale bearers to be silent, and not to trouble themselves with other folkes matters. Let her keepe close vp her stubble and lopping of trees for fuell for the oven: let her not suffer the stalkes of her beanes, peason, fetches, thistles, danewoord, the refuse of pressed things & other vnprofitable herbes to be lost, for in winter they being burnt into ashes, will affoord prouision to lay buckes withall, or else be sold by little and little vnto the towne. Let her giue good account vnto the Mistresse or Lord, of the egges and yong ones, as well of birds as of other beafts. Let her

her be skilfull in naturall physicke, for the benefite of her owne folke and others when they shall fall out to be ill: and so in like manner in things good for kine, swine, and fowles: for to haue a physition alwaies when there is not very vrgent occasion and great necessitie, is not for the profite of the house. Let her keepe all them of her house in friendly good will one toward another, not suffering them to beare malice one against another. Let her gouerne her bread so well, as that no one be satisfied to vse it otherwise then in temperate sort: and in the time of dearth, let her cause to be ground amongst her corne, beanes, pease, fetches or sarrasins corne in some small quantitie, for this mingling of these flowers, raiseth the paste, maketh the bread light, and to be of a greater bulke. At the same time she shall reserve the drosse of the grapes she presseth, affording them some litle corner, for the imploying of them in the defraying of some part of charge for the seruants drinke, that so the wine may serue for her husband, and extraordinary commers. But the naturall remedies which she shall acquaint herselfe withall for the succour of her folke in their sicknesses, may be those or such as those are which I shall set downe by writing: in manner of a countrie dispensatorie, leauing the other more exquisite remedies to be vsed by the professed physitions of the great townes and cities.

To vse bread
temperately.

Prouision for
drinke.

The twelfth Chapter.

The remedies which a good huswife must be acquainted withall, for to helpe her people when they be sicke.

First for the plague she shall make a distilled water of the herbe *Regina prati*, after that shee hath caused the same to be steeped in white wine: or else she shall cause to lie to steepe in the iuyce of cytrons a peece of golde or the powder or leaues thereof, for the space of 24. howres, and afterward mixe that iuyce with white wine, and the powder or decoction of the roote of Angelica, and so giue it to drinke to the infected: or else let her take two old walnuts, one figge, ten leaues of Rue, one graine of salt, poune and temper them altogether, and roist them vnder the ashes, and afterward being sprinkled with wine, let her giue them to be eaten: or else let her take one head of garlick, twentie leaues of rue, as many of clarey, and poune them altogether with white wine, and a little aqua-vitæ: afterward let her straine them out, and giue the partie to drinke thereof a good draught: the water of Naphe drunke to the quantitie of sixe ounces, causeth the malignitie of the plague to breake forth by sweates: the iuyce of marigolds, scabious, and of the flowers of betonie do the like. Applie vpon the swelling a loafe very hot, or a hen

The plague.

Naphe.

cut through the midst or a white onion made hollow on the roote side, and filled vp againe with good strong treacle or mithridate softened with the iuice of citrons, it hauing all this within it and being well stopped, must be rosted vnder the ashes till it be rotten, after that poune it well in a mortar and applie it; or else if it be strained, the iuice drunke, and the drossie part applied to the place, you shall perceine the like effect.

A continuall
feauer.

For a continuall feauer (which is otherwise called the hote disease) she shall apply vpon either wrist of both the armes, the iuice of the stinging nettle mixed with the ointment of poplar buds: or two springs of new laid egges, foot taken off from the hub of the chimney, and well beaten together, and mixt with salt and strong vineger, let her binde the whole vnto the parties wrestles with a linnen cloth: or else in place of this she shall take away the hart of an onion, and fill it with mithridate, and applie it fast bound vpon the wrist of the right arme; or else she shall take the hart of a water frogge, and applie it vpon the heart or backe bone of the sicke partie: or else she shall apply vpon the region of the liuer, or vnto the soles of the feete quickenches. Many for this cause do stampe the small forrell, and make a drinke for the great heate thereof, as also make a caraplasme thereof to apply to the wrists of the sicke partie. Others do the like with the water which they straine out of a great citrull. Others cause to steepe in water the whole seede of seawoort for the space of a night, and minister of this water with a little sugar to the sicke partie to drinke.

A quartaine
ague.

For a quartaine ague take of small sage, or for want of it, the other hyssope, wormewoode, partly, mintes, mugwoort, white spotted trefoule, stampe them all together with the spring of an egge, and the grosest soote that you shall finde cleauing to the chimney, and of the strongest vineger that may bee founde; infuse them altogether, and make thereof caraplasmes fit to be applied to the wrists of the hands. To the same purpose steepe the crums of two white loaves as they come from the oven, in a quart of vineger, afterward distill the same by a lembecke, and giue thereof a smal draught to the sicke party to drinke, about some two houres before the fit come. Some hold it also for a singular remedie, to take the iuice of the small white mullein, before it put forth his stalkke, pressed or drawne forth with white wine, and drunke a small space before the fit: the like effect hath the iuice of solefoot; the decoction of the leaues and rootes of veruaine boiled in white wine; the decoction of calamint, peniroyall, organie, burrage, buglosse, langue-de-ben; the rinde of the roote of tamariske, ash-tree, betonie, tyme, agrimonie, and the rootes of sperage, all boiled in white wine: the iuice of wormwood and rue powred from their setlings and drunke before the fit: the iuice of plantaine drunke with honied water. Some doe make
great

great account of the powder of the roote of Asarum (otherwise called Cabaret) dried in the Sunne or in the oven, and taken in the weight of a French crowne with white wine, halfe a quarter of an hower before the fit. Furthermore, the liniment made with mithridate or the oile of scorpions, applied to the ridge of the backes, soles of the feete, palmes of the hands, brow & temples, some small time before the fit: the very same vertue hath the oiles of baies mixed with *aqua vite*: some townsmen do vse this superstitious rite against such maner of agues: that is to say, they eate nine daies together being fasting the leaues of sage; the first day nine, the second eight, and so consequently they diminish euery day a leafe vntill the last of the said nine daies: and the confident persuasion that they haue of this medicine doth cure them; Some finde it verie singular in a quartaine ague, after purging to drinke white wine wherein there hath beene sage steeped all night: if you eat before the fit a head of garlike pilled, you shall scape the fit of shivering cold: if you drinke one or two ounces of the iuices of the roote of elder stamped and strained, some small time before the fit, and take the same againe two or three times, you shall loose your ague. The distilled water of the roots of sea holly: or else take a dram of myrrhe in powder and drinke it with malmesey an hower before the fit. The distilled water or decoction of *Carduus benedictus* and taken before the fitte: pills made of myrrhe and of treacle as big as a chickpease taken an hower before the fit.

For the thirst of an ague, let him rowle to and fro vpon his tongue the three cornered stone found in the heads of carpes: or the leaues of round forrell, or a piece of siluer or gold; or a snail stone; or a piece of crystall oftentimes dipt in water: or the leaues of purslaine, or of houslecke; or the husked seeds of cucumers.

For a Tertian ague, steepe in white wine the brused roote of herbe patience for the space of three or fower howers, afterwarde straine it, and reserue about a pretie draught to giue the sicke to drinke, an hower or two before his fit: or else doe the like with the rootes of plantaine steeped in equall quantitie of wine and water: or take a prettie draught of the iuice of plantaine, or of purslaine, or of pimpermell, and drinke them a verie little while before the fit: or else drinke with wine euery day six leaues of cinquefoile, that is to say, three in the morning, and three at the euening: or the iuice of smal-lage, of sage, and good strong vineger, of euery one an ounce, three howers before the fit. The most soueraine remedie that some men do find for it, is to drinke fasting five howers before the fit, two ounces of the iuice of pomegranats, and presently after to lay to the wrists, temples, and soles of the feete, small pilles of the bignes of a pease, made of an ounce of the ointment of Populeon, and two drams of spiders webs, and there to leane them vntill such time, as that the hower
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and feare of the fitte be past: or else a cataplasme made of sage, rue, greeke nettle, gathered before sunne-rise, of each a handfull: salt and soote the quantity of a walnut, it being all stamped with vineger and applied to the pulses an hower before the fit. Some doe greatly approve of a liniment of earth wormes boiled with goose grease to rub the brow and temples of the sicke partie withall before the fit: or else to carrie about his necke the hornes of a swift hart, which is a singular remedie.

A Quotidian
agrie.

For a Quotidian, it is good to drinke somewhat before the fit, the iuice drawne out of betonie & plantaine; or to drinke euerie morning a reasonable draught of the decoction made of the root of smallage, parley, radishes, sperage, leaues of betonie, and spleenwort, red cich-peafe, and the middle rinde of elder: or to steepe in white wine the roots of danewort, and to drinke a small draught thereof an hower before the fit: but after that he must take heede of sleepe: or let him drinke euery day with wine two leaues of cinquefoile, one in the morning and another at euening: as also let him apply vnto his pulses the cataplasme that we haue set downe for the quartaine ague.

Headach com-
ming of heat.

To take away the paine of the head comming of great heate, namely such as befalleth mowers during the sommer time, there must be applied vpon the browes slices of gourdes, or linnen cloathes dipped in rose water, or the iuice of plantaine, nightshade, lettuse, purcelaine, and vineger of white wine: or let her beat two whites of egges with rose water and with flaxe make a frontlet, or stampe bitter almonds with veruaine water, and apply them vnto the browes, or to wash the head in warme water, in which hath bene boyled the leaues of vines and willowes, the flowers of water-lillies and roses, and with the same water to wash the feete and legges: and if in case the paine be so great, as that there is feare that he should loose his wits, let there be applied vpon the crowne of his head, browes and temples, a cataplasme made of the white of an egge, bole-armoniacke, crabs thoroughly boyled and poppie seed, with the water of betony and vineger.

Headach com-
ming of drink-
ing of wine.

If the head complaine it selfe of too much drinke, there may be made a frontlet with wilde time, maiden haire, and roses: or receiue & take the fume of the decoction of cole-woorts: or by and by after the head beginneth to be ill, to eate one or two short started apples, or some bitter almonds: or else to drinke of the shavings of harts-horne, with fountaine or riuer water: or if you see that your stomacke be not sicke, thou maist take of the haire of the beaust that hath made thee ill, and drinke off a good glaile of wine.

Headach pro-
ceeding of cold.

If the head become sicke of some great cold, apply and laie to the head a bag full of branne, millet, and rubd salt: or of sage, mariarom, betonie, tyme, anise seed, fennell-seed, bay-berries, and iuniper-berries,

berries, as hot as you can indure them; or else chafe the temples with the iuice of night-shade, oyle of roses and vineger.

To cure the frensie that commeth of a hot cause: you must apply *Frensie.* vpon the head of the patient, the lungs of a sheepe newly killed, or the whole gather: or some henne or pigeon, slit along the backe and applied vnto the same place: or rub his browes and all his head ouer with oyle of roses, vineger and populeon: or with the iuice of night-shade, oyle of roses and vineger.

To awake those which are giuen to sleepe too soundly, it is good *Drowsines, or* to make a frontlet of sauorie boyled in vineger; or to make a perfume *heauines of* for the patients nostrils; with strong vineger or seed of rue or nigella, *sleepe.* or feathers of a partridge, or of old shooe soles, or of the hooves of an asse, or of mans haire; or else to apply vpon the browes a cataplasme of mithridate, and vpon the right arme the head of a bat.

To cause them to sleepe which cannot well slumber, it is good to *Too much* make a frontlet with the seede of poppie, henbane, lettuse, and the *watchfulness.* iuice of night-shade: or the milke of a woman giuing a gitle sucke; or with the leaues of ground iuie, stamped with the white of an egge; or put vnder the pillow a mandrake apple; or the greene leaues of henbane, and rub the soles of the feete with the grease of a dormouse.

For the swimming in the head, there is commonly vsed the con- *Swimming in* serue of the flowers of betonie, or *the head.* *aqua vita*, or the confection called *Electuarium anacardinum.*

To preserve such from the Apoplexie as are subiect vnto it, let *The Apoplexie* them drinke in winter a god spoonefull of *aqua vita* well sugred, and let them eat a bit of white bread by & by after: or instead of *aqua vita*; let them drinke the claret water which I will set downe hereafter; or of the water of the roote of the wilde vine, or of the powder of the roote thereof continually for the space of a yeere.

For the palsey, rub the place affected with the oile of foxes, baies, *The palsey.* and *castoreum*, mixing therewith a little *aqua vita*: vñ likewise oftentimes the water of cinnamome, and of saint Iohns woort; or the conserues of sage, rosemarie, cowslips, baulme and mithridate: make him drie bathes with the decoction of lauander, costmarie, dane woort, sage, and morioram.

To preserve one from the falling sickenes, otherwise called saint *The Epilepsie or* Iohns disease, it is a foueraigne thing to drinke for the space of nine *falling sickness.* daies a little draught of the iuice of the herbe paralysis or cowslips, or of the distilled water of the linden tree, or of coriander: or to vse euery morning for the space of fortie daies a powder made of the seede of poinie, and misletoe of the oake, or of the skull of a man, and more specially of that part of the skull which is neere vnto the seame of the crowne, with neat wine, or with the decoction of pionie: as also to hang

hang about his necke the mislerow of the oake, or some piece of a mans skull, or of the roote or seed of male piony, or of the stone that is found in swallows nests: or to weare about his necke or vpon one of his fingers, some ring wherein shalbe set the bone of the foote of the oxe called clam or alce, & that so as that the bone may touch the flesh or bare skin: you shall deliuer them that are in that fit, if you tickle them and pinch their great toe, or rub their lips with mans blood.

Rednes of the face.

To take away the rednesse of the face, it is good to wash the face with the decoction of the chaffe of barley and oates, and to foment it afterward with the iuice of citrons: or else take fower ounces of peach kernels, two ounces of the husked seedes of gourdes, bruite them and presse them out strongly, to the end they may yeeld their oile: rub or touch with this liquor the pimples or red places.

Spots in the face.

To take away the spots of the face, make a composition of the flowre of lupines, goates gall, iuice of limons, and very white allome: touch the spotted places with this ointment: or else make an ointment with the oile of bitter almonds, honie, Ireos and waxe: or else rub your face with the blood of a cocke, hen or pigeon: or foment it with the water of the flowers of beanes, oranges or mulberries.

The kings euill.

For the Kings euill take leekes, with the leaues and rootes of the herbe Patience: presse out about some pound of the iuice thereof, in which you shal dissolve an ounce of pellitorie powdred, and a scruple of *Tindis aris*, mixe all very well together, and heerewithall you shall daily foment the said disease: hang about your necke the rootes of water betonie, and the lesser plantaine. If you cut the foote of a great witwall or toade, when the moone is declining, and beginneth to ioyne it selfe to the Sunne, and that you applie it round about his necke which hath the kings euill, you shall finde it very soueraigne for the said disease. The dung of a cow or oxe heated vnder the althes betwixt vine or colewoort leaues, and mingled with vineger hath a propertie to bring the swelling to ripenes. Or else vse this remedie which is alwaies ready, singular good and well approoued, take a sufficient quantitie of Nicotiana, stampe it in a very cleane mortar, and applie both the iuice and droffe parts thereof vnto the faide tumour together: and doe this nine or ten times.

Rednes in the eyes.

The rheume falling downe vpon the eyes is staied by a cataplasme applied to the browes, made of the musilage of shell snayles, and corporated with the flour of frankincense and aloes well stirred together, vntill that the whole become to the thicknes of honie.

A weake sight.

For a weake sight, take fennell, veruaine, clarey, rue, ciebright, and roses of each a like, and distill them all in a lombecke: of this water distilled put three or fowre drops in your eyes morning and evening. Also the water of yoong pies distilled in a furnace is very good: in like maner the water of rotten apples, putting two or three drops thereof

thereof into them. It is good for the same disease to take the vapour of the decoction of fennell, ciebright, and rue: to drinke euery morning a small draught of ciebright wine, or to prepare a powder with dried ciebright and sugar, to take thereof euery morning the waight of a french crowne, two or three houres before meate. There is a stone found within the gall of an oxe, which put into the nostrils doth maruellously cleare the sight. So doth the wine made of the roote of maiden haire, if it be oft vied in the morning.

For the paine of the eyes, it is good to make the decoction of camomile, melilot, and the seede of fennell in water and white wine, & dipping a fourefould linnen cloth therein, & after wringing it well, to apply the same oftentimes to the eye: or else to lay vpon it womans milke and the white of an egge well bet together.

Paine in the eyes.

The rednesse of the eyes is amended by the applying of linnen clothes or plegers of flaxe, moistned in the whites of egges well bet together with rose or plantaine water: or else boile a fowre and sharp apple, take the pulpe thereof and mixe it with nourse milke; afterward make a little liniment to be applied to the redde eyelids. In the meane time you may applie to the tempels a frontlet made with Provence roses, or conserve of roses and other astringent thinges, to the end that the rheume falling from the braine may be staied, seeing it is the cause of such rednes: other cause finall, thinne, and daintie flices of veale, or of the necke of an oxe newly killed, to be steeped in womans milke, and lay them vpon the eyes, laying againe aboue them stupes of flaxe: some cause little children to make water in copper, brasie, or latten vessels, they swill the vritue round about the basen, and afterward vpon the sodaine do cast it out of the basen, they couer the basen with a cleane linnen cloth and let it stand so couered fowre and twentie howres, they finde rust in the bottome and round about it, they gather and dissolve the said rust with rose water, which rose water they keepe within a viole well stopped, and drop thereof into their eyes evening and morning holding them wide open. Many likewise there be which content themselves with Tuthia prepared.

Rednes in the eye.

To take away the filthines or gummies of the eyes, touch them and rub them round about with a saphire dipt in cold water.

Filth in the eye.

To preuent that the eye doe not continue blacke or red after a blowe, there must by and by be dropt into the eye the blood of the wing of a pigeon or turtle done.

A blacke and blew eye.

To take away red spots or blemishes of the eye, it is good to vse the like remedie: or else to applie to the eye a cataplasme made of yongue wormewood stamped, with the milke of a woman and rose water.

A blemish in the eye.

For an olde rednes in the eye, take the bignes of a small nut of white copperas, and a scruple of Florence Ireos, as much of roche allome,

Rednes in the eye.

lome, make a powder which you shall mixe with halfe a pint of fountaine water after the measure of Paris : or else boile them all together vntill the water become cleere, and drop into your eie three or fower drops, either of the one water or of the other : or make a liniment to apply vpon it with the drosse of oile of linfeede, gumme, arabecke, tragacanth, masticke and camphire.

The inflammation of the eie.

For the inflammation of the eie, it is a singular remedie to apply to the eie the lungs of a sheepe newly kild : or to make a cataplasme of the pulpe of a twete apple roasted vnder the embers, mingled with barlie meale, the milke of a woman, rose water and the white of an egge : the water of marigolds is also soueraigne good in this case. A wolfe eie, or the stones that are found in the mawes of swallowes, haue the like vertue hanged about the necke. Or take with the point of a needel a peece of frankincense, set it on fire with a waxe candle, after quench it in fower ounces of rose water, goe ouer this counte thirtie times, and straine the rose water through a white linnen cloth, and keepe it to drop in some drops of the same into the corners of your eies at night when you goe to bed : and in case you may feele great paine in your eies, mixe together with this water a litle of womans milke.

The weeping eie.

To restrain teares and all other humours falling vpon the eies, it is good to take a decoction of the leaues of betonie, the rootes of fennel, and a litle fine frankincense, and to make an eie salve thereof : also to wash the weeping eies oftentimes with the decoction of cheruile, or to drop therein sometimes the iuice of rue mixt with purified honie. Some hold it for a secret remedie, to tie behinde the head some drops of amber, which also haue the vertue to stay the rheume falling downe into the throte : or else to drop into the eie water distilled of the gall of a man and celandine : or else to annoint the edges of the eie lids with the soote of butter burned in a lampe, which is a secret sort to drie vp and stay all rheumes of the eies, and to shut vp most speedily all vlcers made in the great corners of the eies, and all rheumes coming of the tendernes or blearednesse of the eie.

The white spots of the eies.

For the white spots of the eies take one or many new egges laide the same day by one or moe blacke hens, or for want of blacke hens, by other, roste them hard vpon hot embers, cut them afterward into equall quarters, and take away the yelke, and put in place thereof as much sugar candie made in powder of the whitest you can get, straine all together through a linnen cloth very cleane and doubled, that so you may doe it verie strongly, the water or licour that cometh forth is very good, to drop one drop after another into the diseased eie, at night when they goe to bed or at any hower of the day : there is another water verie good for the same disease, which is made of white copperas, sugar candie, rose water, and the hard whites of egges, they being

being all strained through a linnen cloth, and of this there must be some put into the eie after dinner and at night going to bed. Some doe vse with very good successe another water, which is this. Take of Tuthia prepared and powdered an ounce, mace halfe an ounce, infuse them together in rose water and white wine, of each halfe a pinte of Paris measure for the space of fixe weekes in a glasse well stopped, this glasse you shall set in the sunne when it shineth, and take it in when it shineth not or is night or raine, stirre the glasse twise or thrise every day : these remedies are likewise good for red, running and weake eies.

For ache in the eare coming of a hot cause, drop therein the oile of henbane : take oile of roses and a litle vinegar, and make thereof an injection into the eare, apply thereto afterward a bag of cammomill, melilote, linfeede, and holihoeks boiled in milke. If the cause be of cold, then put therein musked cotton, or a graine of musk. *Scribonius* doth commend greatly the soote of pitch dropped warm into the eare which aketh by reason of an inflammation, together with a litle of the oile of roses.

Ache in the eare.

Against the noise and founding of the eare, it is good to drop in to the eares of the oile of rue or spike, oile of bitter almonds or baies, together with a litle Aqua vitæ, or fat of an eele : or Aqua vitæ wherein hath beene steeped the seede of cummin or anise : or else take the scrapings of the wood of cedar-tree made very small, and thereof fill a bag of crimson taffata very thin, of the greatnesse of an almond, dip it in very good Aqua vitæ, in such sort as that the said bagge be thoroughly drencht with the same, put the same bagge well and forward and close into the hole of the eare which bloweth and foundeth, and afterward lie downe vpon the same eare.

Noise in the eare.

Against deafnes you must drop into your eares the iuice of an onion, or of brionie mixed with honie or oile, wherein haue beene boyled the rootes of daffodill, or of the iuice of the rindes of radishes mixt with oile of roses, or the fat of an eele, and the oile of bitter almonds.

Deafnes.

For the losse of smelling or when it is corrupted, make a perfume with the seede of Nigella, the leaues of Aron, rue and other herbes which haue a strong sauour : also smell oft vpon mints.

The smelling of the nose.

For tumours vnder the eare, you must make a cataplasme of the flower of barlie, boiled in honied water and putting thereto the muskilage of fleawort-seed and the oile of lillies. A cataplasme made of the dung of goates, fresh butter, and the residence of the oile of nuts doth digest the swellings vnder the eare.

Swelling vnder the eare.

Against the stinking of the nostrils, it is good to snuffe vp into the nostrils of the decoction of marierome, calameth, cloues, ginger, and nutmegs, made in white wine, or else of the vinegar of squills.

Stinking of the nose.

To

Bleeding at the
nose.

To stay bleeding at the nose, you must by and by lay your thumb vpon that side of the nose that bleedeth, and you must put about your necke a necklace of Iaspur stone: you must tie the vttermost parts of the bodie so strait as you can, and put in the nose a rent of dead nettles, and hold in your hands the leaues & rootes of agrimonia: or else hold in your mouth very colde cisterne water, and change it oftentimes. Some doe much approoue the vse of camphire, the flowers of willow, the mosse of quinces & other hoarie fruites put into the nose: and to applie vnto the browes camphire with the seede of nettles, or with the iuice of plantaine or of nightshade: or else to applie vnto the temples & about the necke, especially ouer against the iugular veins, herbes of a cooling facultie, as nightshade, plantaine, lettuce, dead nettles, or prickling nettles, punned with salt and vineger, peruinckle and others. Peruinckle also put vnder the tong hath the same vertue. Some doe make in like manner necklaces and bracelets of the herbe S. Innocent: some hold in the hand, that is, on that side that the nose doth bleede of, a branch of holihoкке. Diuers countrie folkes to stay any kinde of bleeding in any part, doe wrap of hogs-dung in cotton, and apply it to the place from whence the blood commeth. Others snaffe vp into the nose the powder of a three cornered stone found in the head of a carpe, dried and made into powder.

Tooth-ache.

Against the ache of the teeth, you must boyle in vineger and rose-water the roote of henbane or of the mulberie tree, and to holde this decoction in the mouth: otherwise take a clove of garlick and roste it a little vnder hot embers, afterward bray it, and lay it vpon the pained tooth as hot as you can: in like manner put one in the eare of the same side that the paine is: some doe bray a clove of garlick with salt, and lay it to the pulse of that arme that is vpon the aking side. Otherwise take two drams of the rootes of pellitorie bruised, of the leaues of sage, rosemarie, of euery one halfe a handfull: three fat figs, and you shall boile them all in ten ounces of wine vnto the consumption of all the wine, afterward you shall take a quantitie of the saide figs, and applie it to the aking tooth as hot as possible may be: or else wash and gargle your teeth with the decoction of ground iuice made in wine, and to the consumption of the third part of the saide wine: after the same manner, you must applie vpon the pulses of the temples, a plaister made of pitch, the powder of allome and a gall, very hot: It is good also for the ache of the teeth to put thereupon the iuice of garlick, motherwort, rue, or some hot oile, as that of sage, which is singular in this behalfe. Some holde it for a secret, to weare about the necke the tooth of a man knit within a peece of taffara: or a bean found, in which there is inclosed a louse, taketh away the most strong paine of the teeth that may be endured.

Loose tooth.

It is good to foment the loose teeth with the decoction of rose-water

water and allome: or else of the rootes of cinquefoile and allome: & in case you would cause them to fall out, put in their hole or hollow place, of the ashes of earth-wormes, or of the dung of mife, or of the tooth of a hart, for such ashes will cause them to fall out by and by without any iron or instrument. Or else applie thereunto the stone of a mulberie: or else steepe the roote of mulberie tree stampd and bruised the space of five daies in good strong vineger in the Sunne, and there let it drie so as that you may make it into powder, and then applie the same powder vnto your tooth: or else you shall applie thereto the braines of a partridge: or the iuice of water-cresses in the place: or else put into the hollow of the tooth the iuice of greatcelandine.

To keepe the teeth cleane and bright, and to preserve them from the falling downe of all maner of rheumes, take a pinte of fountaine water, a third part of rose water, put therein two drams of allome, as much of cinnamom, boile them softly together in a viall, or earthen pot well leaded, vnto the consumption of the third or fourth part, wash your mouth and teeth therewith, euening and morning: or else wash your mouth and teeth in the warme decoction of small sage, rosemary and great marierome, boiled in white wine to the consumption of the third part.

To stay the canker of the teeth, holde in the morning a great graine of salt vnder your tongue vntill it be there melted, then rubbe your teeth therewith.

To take away the stinking of the mouth, it is good to wash the mouth with wine, wherein hath boyled aniseede & cloues, or to chaw the roote of Acorns, or else to chaw masticke long enough.

For the stinking of the teeth, it is good to rubbe them with the leaues of sage and the rinde of a citron, or with the powder of cloues and nutmegs: in the meane time there must be auoided the vse of milke-meats, raw-fruits, sharpe things, and such as are hard to chaw, all victuals of ill digestion, and all vomiting.

To white and take the wrinkles out of the hands, take the drosse of oile of linseed, steepe it in raine water, and wash your hands therewith: or else wash your hands with the iuice of citrons alone, or some graines of salt mixed therewithall.

For the cough: take hyssope and solefoot, of each one handfull, figs of Marcellis, damaske raisins, and licorice, of each one ounce, boile them all in water vntill the third part be consumed: vse this decoction twice a day, two howers before dinner in the morning, and at euening one hower before supper. It is good likewise to take redde coleworts, and to make them boile two or three boiles with an handfull of solefoot, and a slip or two of hyssop, and to vse this broth twice a day.

For

Squinancie.

For the Squinancie or forenesse of the throat, you must take a whole swallowes nest boyled with white wine, and with the oyle of cammomill and sweete almonds, therewith to make a cataplasme and to applie it vnto the throate: or to drinke by and by the waight of a French crowne of the tooth of a wilde boare powdred, with the water of *Carduus Benedictus*: or to touch the diseased place with a liniment made of linseed, and the powder of the tooth of a wilde bore, or else to applie vnto the place a cataplasme made of the dung of a yong boy of a good cōstitution, fed for the space of three daies with lupines, and well baked bread leauened and salted, and hauing claret wine to drinke, and no other either meats or drinks, and adding to the foresaide childes dung an equall quantitie of honie.

Pleurisie.

Against the Pleurisie, drinke presently with the syrupe of violers, or some other appropriate to the breast whatsoever, the waight of a scruple of nettleseed, or of the ashe trees: or take three ounces of the distilled water of Maries thistle, or of *Carduus Benedictus*, or of broome, a spoonefull of white wine, sixe springs or straines of egges that are verie new, the waight of a French crowne of the shels of French small nuts made into powder, eightene graines of red corall poudred, al being mixed together, let it be giuen warme, with as much speede as may be: mundified barley and the seeds of melons, gourds, cucumers, and poppie are in that case highly commended: roast a sweet apple vnder the embers, mixe therewithal when it is roasted the iuice of licorice, starch, and white sugar; giue thereof vnto the diseased twise a day, two houres before meate: or else take the waight of a French crowne of the powder of a wilde boares tooth, and cause him to swallow it, either with the iuice of sweete almondes and sugar candie, or with the broth of red colewoorts, or decoction of the water of barley, or some other such like which is appropriate for the breast: or else burne to ashes the pille of an oxe, & giue a dram thereof with white wine, if the ague be but small, or with the water of *Carduus Benedictus*, or barley water, if the ague be strong and great: and assure your selfe that such remedies are singular if they be vsed within three daies of the beginning of the sicknes. The manner of making these ashes, is to cut the pille of the oxe in gobbets, and laying it vpon the harth that is close laid to set a new pot ouer it, & afterward to lay hot burning coles, or hot embers about the pot, which must be oft renewed, vntill one be assured, that it is burnt into powder: and the better to iudge of the time, he must thinke that this will not be done vnder a whole day. It is good to lay a plaister of blacke pitch vpon the greened side: and where it commeth to passe that the paine of the side continueth, and that the sicke partie cannot spet, cause him to vse the decoction of the flowers of red poppie, or of the powder of them, the weight of a French crowne with the water of scabious and pimpernell,

nell, and syrupe of hyssope, if there be no great feauer; or violers if it be great. Furthermore, for a Pleurisie which is desperat and past hope, take a sweete apple, euen a very excellent one, and take the kernels forth of it, and fill vp the hollow place with fine Olibanum, rost it couered ouer and rowled in stupes vnder the hot embers thoroughly, and then giue it to the sicke of the pleurisie to eate.

For the spetting of blood, cause him to drinke the distilled water ^{Spitting of} of the first little buds of the leaues of the oake, or the decoction of blood.

comfrey, or of plantaine, horsetaile or knotgrasse, otherwise called the herbe of saint Innocent: or to swallow downe some small drops of masticke, or harts home, or goats home burnt, or bole armoniacke, or terra sigillata, or corall, or amber, or the powder of the innermost rinde of chestnut tree, or of the cork tree: or frie the dung of an hog with fresh butter, and of that cluttered blood which the sicke partie shall haue spet, and so giue of these thus fryed together to the sicke partie to eat.

For the beating of the hart, it is good to hang about the necke so much camphire as the quantitie of a peale, or to drinke two or three ^{The beating of} ounces of the water of buglosse and of baulme: some hold the distilled water following for a singular & soueraigne remedie.

Take two hogs-harts, three stags-harts, or the harts of three bulles, nutmeg, cloues, and basil-seed, of each three drams, flowers of marigolds, burrage, buglosse, and rosemarie, of each halfe a handfull; steepe them all in malmesey or hypocras for the space of a night, after distill them with a lembecke, and referue the water for vse, which shall be by taking three or fower ounces, when necessitie doth require. The conferue of betonie and rosemarie flowers: cinnamom water, aqua vitæ, and imperiall waters, which we haue set downe in our worke of the beautifying of mans bodie.

For the faintnes of the hart or swooning, it is good to straine and ^{Swooning.} wring the ioynt of the ring or phisitions-finger: as also to rubbe the same with some piece of gould and with saffron: for by the meanes of that finger his neere communicating with the hart, there is from it conueighed and carried some vertue restoring and comforting the hart.

For the flagging and hanging breasts of women, make a liniment ^{Flagging, wi-} with the drosse of the oyle of linsed, a little gumme arabecke, traga- ^{thered and} canth, masticke and camphire: or with the iuice of succorie: or apply ^{hanging breasts.} thereunto ground iuice, or the egges of partridges, which you shall change oftentimes: or small basins of the distilled water of yong pine-apples, or the iuice of wilde pine-apples.

To procure much milke vnto nurces: they must vse the fresh & new ^{Want of milke.} gathered iuice of fennell oftentimes, or the iuice of smallage, or of beets, or the powder of the roots of Maries thistle, adding thereto the seed

seed of fennell and a little pepper : the forehoofes of a cow burned, and drunke with wine, or broth, or other conuenient liquor : or the powder of cryftall powdred verie finely and drunke with wine or some broth: or let them eate of boyled colewoorts seasoned with pepper : or of the rootes of rapes boyled with pepper.

Abundance of milke.

To caufe women to loofe their milke; you must apply vpon the nipples of their breasts, the rootes of greatcelandine foddend and pounded : or vse a fomentation of verie sharpe oxycrate vpon the breasts : or else you shall apply a cataplasme of the flower of beanes; or an emplaister of rue, sage, mints, wormewood, fennell, branne boyled and mixed with oyle of cammomile, or the leaues of yoong and verie Greene gourdes; or of crayfishes, all to braied and stamped in a mortar.

The inflammation of the breasts.

For the inflammation of the breasts comming of the great abundant store of milke, take the durt found in the bottom of the troughes of cutlers or grinders, and therewith couer the breast, and so you shall alswage the paine in one night : you may adde thereto a little of the oyle of roses: or if the milke be much curded without any great inflammation in the breast, you may apply vnto it a cataplasme of the flowre of rice, or of pure wheat boyled till it become like pap, with thicke red wine, and apply it vnto the teates vpon plageats, as hot as may be endured.

Belching.

For belching at the mouth, it is good to take fasting a dredge made of anise, fennell, caraway, and coriander seede : or else to drinke wine in the morning two or three times, and that such as wherein hath beene boyled bay-berries, anise, coriander, and fennell seede: and apply vpon the stomacke a bag full of rue, wormewood, marierome and mints.

Hicket.

For the hicket, it is good to keepe ones breath oftentimes and long, to stop both his eares, to hold his head awry, and his mouth couered and vpward, to procure himselfe to neefe, to labour much, to indure thirst, to cast cold water in his face which hath the hicket, thereby to cause him to feare. Some are of opinion, that if he which hath the hicket doe count and reckon the first, saying one or borrowing, he shall haue no moe but that one.

Vomiting.

Against vomiting take a totte of bread and steepe it in the claret water heereafter described, or in the iuice of mints, spread it ouer with the powder of malticke, applic it warme vnto the stomack, renewing it euery three houres. Otherwise, take two handfuls of mints, and one of roses, boile them in wine : take afterward two ounces of tosted bread, and let it be well steeped in wine, and afterward compounded with malticke and the saide mints and roses, make thereof a plaister to lay to the stomack before you goe to meate. It is true, that if the vomiting be with an ague, it will be good to boile the

the mints and roses, and to steepe the tosted bread in vinegar. In like manner mints braied and mingled with oyle of roses, applied vnto the stomacke, is a singular helpe for any kinde of vomiting : it is good likewise at the end of meate to swallow downe one gulpe of water, or a morsell of marmalade of quinces, nor drinking afterward : and in the morning two houres before meate, to swallow five or sixe pepper cornes whole with wine, or the sirupe of mints, or of wormewood, or greene ginger preferred : it is also good to set cupping glasses vpon the bottome of the stomacke, or vnde the nauell, and then chiefly when the partie eateth : to take rest after meate, and to talke or cough any thing at all.

For the paine of the stomacke, fill a dish with hot ashes, sprinkle them with wine, ouer them cast a linnen cloth, which may couer all the dish, apply this vnto the pained place : or else put vnto the stomacke a hot bagge full of fried salt : or else take the crums of a good thicke loafe, and being dipt as it cometh hot out of the oven in the oyle of cammomill, and wrapt in a linnen cloth, let it be applied vnto the paine : or else fill a swines bladder with the decoction of the leaues of baies, organie, marierome, mints, time, cammomill, calamint, melilote, anise and fennell seede, apply it to the paine, warme it againe when it shall be colde : or else make a cake with a handfull of wormewood, mints, and roses kneaded with Rie leauen and wine, and apply it vnto the stomacke.

For the obstruccion of the liuer, vse a decoction made of succory, the roots of parsley, smallage, fennell, doggrasse, patience, butchers broome, cich-pease, capillus veneris, hoppes and fumitorie : vse likewise oftentimes the shauings of Iuorie.

For the heate of the liuer, there is nothing better then to vse lettuce, sorrell, purcelane, hops in portage, and sometimes to drinke the water of the said herbes fasting, or the water of endiue.

Against the iaundise, drinke fasting of the dung of ganders the weight of a French crowne, well mingled with white wine, for the space of nine daies : or else of the decoction of the leaues and rootes of strawberries : or else take misletoe of the white thorne, gathered before the sunne rise, about a handfull, three or fowre rootes of parsley, bray them all together with white wine, let them runne through a linnen cloth or strainer, and drinke of this euening and morning a reasonable draught. This is a more excellent remedy then many others : which notwithstanding women with childe must not vse, but in place of it, you must apply to the wrests and soles of their feete, the leaues of misletoe of the oake, of greatcelandine, & horehound, the whole being braied with a little wine, and made in forme of a cataplasme. Some commend highly against the iaundise, to take of the wormes of the earth, to wash them in white wine, and after to dry them, and making

king a powder of them, to giue thereof a small spoonfull in white wine, or the decoction of wormewood or of horehound: or to drinke fasting ones owne vrine certaine daies: or to drinke for the space of eight mornings with white wine fasting, five trotles of a goate. Some say, that to cary in the left hand three leaues of wilde rocket, doth cure the iaudise. Some also holde that to weare vnder the soles of the feete the leaues of shepherds purse, or of great celandine, next vnto their bare feete, doth the like.

Dropsie.

For the dropsie, it is good to make a drinke with the seede of broome, pouned and braied in white wine: or to make a drinke of the iuice of the roote of Gladiolus or Asarum with white wine: or to drinke fasting his owne vrine for the space of certaine daies: to applie in like maner vnto the moist places a cataplasme of cowes dung warme, with which, as Galen testifieth, a Physition of Misia did maruelously heale all maner of dropsies: or to applie vpon the swolne place shell snailles aliue, not washed, but carefully bruised. A secret remedy against the dropsie, is to drinke with honied water the powder of glasse seuen times burned, and seuen times quenched in the iuice of flowre-de-luce, or white wine.

Paine of the spleene.

For the paine or heauinesse of the spleene, drinke wine wherein hath boiled scolopendrium, sperage, and hops: or else drinke oftentimes fasting of the broth of red coleworts halfe boiled, or of the decoction of Romaine wormewood, or of Pauls betonie, or of small centaury, or smiths forge water.

Colicke.

For the paine of the colicke, there is nothing more soueraigne then to weare about him a ring or boxe of siluer, in which is inclosed some part of the nauell of an infant newly borne, and that the ring doe touch the flesh: there is also nothing more singular, then to drinke in a prettie draught of white wine, the red pill which is to be founde in the space and cartilaginous grittles of walnut kernels, dried in the moneth of August and made into powder: or to drinke fowre or five ounces of the oile of nuts, or of linseed, or of the shels of ripe nuts, or the water of camomill, or the decoction of the seed of hempe, or wine wherein hath bene steeped for the space of tenne or twelue houres the roote of Enula campana brused: or the powder of a stags pisse drunke with water: or the dung of hennes drunke with hyppocras made of honie and wine: or a clister made of brine: or the hart of a lark swallowed downe while it is fresh and new: or the said hart of a lark salted to the thigh. As concerning outward remedies, some approue greatly to take the skin of a sheepe all new, or the kelle of the intrails of a sheepe newly killed, & to applie it vnto the bellie: or to make a bagge of miller, bran, wheate and salt fried together, to lap vpon the bellie: a cataplasme made of woolues dung is also profitable against the colicke: the same dung drunke with a little wine doth

very

very much good: the bones found in the dung of a wolfe pouned small and drunke with wine haue the like qualitie: some say that if you take ashes comming very hot from vnder the coales of fire, and put the saide ashes in a dish or pot, and afterward powre thereon a good glasse of claret wine: and afterward couer the said dish with ashes, with a linnen cloth fower double, and applie it vnto the bellie, you shall finde releafe and mitigation of your paine.

For the humoral fluxe of the belly, it is good to drinke milke, ^{Fluxe of the belly.} wherein hath bene quenched a gad of Steele or of iron: or milke boiled with a halfe quantitie of water, and that vnto the consumption of the water: or he shall take of a stags pisse with cesterne water: to vse rice parched: to take a dram of masticke powdered with the yolke of an egge: to make a cataplasme with the flower of wheat to apply all ouer the nauell, but it must be wrought with red wine, and after baked in the oven.

For the bloodie fluxe, giue to drinke with red wine the blood of ^{The bloodie Fluxe.} a hare dried and made in powder, or the powder of mens bones: or else gather the dung of a dogge, which for three daies hath fedde vpon nothing but bones, and this you must dry to make into powder: of this powder giue vnto him that is troubled with such fluxe twile a day in milke, wherein you shall haue quenched many stones of the river, very thoroughly heated in a very hot fire, continue this two or three daies: or else giue to drinke the distilled water of the great burre, or the decoction of shepherds purse: or the distilled water of woodbinde: or else giue to drinke the seed of plantaine in powder: or the distilled water of the first buds of the oake: or the powder of snailles burnt with the powder of brearberies, and a little white pepper and galls: or of the harts and goats horne burned: or rather of the pille of a hart prepared, as we haue taught heere aboue in setting downe the remedies for the pleurisie.

For to staie the fluxe of blood, drinke a reasonable draught of ^{Fluxe of blood.} the iuice or decoction of dead nettle: make clysters with the iuice of plantaine and horsetaile: vse the broth of coleworts sodden very tender: the iuice of pomegranats, and the substance it selfe; tallads of plantaine and sorrell: chaw oftentimes some rubarbe.

To loosen the bellie you must eate sweete cherries, or peaches, ^{Coffinnes.} figs or mulberries fasting: to sup the first broths of coleworts, of beets, of mallows or lettuses, or of chicke pease without salt: to applie vnto the stomacke a cataplasme made with honie, the gall of a bull, and the roote of sow-bread: or the leaues of apples of coloquintida: to take a suppositorie made of fat bacon, or the stalke of a mallow or beete.

To kil the worms of litle childre, it is good to cause them to vse ^{Wormes.} pre-served rubarb: or the conserue of peach flowers: to drinke the distilled water of gentian, or the iuice of citrons, the iuice of mints or basill, of

purflaine, rue or wormewood, or else to cause them to swallow with a very small draught of wormewood wine, of the powder made of wormes first dried, and after burned on a fire pan red hot, and make it into very fine powder: or of the powder of blessed thistle, or of coralline the waight of a French crowne: also to applie vnto the nauell a cataplasme made of wormewood, tanfie, and an oxe gall: and all this must be done toward the latter end of the moone.

*Paines of the
hemorrhoids.*

To stay the excessive paine of outward hæmorrhoides, you must make a liniment of oyle of roses, washed in the water of violets, fresh butter, oile of linseed, the yelke of an egge, and a little waxe; or else to make a little cataplasme with the crums of a white loafe steeped in cowes milke, adding thereto two yelkes of egges, a little saffron, and a little Populeon. There may also a little liniment be made with fresh butter and the powder of corke-n: be burned. In the paine of the hæmorrhoides there is nothing more singular then the perfume made of shavings of iuorie.

*The fluxe of the
hemorrhoids.*

To stay the excessive fluxe of the hæmorrhoides, it is a most singular remedie to drinke a dram of red corall: or of the scum of iron with the water of plantaine, and also to make a fomentation of the decoction of white henbane: or in place of this, a cataplasme made of the powder of burnt paper, or of the shavings of lead, or of bole armoniac with the white of an egge: or of three oyster shels finely powdered either raw or burnt, and mixt with a little fresh butter.

*The stone in the
vaine.*

For the stone in the reines you must drinke often of the iuice or water of the bodie of the beech tree, which water must be gathered in the spring time, in as much as then the bodie or the rinde thereof being slit or cut to the quicke, doth yeeld a great quantitie of water very singular for this purpose: the fruite of the eglantine preserved before it be ripe, after the manner of marmalade with sugar, hauing first taken the kernels from within, taken fasting to the end of the last quarter, and first daies of the moone following, in drinking somewhat more then a reasonable draught of white wine, or of the water of wilde ransie, or such other, is very excellent therefore: he must also drinke very oft with white wine the powder of the pilling of rest-harrow, of bucke-thorne, or of the gum which groweth round about the rindes of vines: or of the seede of goose-grasse finely powdered: or to drinke the distilled water of radish rootes and nettle rootes, with a little sugar: or the water of broome: or of dogs-grasse: or of wilde tanfie: the water or iuice of radish, wherein is dissolved the powder of egge shels burnt, or of the stones of medlars, or of the eie of a partridge, or of the braine of a pie, or of the inward skin of the stomacke of a hen or capon. Euerie man praiseth this decoction whereof *Aetius* maketh mention in his chapter of Sea-hollie. Take the rootes of Sea-hollie (the pith taken out) and make them very cleane, steepe them eight

howers

howres in fountaine water, after that to boile them till the halfe of the water be consumed, in the end of the boiling, cast into the pot licorice bruised: let this decoction coole at leisure. And as for outward meanes, it is good to apply a cataplasme made of pellitory of the wall vnto the reines, or else a cataplasme made of the roote of cypres, and the leaues of bell-flower boiled in wine. The best and most soueraign of all the rest is to prepare a bath, wherein haue boiled the leaues of water-parsley, mallowes, holihoeks, March violets, pellitory, flowres of broome and cammomill, and within the bath vpon the reines a bag full of bran and water parsley.

For the colicke caused of grauell, cause to boile the leaues and flowres of cammomill in an equall quantity of water and white wine, to the waiking of the third part, drinke the decoction warme, suddenly the paine will be appealed.

For the difficultie of vrine, drinke the iuice of winter cherries: or the decoction of radish rootes in white wine, or the decoction of herb patience, or of the thistle saide to haue an hundred heads, or of bell-flower, or of the white pricklie thistle, or of sperage, or of dogs-grasse, or of rest-harrow: also applie vpon the yarde or secret parts a cataplasme or liniment of fleawort. Some hold it for a great secret, to drinke white wine wherein hath beene braied sowes found in caues and hollow places: or to make powder of the said sowes dried, and so to giue the same to drinke in white wine. Others do greatly esteeme the distilled water of the pillings of the roote of rest-harrow, first steeped in malmeley.

For the stone in the bladder it is a singular thing to drinke the iuice of limons with white wine: or to make a powder of the stones of medlars first washed in white wine and after dried: of broome-seede, burnet-seede, and of the seede of sperage, holihoeks, saxifrage, melons, pompions, citruls, and of the herb good against pearles, and to vse these with white wine. There is an hearbe growing at the new towne *Le Guyard*, called in French *Cresspinette*, by those that dwell thereabouts, and of this the yong Lady of *Villeneuve* (sister to the late deceased Monsieur Cardinall of *Belley*) caused to be distilled a water which is singular against the difficultie of vrine and the stone in the bladder, as I my selfe haue proued diuers times. Some hold it also for a singular remedie to make a powder of the stones of spoonges, or of the stone which is found in the head of cray-fishes, or of the shels of small nuts, or of the gumme of cherrie trees, and to take it with white wine or the iuice of radishes. Or else the distilled water of the stalkes of beanes, red cich-pease and the seed of holihoocke. This which followeth of glasse is a great secret, which being burned and quenched seuen times in the water of saxifrage, and afterward made into a very fine powder, and giuen with white wine vnto the party troubled with

F 4

grauell,

grauell, doth breake the stone in them in any part of the bodie: another secret is that of the shells of egges which haue brought forth chickens, being braied, brued and drunke with white wine, which breake the stone as well of the reines as of the bladder.

Pissing in bed.

For all such persons as pisse in their bed whiles they be asleepe, and cannot hold their vrine, there is nothing better then to eate oftentimes the lungs of a yoong kid roasted: or to drinke with wine the powder of the braines or stones of a hare, as also the powder of a cowes bladder, or of a hogs, sheepe or goates bladder, or the powder made of the rootes of bistort, or of tormentill with the iuice of plantaine or with the milke of sheepe, or the alhes of the flesh of an hedgehog.

Hot vrine.

For the burning of the vrine, let be taken of shell snails and whites of egges, of ech a pound, of the great and small cold seedes, of ech halfe an ounce, halfe a pound of the water of lettuce, fower ounces of good cassia, three ounces of Venice turpentine, poune that which may be poune, and let it all stande to mixe together for the space of a night, afterward distill them in a lembecke in Maries bath: let this water settle some time before that you vse it: giue thereof halfe an ounce every morning with a dram of *Saccharum rosatum*, continue the vse thereof as long as you are able.

Barrennes in women.

To make a woman fruitfull which is barren, let her drinke fower dayes after the purging of her naturall course, the iuice of sage with a little salt, and let her continue and goe ouer this course diuers times.

The menstruous fluxe.

To stay the excessiue fluxe of the flowers of women, they must drinke with the iuice of plantaine, the powder of the cuttell bone, or the bone of a sheepes foote burned, or the shells which pilgrims bring home after their pilgrimage to Saint James, or of corall, or of harts horne, or of the shells of burnt egges: or of twelue red graines of the seede of Pionie: or to swallow with the yolke of an egge the powder of tezell, or the scumme of iron first dipt in vineger, and after made into fine powder. And as for outward meanes it is good to applie vnto the nauell shell snails well braied, or the red in the void space of the nut, burnt, and powdred, and mingled with wine: make a cataplasme of soote, or of the scraping got from vnder the bottome of a caldron, mingle it with the white of an egge, or the iuice of dead nettle, or white mulleine, and apply it vnto the loynes and bottome of the belly: or to fill a bagge sufficient full of grosse salt, to dippe in fresh water newly drawne out of the well, and to apply it to the hollow of the reines. Some make great account of cherrie-tree gum infused in the iuice of plantaine, and cast into the priue parts with small sirings: or to apply to the breasts the leaues of celandine.

The white termes.

For the white termes of women, after that the body is purged, it is good to drinke with the iuice of plantaine, or the water of purcelane,

lane, the powder of amber, of corall, or of bole armoniacke, or of terra Sigillata, or of Steele prepared, or of spoong burnt in a pot, or of the sea snail first burnt, and afterward walsh in wine. And as for outward meanes there must be made a lee with alhes of oake woodes, or of the figge-tree, or of the osier, in which there must be boiled the rinde of pomegranats, galls, pieces of corke, leaues and rootes of bistort, and of peruinkle, beyond-sea roses, with a very smal quantity of allume and salt, and of this to make a fomentation or a halfe bath.

For to cause women to haue their termes, they must drinke every morning two ounces of the water of mugwoort, or of the decoction of dogs-grasse, eich pease, the seed of common or Romaine nigella, of the roote of smallage, cinnamon and saffron, the rootes of radish, of the rasell in which one may dissolve as much mirthe as the quantitie of a beane. The iuice of sea holly, and of rasell, mixed with white wine is singular in this case: a bath also is very good, and it may be prepared with water of the river, in which shall haue boiled mugwoort, mallowes, hollihocke, cammomill, melilot, and other such like herbes, and within the bath to rub the hips & thighes, drawing them downward, with a bagge of mugwoort, celandine, cheruile, smallage, betony, seedes of nigella, and other such like. Some esteeme it for a rare remedy for to take the weight of one or two French crownes of the marrow of a hart, to tie it within a little knotte of fine and cleane linnen, and to put the said knotte into the woman her secret place deepe inough, but this to be after the body hath bene prepared and purged.

For the suffocation of the matrix, the legges must be rubbed alwaies drawing downward, & tying them hard to put the party thereby to great paine: put cupping glasses vpon the thighes, rub the stomack drawing downward, from the pit thereof to the nauell. Furthermore she must be made to smell vnto things that stinke and smell strong: as the feathers of partridges, or shoefoles burnt, and below to applie thinges that are very sweet smelling, as cloues, marierome, amber, time, lauander, calaminth, penny royall, mugwoort, ciuet: the leaues of white mullein, which hath his stalke rising very high: you must also giue her to drinke the quantity of a beane of mithridate, dissolved in the water of wormewood: or fiftene red or blacke seedes of pionie, bruised and dissolved in wine. The only remedy for this disease is, that if it fall out that the sicke party be with child, that then her husband dwell with her, for the remedies before spoken of are dangerous to women with childe. Some do much esteeme in this disease, the course following, that is, that the woman every weeke to keepe her selfe free, should drinke three spoonfulls of white wine, wherein hath been boiled and steeped an ounce of the roote of briony.

For the falling downe of the mother, the party must be caused to vomite,

Suffocation of the matrix.

The falling downe of the mother.

vomite; to haue her armes rubbed and bound hard to moone great paine, to set cupping glasses vpon her breasts, and to cause her to smell vnto sweete and odoriferous things, and below to applie things that are of a strong and stinking smell: there must be giuen her to drinke the powder of harts horne; or of drie bay leaues with red wine that is very sharpe; in like manner a cataplasme made of garlick stamped and dissolved in water: or nettles newlie braied and applied vnto the bellie, causeth the matrix to returne into his place. Holihocks boiled with oile and the fatte of quails, made in forme of an emplaister, and applied to the bellie are very profitable. Ashes made of egge shelles wherein chickens haue bene hatched, mixed with pitch and applied vnto the belly, do put the matrix againe into the place. Some are of opinion that one leafe of clot burre, put vnder the sole of the womans foot draweth downe the mother, and being applied vnto the top of the head doth draw it vp on high.

The inflammation of the matrix. For the inflammation of the matrix, it is good to make an incision with the iuice of plantaine, or of nightshade, or of houlleeke, or to apply a cataplasme made of barley flowre, the rindes of pomegranates, and the iuice of plantaine, houlleeke or nightshade.

The inflammation of the yard. For the inflammation of a mans yard, the same cataplasme will be very soueraigne, if there be added vnto it some quantity of drie red roses: or else take the new dung of a cow, drie it in a pan with the flowres of camomill, briar and melilot, lay it to the cods, you shal perceiue the swelling to depart quickly.

The stinking of the feet. To take away the stinking smell of the feete, put within your shooes the scumme of iron.

For to make a woman fruitfull that cannot conceive: take a Doe great with fawne, kill her, and draw out of her belly the membrane, wherein the fawne lieth, turne the fawne out of the said membrane, and without washing of it, drie it in the oven after the bread is drawn forth, being dried make the inner part and place where the fawne lay, into powder: giue of this powder three mornings vnto the woman, and that by and by after midnight with three or fowre spoonefulls of wine; let her not rise of fowre houres after, and aduise her that her husband may lie with her.

To be brought in bed before due time. If a woman with childe haue accustomed to lie downe before her time, it is good that whiles she is with childe, she vse with the yolke of a new egge, a powder made of the seede of kermes, otherwise called diers graine, and of fine frankincense, of each an equal part: or else that she vse oftentimes of the powder of an oxe pisse, prepared in such sort as we haue set downe among the remedies for the pleurisie: or else that she weare continually vpon some one or other of her fingers a diamond, for a diamond hath the vertue to keep the infant in the mothers wombe. Some say also that the slough of an adder, dried

dried and made into powder; and giuen with the crums of bread is singular good for the staying of vntimely birth. The eagles stone is commended for this aboue all other things, which being worne vnder the left arme pir, or hanged at the arme of the left side, doth keep the infant, and hindreth vntimely birth.

To bring to bed the woman which is in trauaile of childe, you must tie on the inside of her thigh, not farre from the place by which the excrement of ordure passeth, the eagles stone, and so soone as the childe is borne & the woman deliuered to take it away: for the same purpose to giue her the decoction of mugwort, rue, dittanie, and penniroyall, or of the iuice of parselie drawne with a little vinegar, or of white wine, or hypocras, wherein hath bene dissolved of the powder of the canes of Cassia, of cinnamon, of the stones of dates, of the rootes of cypres, of the flowers of camomill, of the roote of round aristolochie or birthwoort, or the iuice of Tota bona with white wine, or else the leaues of Tota bona stamped, laide vpon the secret parts and round about. And when a woman is in trauaile of childe and looseth all her strength, it is good to giue her bread steeped in hypocras, or a spoonefull of the water called claret water, which must be prepared in this sort: lay to steepe in halfe a pinte of good aqua vitæ according to the measure of Paris, about three ounces of cinnamon well shaued, by the space of three daies, in the end, whereof let the saide water run through a cleane linnen cloth, and dissolve therein an ounce of fine sugar, after put thereto about the third part of old red rose water, and let all stand together in a bottle of glasse to vse when neede requireth. This water is principally good for all the diseases of the mother, as also for fainting, swooning, weakenes of the stomacke, difficultie of breathing, of making water and many others.

To cause the after-birth to come forth, the remedies next aboute deliuered are very good and profitable, but aboute the rest it is good to drinke with white wine or hippocras warme, the powder of beanes or the flowers of saffron, or the flowers of marigolds.

For the throwes which come after childebirth vnto women, you must giue to drinke a spoonefull of the foresaide claret water, or of the water of peach flowers, nutmeg, carabe and ambergrise: you must make a cataplasme to apply vnto the belly with the yelks of eggs hard roasted, or fried with oile of nuts and iasmines, putting thereto of the seedes of anise and cummin powdered, the flower of beanes, fresh butter, and oile of rue and dill.

If the matrix after childebirth be out of frame, it is good to apply vnto the belly a cataplasme made of cowes, sheepes or goates dung, adding thereto the seedes of cummin, fennell, anise and parselie, with a quantitie of very good wine; and for want of this cataplasme, the belly may be couered all ouer with the haule of a new slaughtered sheepe

sheepe or goate : as also to haue a dish of the plane tree or a test of earth, and after you haue rubbed the edges of the said test or earthen drinking pot with a head of garlick, to apply it vnto the nauell.

For the rupture

For the rupture, otherwise called the falling of the guts downe into the flanke, it is good to applie vnto the place, a cataplasme made of the flower of beanes and the lees of white wine, or a cataplasme made of the roote of the great and small comfrey, and of stone pitch with a little malticke, or double linnen cloathes dipped in the iuice or licour, which commeth out of the small fruit of the clme, and vpon this cataplasme to weare a trulle. It is good also to drinke for the space of nine daies, a drinke prepared of the iuice of the rootes of Salomons seale, and female ferne, the leaues of bugle and fanicle, and this to the quantitie of a small draught : or else burne in the ouen in a pot well lured, red snails, make them into powder, and giue of this powder for the space of fittene daies, or longer if neede be, with such pap as is made for little infants, or with pottage if they be past the teat : for them that are more dainty and delicate, you shall distill the said snails in Maries bath, and giue of the distilled water to drinke the same space of time : or else make a powder of the molle of the blacke thorne, drinke of it with thicke red wine the waight of a French crowne euery morning : applying in the meantime a certaine pap or thicke clammy substance such as is to be had in the paper mills, and tie vpon it a trulle.

Gout and ache in the handes.

For paine in the secte and hands, boile a good handfull of mugwort in a sufficient quantitie of oile oliue, vnto the spending of the third part, make thereof an ointment for the pained place : giue also to drinke the waight of a French crowne of the seedes of Ebulus, with the decoction of one of the herbes called Arthritica.

Sciatica.

For the Sciatica, you must applie to the greued place a cataplasme made of the crums of citizens bread, kneaded or boiled in cow or sheepes milke, putting thereto two yelkes of eggs and a very little saffron : otherwise there must be provided a cataplasme of the rootes of mallowes and holihoockes, the leaues of March violets and of mallowes, the flowers of cammomill and melilote, all boiled in the water broth of tripes, after washt and wrought together with yelkes of eggs, flower of linscede, hogs-grease and oile of cammomill : or else, and more easily, you must make a cataplasme with coves dung, flower of beanes, bran, wheat and cummin seede, all beat and made into a masse with honied vinegar : it is true that if the greued part doe grow vnto a whinsh colour and be much puffed vp, it will be good to adde vnto the former cataplasmes, stone pitch and a little brimstone. It will be good also to draw the iuice of danewort, of elder and iuie, and to boile them afterward with oile of rue and wormes, and with a little waxe to make a liniment. A cataplasme made of the dung of an oxe or a cow,

and

and wrapt in the leaues of the vine or of coleworts, & heated among the embers. And in case you would draw out of the vttermost part vnder the skin, that which is fetled in the inner places of the ioints, then apply this cataplasme made of the dung of stocke-doues or house-doues, an ounce; of mustard and cresses seed, of ech two drams; oile of old tiles an ounce : mixe all these very well together.

For the shaking of the parts of the body, vse a long time the decoction of one of the herbes Arthritica called primrose and sage, eate also oftentimes of pine apples.

For sinewes oppressed, take the ripe seede of danewort, put it in a viole halfe full, fill it vp with oile oliue, stop it very close, and let it boile fower and twentie houres in a posnet full of hot water : and as oft as the hot water shall be boiled away you must put other in place of it, all the time of the fower and twentie houres : which being expired, take away the said viole of water, and set it in a dunghill ten whole daies : you may also make oyle of danewort for the same purpose ; fill an earthen vessell well leeded to the halfe, with the iuice of the leaues of danewort, and poure thereupon so much of oile oliue, set this vessell well stoppt with paste in an ouen, after the bread is drawne, there let it stande till the iuice be waisted; keepe this oile for sinewes that are colde and benumbed : or more easily, apply vnto the place the dung of an oxe or a cow fried with strong vinegar or the oile of acornes ; or the gumme of the wilde peare-tree softened with capons greafe, or the oile of linden or Iesamine tree.

For the prickings of sinewes, take snails with their shels, bruse them and adde thereto a little of the flying dust that is to be gathered vpon the wals of the mill-house, and apply it to the place pricked, or else rub it with the oile of wormes.

For sinewes that are pained, take rawe wormes of the earth, bray them and lay them hastily and with speede vnto the benumbed sinewes. Or else infuse in the Sunne the flowers of elder in the oile of nuts, and rub therewith the pained sinew, or rub and chafe the same with the oile of balsam.

For all other sortes of paines in the ioints, it is good to make an emplaister with the iuice of red coleworts and danewort, the flower of beanes, flowers of cammomill and roses made in powder, and to apply them vnto the pained place. Otherwise, cut in thinne shauings the roote of the great comfrey while it is yet Greene and but newly pluckt vp out of the earth, spread that which you haue shaued or scraped off, vpon a linnen cloth in manner of a cataplasme, and apply it vnto the pained place. Otherwise, take the rootes and leaues of danewort, the leaues of scabious, the small comfrey and wilde sage, boile all together in wine, after let it passe through a searce, and put thereto oile of spike, Aqua vita, and the oile of neates secte. Otherwise, take

a very far goose puld and the garbage taken cleane out, after stufte her with kitlins that are well liking, and chopped very small with common salt, & roasted at a small fire, and looke what droppeth forth let be referued for an ointment for the greuced place. Some likewise apply for the paines of the joints, yong whelpes vpon the pained places. *Galen* saith, that he was wont to soften all such hardnesse as is wont to happen about the knees, by applying vnto them old cheefe all mouldy, stamped with the broth wherein a salt gammon of bacon hath been boiled.

Windy swell-
lings.

To take away the swellings procured of winde, you must take fried salt, and put it betwixt two linnens vpon the swelling: or applie a cataplasme made of the lees of white wine, the branne of wheat and new oxe dung.

Red pimples or
swellings.

For such swellings as are very redde, make a cataplasme with the leaues and flowres of violets, flowres of henbane, leaues of nightshade, flowres of cammomill and melilot, all boiled in wine and water, strained through a searce, and applied vnto the aking place: or else draw the iuice of houlleeke with a little red wine and the flowre of barley, make an emplaister for the place. The dung of goates hath power to wast, spend, and consume the hard swellings, how hardly fouer resolued and waited, especially the old hard swellings about the knees, mingling the same with barley flowre and water and vineger in forme of a cataplasme.

To suppurate
an impostume.

To ripen an impostume, apply vnto it the dung of goslings, which haue bene kept from meate three whole daies together, and after fed with the goblets of a fresh eele: it is good also to apply rawe wheat champed or chawed a long time: a cataplasme made of the leaues & rootes of mallowes, holihoocks, onions, lillies, crums of white bread, all sod together and after strained through a colander, adding thereto the yelke of an egge, and a little saffron: It is true that if the aposteme be very cold, there may be added to the decoction of the cataplasme abovesaid the rootes of elacampane, danewoort, lillies, and brionie, flowres of cammomill and melilot, onions, and wheat leauens. To ripen a naile, otherwise called a fellon or cars-haire, take raw wheat a long time chawed, or the flowre of wheat, the yelke of an egge, hony, and hogs-grease, after heat them all together, and make a plaister to lay to the soare: or else lay vpon it sheepes dung steeped in vineger, if in case you mind to soften and resolu it.

A naile other-
wise called a
fellon or
cars-haire.

Tetters.

For tetters you must vse the iuice of purslaine, celandine, plantaine, nightshade, and limons: and if this medicine appeare not to bee strong enough, it will be good to mixe some red tartar amongst, and with this composition to rub the spotted places. Otherwise, infuse for the space of a whole daie in strong white vineger the roote of herbe patience, cut into shiuers, rub the place where the tetter is with
one

one of the shiuers three or fower times a day: or else boile tenne graines of sublimite, and halfe a dram of aloes in equall quantitie of plantaine and nightshade water, vnto the consumption of the one halfe: or else steepe the powder of a slate in very good vineger with salt and rub the place. Otherwise, take the gum of cherrie tree, a very little brimstone, with twise so much salt as brimstone, steepe all together in the strongest vineger you can get, and with this composition rub the spotted places: or else rub the place with your fasting spertle or with the gum that groweth about the vine: but before this you must rub them with salt nitre, or else with the herb Nicotiana, applying both drosse and iuice together vnto the place.

To take away the markes and pits of the small pockes: take an ounce of oile, or of the flowers of Saint Iohns woort, halfe an ounce of Venice turpentine, as much of sperma cœti; melt it all vpon the fire in a dish of earth well glased; when it beginneth to boile and to swell vpward, take it from the fire and let it coole, rubbe and chafe the places of blacke spots with this ointment, and continue it so long as till the pits be filled vp.

For vlcers and apostemes which happen about the nailes: laie vpon the soare a little worme which is found in the head of the tascell when it is drie.

For hard swellings: take mallowes, holihoocks, the rootes of lilies, pellitorie, the leaues of white mullein, seed of line and holihoocks, flowers of cammomill and melilot, let all be boiled in equall portions of water, wine and vineger: after passe them through a colander, adding thereto the flowre of barley and beanes, the powder of cammomill and roses, hens grease, and fresh and new butter: make a plaister to lay to the soare. Likewise it shall be good to lay hot thereunto a cataplasme made of the drosse of Bee hiues dissolved in white wine and fried in a frying pan.

For such as are fallen from on high, giue the weight of halfe a French crowne of this powder with good wine, mummia, tormentill, rhaponticke, sperma cœti, of each a dram: or else giue the weight of a French crowne of the powder of the seede of garden cressles, of mummia, of the seede of houlleeke prepared and sugar candy.

For a green wound, you must take garden baulme, the great and small comfrey, and a little salt, punne them all together and apply them vpon the wound. It is good also to drop into the wound the iuice of nicotian, or for the more profitable vke thereof to apply both the drosse, as also the iuice thereof itamped, and to binde vp the wound by and by, and assure your selfe that within three daies it will be recovered. Otherwise, take the elme apples, the flowres of Saint Iohns woort, and of rosemay, the knops or buttons of roses, put all together in a glasse bottle full of oile oliue, stop the bottle diligently and

The pits of the
small pockes.

Plcers about the
nailes.

For sibirrom
tumours.

Falles from on
high.

A greens
wound.

and set it to the Sunne, so long as till all be so far consumed, as that it may seeme to be rotten; afterward let it runne through a linnen cloth diuers times, and then keepe it in a vial to drop into wounds. The readiest and most soueraigne remedie is the iuice of Nicotiana and the droffe or substance likewise: and also the ointment made thereof, which we will handle heereafter, *videl.* in the seuentie sixe chapter of the second Booke. This ointment is very singular: take veruaine, agrimonie, betonie, and pimpermell, of ech a handfull, wash them diligently, and being washed swing them well, stampe them together in a mortar; being stamped, put them in an earthen vessell well glazed, with seuen pintes of white wine to boile till halfe of it be consumed, the vessell in the meane time being close couered, and the fire burning cleere and softly: after draw the vessell somewhat further from the fire, and let it coole vnto the next morning, then straine it out a little, warme the grosser parts that it may so be forced through some haire strainer, and adde thereto of white pitch melted by it selfe, & also strained through a haire strainer a pound, halfe a pound of white waxe in graines: masticke and turpentine, of ech one ounce, make thereof an ointment of good consistence. Likewise there is nothing more singular then to take of greeke pitch, brimstone, and olibanum equall parts, to bray them together with the whites of egges, and after you haue stanchd and wiped away the blood in handiome sort, to ioine and bring together the edges of the wound, and to apply it thereto with a linnen cloth and a cataplasme, afterward to binde and roule it vp with double linnen clothes, and so to leaue it for certaine daies: or else boile the leaues of Carduus benedictus and flower of wheate in wine vnto the forme of an ointment, wash the vlcers twice a day with wine: afterward lay thereunto this ointment, or else wash the wound with the decoction of Dent de lion: more easily thus: take the durt which you finde vnder buckets, trounges, or such like, and apply it vnto the cut: it closeth it vp incontinently.

Old or new
wounds.

For all wounds as well old as new, vlcers and whatsoeuer cuts in the flesh: take the leaues of plantaine, spearewoort or small plantaine, mallowes, all good, of ech a handfull, French sage, about fower and twentie leaues: let all the foresaide herbes bee well picked, washed, and after stamped verie well all together: this done, take five quarts of old swines grease, put therein a hot pestill and cause it to melt, then boyle it with the said herbes, and when you see that the liquor of the herbes is consumed, you shall straine it and put therevnto as much frankencense as a nut, greene waxe and perrosine, of each as much as two nuts, melt them, that so they may all be brought vnto the forme of an ointment, of which you shall make vse for all sorts of wounds. Otherwise, take brimstone most finely poudred and searced, put it in a glasse vessell, and powre thereupon so much oile olive

as wil do more then couer it by fower or five fingers, set it out vnto all the heate of the sunne you can for the space of ten dayes, and stirring it about many times with a spatull of cleane and faire wood, and keeping the said vessell close shut continually, to the end there may not any durt fall thereinto. At the ende of the tenne daies emptie out all the oyle by leaning the glasse softly to the one side (seeing it hath extracted all the substance or essence of the brimstone) into another glasse bottell by the helpe of a funnell, and let not any of the droffe or residue go in withall, after which you shall stop the bottell verie carefully: and at such times as you would vse it you shall dip lint, white linnen cloath, cotton or blacke wooll in it, and apply it vnto the parts that are hurt, whether by vlcers or cuts, as also vnto impostumes, and that so long as vntill they be cured: you may powre in oile againe the second time vpon the residue (left after the oyle powred out as befor saide) and doe as was done before. Make account of these two latter remedies as of those which will not faile you.

For the boile called *Anthrax*, *Carbunculus*, and other such pestilent tumours, see that you apply vnto them rue brused and mixt with very strong leauen, figges, cantharides, onions of the land and sea, vnquencht lime, sope, gum ammoniack, and a little treacle: for this emplaister draweth forth such kinde of tumours. Or else take a toade, dry her either in the sunne or in the ouen, make her into powder, and put of this powder vpon the carbuncle, and it will draw forth all the venome: or else apply vnto the carbuncle a frog alive, and if she die, then another, and do this so oft as vntill that one do liue, and so you shall darw out all the venome.

The carbuncle
Anthrax, &c.

For vlcers comming of the pockes and such other maligne ones, *vlcers of the pockes.* take ten pintes of water, quench therein hot irons so long as till the ten pintes become but five, and in these five pintes infuse for the space of fower & twenty houres a pound of vnquencht lime, after that straine the water, when it is strained dissolve therein fifteene graines of Verdegrease, and as much of vitriole, and twentie graines of camphire; this water is singular to mundifie, cleanse, and drie vp vlcers. Otherwise, set to boile in a new earthen vessell very cleere water, when it beginneth to boile, put into it by and by vnleckt lime, and presently thereupon powre it out into another vessell all new, let it rest there so long, as vntill (after it be scummed) it become cleere, the lime falling to the bottome of the vessell in manner of pap: in the end you shall gather the water swimming aloft by leaning the vessell and letting the lime abide vntill it is in the bottome, and this water thus gathered shall be refered in a cleane vial or other vessell well stopped, that so it may serue for your vse: in which being warme dip a linnen cloth, and apply it in steede of an emplaiter vnto the vlcere, and renew it oft.

To draw out miraculoussie a peller, make a tent of a quince, and for

A wound with
But.

for want of it, of marmalade of quinces onely without any addition of spices or other things, annoint it with the oile of egges, and put it into the wound or hole made by the shot of the pistole.

Inward
woundes,

For inward woundes in which there can no tents be put, there must be drunke oftentimes the decoction of Auens: and the outward wounds washt: or else take mugwoort, great and small comfrey, whole beronie, agrimonie, the rootes of rubia, otherwise called the Diers hearbe, the rootes of small plantaine, otherwise called carpenters herbe, sage, the leaues of brambles, parcelie, pricking nettle, marigolds, fanicle, bugula, mouse-care, burnet, dandelion, plantaine, the crops of hempe, female ferne, buglosse, gentian, veruaine, birdes roong, ground luie, water germander, catmint, herbe Robert, cinque-foile, tanley, all the capillar herbes, of each one halfe handfull: damaske raisins their stones taken out, licorise, the seede and flowers of saint Johns woort, the seede of blessed thistle, of each an ounce, the three cordiall flowers, of each foure ounces; all these being thus carefully pickt, and made cleane, let be braied very thoroughly, after strained through a hairen strainer, with one pinte of white wine: you must cause him which is thrust through to drinke of this drinke a little draught fasting, or one howre before he eate, and as much before his supper. If these iuices displease thee, in steed of braying, brusing, or stamping of the things aforesaid, you may make a decoction in common water, adding in the ende of the decoction, white wine, honie of roses, and sirupe of dry roses. In the meane time the wounde must be clenfed with white wine warme, and there must be laid vpon it a leafe of red coleworts warmed at the f. c. and reasonable greene: and there must care be had to keepe the wound from salte and thicke meate, from strong wine, great paine, and vse of women.

Knots or knobs,

To cause knots to waste & go away in any part of the bodie whatsoever, take the oldest and moist mouldie cheese that you can finde, knead it with broth wherein there hath boyled a peece of fat bacon or lard a long time, make thereof a plaister to lay vpon the place: or else stampe in vinegar Conchula Indica with mirthe, apply it to the place, and you shall finde a marueilous effect. Otherwise take nine pints of vrine, wherein boile for a good while two handfulls of balme & Dent delion in a pot of earth very close couered, & that so long as vntill all come to a pinte, after straine out the herbes, in the liquor strained out, put halfe a pound of hogs greafe verie newe and neuer salted, foure ounces of aqua vitæ, boile them all together the space of halfe an howre, after put thereto the oile of pike and rosemarie, of each an ounce, quicke siluer the waight of two french crownes, mixe them all together, and stirre them well with a spatull; and by this meanes you shall make an ointment, with which you shall vse to chafe the members troubled with knots, before the fire.

For

For haire that is fallen by the disease called Tinea, or otherwise: *the falling of the haire.* rub the bare and bald place with a peece of died cloth, vntill it bleed, afterward annoint it with an ointment made of honie, oile of linseed, and the powder of small flies burnt vpon a tile red hot: or with mife dung braied with honie: or with shels of nuts burnt, powned and mixed with wine and oile.

For vlcers that are hard to be cured, gather with linnen clothes *vlcers.* spread vpon the grasse before sunne rise in the moneth of Maie, the dewe of the same moneth: afterward wring out the said linnen for to haue the dew, which you shall boile and scum, and in boiling dip therein diuers bolsters or plagets of fine linnen, which you shall apply vnto these maligne vlcers; afterward when you shall perceiue that these vlcers doe not continue any longer so fowle and filthie, and that they begin somewhat to shew to haue faire flesh, boile in this dewe water a little allom and olibanum, and by this meanes you shall heale them thoroughly: or else make a powder of the raw or burnt shels of oysters, or of the dung of a dogge, which hath gnawed and fed vpon nothing but bones for the space of three daies: after you haue dried the same dung, and made it readie to apply vnto the vlcers, there is not any thing to be found that will more drie vp the same: or elie make a powder of a rotten post.

For kibes on the heeles, make powder of old shoos soles burned, *Kibes on the heeles.* and of them with oile of roses anoint the kibes: or else lay vnto the kibes the rinde of a pomegranat boyled in wine.

For the blewnesse coming of strokes or otherwise, steepe in boiling water a cloth hauing salt tied within vpon a knot, and with this *Blawkes and blow spots through blowes.* foment the brused place.

To take away wartes or brawnie tumours in the ioints, rub them *wart.* with the milk of tithymal: or apply therunto the powder of saune, or of hermodactilis mixed with oxymel squilliticum, or with the iuice of marigoldes: the dung of sheepe wrought with vineger and made soft and applied doth heale all hanging wartes.

For the *Noli me tangere*, it is killed if that Nicotiana bee applied thereunto, as wee will further declare in our second booke and 76. *gerv.* chapter.

To kill crablice, make a decoction or Lee of the leaues of worme. *Crablice.* wood, aron, and nut tree in very strong vineger.

For all burning or swinging with fire, take the decoction of ra- *Burning.* dish with the lee of vnquencht lime: or an onion roasted vnder the embers, or oile of nuts with water: or the yolke of an egge dissolved in oile: or hens dung tempered with oile of roses: or mosse of the black thorne the finest that you can finde dried in the oven or in the sunne made into fine powder, and with the milke of a woman which giueth sucke vnto a boy, to make a liniment to annoit the places burnt:

G 2

or

or else take salt water or brine, dip therein a linnen cloth and applie it vnto the burning: or common sope with honie and butter: or the iuice of an onion: or the oyle of an egge: or else dissolue allome, copperas, the fat of glasse, and a little camphire in fountaine water and good vineger, powre this water oftentimes from pot to pot, dip a linnen cloth in the same water warmed vpon ashes, and apply it to the place: or else take two whites of egges, beate them together with oyle of nuts and rose water, adding thereto the remainder of such water as quicke lime hath beene quenched in, stir them all yer once againe well together, and afterward let them stand and settle.

Ringwormes.

For ringwormes, scabs, and all maner of sorts of itchings which happen in the hands, legs, and other parts of the body: take the water of a smithes forge, and put a handfull of salt to melt therein: with this water made warme wash the place where the ringworme spreadeth: when the scab is drie, annoint it with the creame of cowes milke. Or else take of Venice turpentine two parts, wash it fve or fixe times in fresh water, or in rose water, after that it is thus well washed, adde vnto it one part of new butter salted, the yelke of an egge, and the iuice of a lowre orange, make hereof a liniment and annoint the scabie places therewith before the fire. Or else for little children, take the iuice of nettles and populeon, and make thereof a liniment: or else take soote finely powdred, mixe it with strong vineger, therewith you shall annoint the place, hauing first rubd it well euen to the raising of rednes in the skin.

The canker.

For the canker, take honie of roses, roach allome, salt and white wine, boile all together till the halfe be consumed, and then straine it through a linnen cloth, afterwarde keepe the water for to wash the canker. Some doe greatly allow and like of the distilled water of cowes dung newlie made, to wash the places troubled with the canker.

The moth in the haire.

For the falling of the haire called the moth, wash the head of the patient with oxe pisse till the blood come, and afterward cast vpon it the powder of the white of hens dung dried in the ouen: or of fine soote mixt with strong vineger.

To make the haire blacke.

To make any mans haire blacke: Take such quantitie as you shall thinke good of gals, powder them and put them ouer the fire in an iron chafingdish, and let them continue there, till they become verie blacke; then powre vpon them by little and little the oile of oliues, alwaies turning them to and fro, in such sort as that they may drinke vp all the oile, and after become drie againe, in so much as that they being taken from the fire may be pouned very well: whereunto adde of vitrioll, rosemarie, sal gemme, the dry earth whereof tiles are made and cloues, all these being likewise made in powder. On the other side boile in wine the rinde of the wall-nut, and of the pomegranat, and allome,

allome, as much of the one as of the other, so long as till the wine become blacke as inke, straine this wine, and cast into it your powder before you vse it scoure your head with some good leey, and then hauing dried it againe, afterward wash it with this wine wherein these drugs be, and then put on a coise, & so keepe it for fve or fixe houres after: in the end wash it very well with water and wine and drie it: the haire will abide blacke for fve or fixe monethes.

Against the biting of a mad dog, giue to eate the roote of sweete The biting of a
eglantine: toment the place with the vrine of a young infant: or with mad dog.
the grosse partes of the decoction of rue, figs, red coleworts and salt mixt with honie and butter.

If the husbandman or any of his people haue beene bitten with a The biting of a
snake or other serpent, let him drinke presently an indifferent draught of the iuice of the ashe tree pressed out with white wine, and let him apply vnto the bitten place in maner of a cataplasme the leaues out of which the iuice was pressed: or let him drop into the hole made by the snakes biting three or foure drops of the milk of the fig-tree, or of figs, or some mustard-seedes pouned with vineger: or else take the leaues of white mullein, auens, red goose berry bulh, of each a handfull: boile them all in vineger and vrine of a man, a like much, vnto the consumption of the halfe: drinke an indifferent draught of this decoction, and foment the bitten place with the leaues.

If it fall out that a snake or any other serpent be crept into the far- A snake crept
mers body, or into the body of any of his seruants lying asleepe with into the bodie.
their mouthes open in the medowes, gardens or other places, ther is nothing more soueraign to force the same againe out of such a body, then to take at the mouth with a funnell, the smoke of a perfume made of some old shoo sole, for the snake detesteth such stinking fauours aboue all other things: and to drinke the decoction of veruaine made in white wine. A thing tried and approued.

If a man haue swallowed downe a horse-leach in drinking water, Horse-leaches.
you must giue him fleas with strong vineger.

If any rat, spider, flie, waspe, hornet, or other venomous beast, by The sting of
his sting or biting haue caused your flesh to rise, rub very gently the spiders.
offended place with the iuice of housleeke, & incontinently the paine and swelling will cease: or else rub the place with your owne spittle: or else put vpon the stung place, the dung of a cow or ox very hot.

To kill lice: rub the place with the iuice of broome, mixe it with Lice.
the oile of radish, or of iuniper, or with the decoction of stauelacre: or else boile within an earthen pot well leaded, equal parts of Olibanum and larde of bacon, make them in forme of an ointment, passe them through a searce, and keepe it afterward to rub the head withall, or any other place where lice are.

For the danger insuing of the eating of mushrūs, drink with hony & Mushrūs eatē
vineger

vineger, hens dung braied, and you shall within an hower be healed of the heauines and strangling fits of the stomacke: or else drinke the lee made of the vine branches with a little sale.

And for as much as in the most part of the diseases aboue named and such others, it is needfull that there should some purgation be taken to cast out the hurtfull humours which gather in the body, the wife huswife may prouide and make this purgative following. Take virgins honie one pound, rubarbe, or sene, or agaricke, euen of any one of them, or all three made into powder, fower ounces; mixe this powder with the honie, and let it stand in the shadow sixtie daies in a pot well couered: stir it euery daie, and take away the froth which you shall finde on the top of it: the honie will keepe all the force of the medicine, and will calt vp in a scum the substance thereof, in such sort as that still it will abide without mixture. To make this composition the more pleasant, you may mixe therewithall some one or other drug that is pleasant and of a good relish. If you further desire to be instructed in diuers other remedies which are readily and easily to be gotten, looke in our Latine worke called *Theaurus sanitatis paratu facilis*.

The thirteenth Chapter.

Of kine and calues.

A cleane cow-house.

FOR the better keeping of kine, let the huswife procure and cause her maides to ouerlook oftentimes & see that all things be well in the cow-house: for there is nothing that doth them so much good, and keepe them so well in health and good liking, their meat & fodder excepted, as the cleane and neate keeping of their houses: let them rub them along the backe, about the necke and head and no more, with a wispe of strawe harde writhen together, and made somewhat rough: at their comming from the pasture and in the morning after they haue beene dressed, let them carefully fill vp the holes that are in their house floore, wherein their pisse might stande and stinke, and let them calt sande or grauell vpon the floore, that they may haue the faster and surer setting of their feete. Let them not be put to the bull, before they be vpon their thirde yeere, nor any longer then vnto their twelfth yeere: for if they bee put to sooner then they bee growen vpe to their full strength and growth, they will bring forth calues halfe cast, smal and little, weake and feeble: and againe if you goe about to continue their bearing after twelue yeeres, their calues will not bee so strong nor of so comely a shape: you shall lead them thereto, throughout all the time of the moneth of May, Iune & Iuly, when the grasse doth most flourish; & again about this time they are chiefly set to go a bul-ling,

The putting of kine to the bull.

The time of the yeere fittest for kine to be put to the bull.

ling, seeking for the bull of themselves without being lead vnto him. And you shall know their inclination to the taking of the bull by their hooves if they be puffed vp or swolne, as also by their continuall lowing, and by their leaping vpon the bulls backe. The profit which riseth by their taking of the bull at this time is, for that they will happen about tenne monethes after (which is the iust time of their going with calfe) to calue, and that being at such time as new grasse doth draw on, it will be an occasion of greatly increasing their milke, and vpon this occasion also their calues shall be a great deale the better fed. To the ende they may hold bulling the better, you must see that at such time they be kept bare and leane, for so they will hold a great deale better: on the contrarie a good bull for breed must be fat, well set together, and well meated; hauing for two moneths space before beene fed with barley and fetches: he must also be chosen more long then high, of a red haire, large betwixt the shoulders, strong legged, round trussed and bodied, broad breasted, short headed, broad browed, fierce countenanced, terrible to fight, blacke eies, short hornes, long taile and full of haire. And if it happen that the cow refuse the bull, or the bull her, they must be brought to haue a desire the one to the other by holding neere their nostrils the taile of a hart burned, or else vsing some other composition whereof we will speake in the treatise of horses. During the time of their going with calfe they must be kept from leaping of ditches, as also from leaping of hedges or bushes: and a little before the time that they doe calue to feed them in the house, or yeard adioyning to the house, and that with good prouander, or blossomes, not milking them at all; for the milke that they haue then cannot be but naught and becommeth hard as a stone. When they haue calued they may not be milked to make any butter or cheese, vntill two moneths be past: after which time you shall send them againe to their pasture, not suffering their calues to sucke them any longer, except it be at night when they returne from pasture, so long as they feed vpon fresh prouander, which you shall haue in readines for them: and in the morning before you send them to pasture. In what state soeuer they be, you shall not let them drinke about twise a day in sommer and once in winter, and that not of riuier or flood water, but of some water which is warme, as raine water, fenne or well water, hauing beene drawne a long time before, for well water by reason of the coldnes might somewhat hurt them. It is true that the cow will not refuse anie water that is without fault, so that it be cleere; for she loueth cleere water especially, as the horse on the contrarie, that which is pudly and troubled, being a signe of his goodnes if so he iumble the water with his foot before he drinke. And as for calues newly calued, you must leaue them with good litter of fresh straw, vntill such time as she haue licked, cleansed, and wiped them,

Signes of a good bull.

A cow with calf.

The cow would haue a cleere water as she horse a troubled.

and for some five or sixe daies after, for the being of the cow with the calfe doth heat and fettle the calfe. After such time you shall put it by it selfe in some shed providing it good litter, and renewing the same oftentimes, and thence you shall bring them forth when you would have them sucke, & carrie them thither backe againe so soone as they have sucked. And if you see, either that they will not sucke, or that being willing to sucke, they can doe nothing but offer to take the paps without sucking any thing: you shall looke vnder the tooong if they haue not the barbes, which is a whitish fleshines growing vnder the tooong almost after the manner of the pip, which (and if it be so) you shall take away gently, without fleying the tooong, with little nipping pincers: washing the place afterward either with red wine of it selfe, or with the infusion of salt and garlicke stamped together, for this disease will cause them to languish vnto death by keeping them from sucking. Let the huswife also be diligent in taking away the lice that may breed vpon calues, and make them languish and thriue nothing at all, as doth also the scab when they haue it: and this is to be knownen by their skins, if they become hard and stiffe after the manner of little ridges, and that stroaking your hand along you feeles the skin hacke and rough like a file, and the haire staring and standing vpright. For the healing of such scabs she shall rub them with butter or with oile of the fetlings of the lampe all ouer the body where the scab is seized. But as it is a great deale better to preuent diseases then to cure them, the huswife shall cut off all entrance from these two annoyances, if she cause to be rubbd with the wispes of straw vnbound her calues twice a day, if she suffer not their pisse to stand in puddles vnder them, if she see that they be kept with fresh litter and drie, causing their dung to be carefully cast out from among their litter.

But to returne to the keeping and ording of kine, the huswife shall appoint times for the milking of them, as that they be milkt euening and morning at a conuenient howre, and when they be at red. That the milke be strained so soone as it is taken, and that butter bee chernd with leasure but not any losse, that the cheefe be well crafht, prest, and freed from their whay, and especially that her pots, kneading troughes, strainers, slices, and cheefe presses, and other implements seruing for the daire, be kept neat & cleane, and that none of her maides haue any thing to doe with either the butter or cheefe whē they haue their termes. In the morning before going to field, she shall cause the calues to be gelded, and that before they be two yeeres old, and not after: for calues grow the more when they are gelded in the time of their growth, because thereby their bodies are made the more moist: when they are gelded in respect of their paine and griefe, there shall be giuen them hay small shredded and mingled with branne, vntill they become againe to their former stomacks and appetites:

The barbes vnder calues tooongs.

Lice and scabs of calues.

Kyme.

To geld the calues.

appetites: they must not be gelded either when it is very hot or cold, or in the old of the moone: being more than three yeares olde they shall be put to the neatheard, to begin to prepare the for the draught: and likewise she shall deliuer him her kine with calfe, and those which after nine yeares do not bring forth any more calues, for yet they may serue to draw in the yoke.

Furthermore she shall make much account euermore of the cow *The markes of which is of a meane stature, of a long body, a large flanke, fowre or five yeeres old, of a party blacke colour, or spotted with white and black, her bagge great and fide, a great belly, broad betwixt the browes, a blacke eie and great hornes not turning in one towards another, nor yet short or small, but bright, blacke, and of a wide and well spread shape, her eare very hairy, a narrow iawe, a thicke and grosse muzzle, wide nostrils and sniuely, kittle and blacke lips, her haire glistering and thicke set, her legs short, her thighes grosse and thicke, and her necke long and grosse, her backe large and broad, her taile long euen to the heele, her hooves short and euen, a broad brest, a great and grosse briske and her dugs great and long. As concerning the diseases of calues and kine, they shall be handled, as shall be saide heereafter in the chapter of the neat heard.*

The dung of a cow made hot in the embers, being wrapped in certaine vine leaues, or in the leaues of colewoort, and applied in forme of a cataplasme, doth appease the paine called Sciatica: being fried with vineger doth ripen the kings euill: being fried in a frying pan with the flowres of cammomill, melilote and brambles, it diminisheth the swelling of the cods, applied very hote vpon the places troubled with the dropsie, it cureth them thoroughly, and applied vnto any place stung by bees waspes and hornets it taketh away all the paine.

The foureteenth Chapter.

The way to make greene cheefe, butter, and other sortes of cheefe.

She shall be carefull, as well for the feeding of her people, as also *milke.* for the gayning of the penny, diligently to set on worke her daughters and maide seruants about the good ordering of the milke of her kine, in the making of the butter and cheefe thereof. And first as concerning milke, she must not make any account of that which commeth from the cow after she hath new calued to preferue and keepe it: for besides that it is naught both to make butter and cheefe; it is also very dangerous for to vie. Like as we see that mothers which nurce their children, make no account of their first milke to giue it to them: the reasons whereof you may learne in our booke of

The keeping
of milke.

Good milke.

Creame.

Fresher or greene
cheese.
Sowre milke or
Serate.
Whey.

Butter.

of the diseases of women. After the milke is milked, you shall set it in a place where it may be warme, to the end it may be kept the longer; and become the thicker in short time: inasmuch as heate doth sauegard and thicken the milke, as cold doth sowre it and make it to turne by and by: and therefore to auoid this danger, it is good to boile it: and thereupon to stire it much before you let it rest, if peradventure you be not disposed to keepe it three daies or somewhat more. She shall know good milke by his whitenes, pleasant smell, sweete taste, and reasonable thicknes in substance, in such sort as that being dropped vpon ones naile it runneth not off presently, but staith there and abideth round a good while: she shall not let her milke be kept long; as aboute a day in sommer, especially in Autumne and the spring, in which seasons milke because of the heat and temperature of the time would be spoiled and presently turned, but as soone as she can, she shall gather her creame, greene cheese, butter, pressed cheese, wheie and other commodities which a good huswife is wont to raise according to the time: although in winter the kine yeelding small store of milke, as being then with calfe, she may gather three or fower meales together, which will not so soone be spoiled by reason of the coldnes of the winter, which maketh the milke to thicken presently: likewise at this time she shall gather but small store of butter, but shall turne all her milke into cheese: it is true that seeing cheese is not of so great prife in winter, neither yet so good and dantie as in sommer, spring-time & Autumne by reason of the grassie; that therefore it shall be no great danger to gather the butter cleaner from the cheese in winter than at any other time.

She shall gather her creame from the vppermost part of her milke, presently after that the milke is drawne from the cowe and cooled a little: and with this creame to make creame cheese, ordinarily accustomed to bee solde in sommer to be vsed at meetings of smaller account, or in the end of dinner and supper: the Italians with such creame cheese or Parmisan do mixe fine sugar well powdered, together with rose water.

The milke curded and thickned without runnet, will make little cheeses, which the Parisiens doe call Ionches,

The Normans do boile milke with garlike and onions, and keepe it in vessels for their vse, calling it sowre milke or Serate.

The wheie may serue for the feeding of the hogs and dogs, as also in the time of dearth for sustenance for the familie, if she boile it but a little.

For to make butter, she shall reserue the newest and fattest milke, that she shall haue, whereof she shall gather no creame; and she shall make account of ten pounds of milke, to make two pounds & a halfe of butter: to make this butter, she shall beate or cherne it a great while

while in vessels made for the purpose, especially whiles the times of greatest heat indure, seeing such heate is the cause that butter commeth not and is not made so soone as at other times. If she will make account to sell it, she shall salt it, and put it in pots of earth, such as we see brought to Paris from Britaine, Normandie and Flaunders. The butter of a yellow colour is the best: and that of a white colour is the worst: but that which is gathered in May is better then either of the other.

As concerning the making of cheese: she shall choose the most grosse and fat milke, being pure and newly drawne, to make cheese that shall keepe a long time, and of such milke she shall gather neither butter nor creame: but such as it commeth from the cowe, such shall be put in vessels for to coagulate and turne to curdes. The way to curdle the milke, is to mingle therewith of the runnet, of a lambe, kidde, or hare, or the flowers of wilde thistle, or the seede of blessed thistle, or the iuice of the figge tree which commeth out of the tree, when one cutteth the greene barke thereof, or the leaues and hoarines which groweth at the small end of the artichokes, or ginger, or the inner skin of a house hens stomacke, or the spawne egges of a pike, and with these it is vsuall to make cheese to be eaten in lent: or the blacke mutable thistle, therefore called *Chameleon niger*. Let her beware of casting in any the least quantitie of vineger, for one onely drop of vineger is sufficient to hinder the turning of the milke into curdes. The pot in which the milke is, must not be without some quantitie of heate for to keepe it warme: and yet notwithstanding it must not come neere vnto the fire, as it may not stand farre off. And when it is curded and gathered together, it must be put presently into slices, formes, or fars, for it is profitable that the whay should runne out, and separate it selfe from the curd. But chiefly and aboue all other things it is required that the maidens which shall meddle with the making of cheese, should be cleanly, fit for the purpose, their sleeves from about their hands and armes foulded vp, and aboue all farre from being troubled with their termes. In like sort the people of the countrie of Auerngnac, which make great reckoning of their cheese, doe choose the yong children, that are but off fowreteene yeeres of age, and those proper, neate and handsomely trimmed vp, not hauing scabbed or scurvie hands, neither yet of an vntemperate heate, for they thinke and perswade themselves, that such filthines of the hands doth hinder the full curding and ioyning together of the cheese, and so doth make them full of cies.

If she determine to drie, harden, and keepe them long, she shall the more carefully looke to the straying forth of the wheie and cleere milke, and after to set them in rowes vpon sheldes, lattises, or cheese-heights fit for the same, and that withall it be in a cellar, or in some

some darke and coole place : or else to take them vp into some high place, hauing store of aire : provided alwaies that the sunne haue no power over the cheefe : she shall shift them every day vntill about the fourth or fifth day, at which time they will begin to cast a floure, as though it were the flowre of meale, & then she shall cast a litle small salt vpon them : the next morning she shall turne the other side, and doe the like therewith : after she shall turne them euery day, and if need be make them cleane on both sides and about the edges with a rebated knife made of purpose, such a one as will not cut. After some time when she knoweth that they are somewhat dry, she shall put them in another place, as vpon boordes laide as it were vpon ladders, she shall clense and scrape them oft, and keepe her boordes cleane also : and if by struing to keepe them long, they become hard and bitter, she shall couer them ouer in grauell, or in barlie flower, or in cich-peale, or else shee shall couer them with the leaues of dragons, which likewise doe keepe them from being eaten of mites, and that they doe not become mouldie. And in case that wormes doe eate them, she shall take away this vermaine, and annoint them with oile of linseed or the drosse of the same, which wil preserue them singularly well : or else she shall put them in a great heape of millet corne or linseed, which will keepe them fresh and coole in the hottest times, and hot in the coldest times. And seeing the deepest point of skill about cheefe, is to bestow them so as that they may best mellow, she shall bring them together in the end and put them in pressies the cloathes taken out, and set neere the wals of cellars vnder the ground vpon small boords, hauing moistened them before with oile oliue, or linseed and vineger mixt together.

She shall iudge that for good cheefe which is fat and heauie, the meate of it close and well compact, of colour somewhat yellowish, sweete to taste, pleasant to smell, and nothing mouldy, neither yet full of mites or wormes, and which is made of pure cowes milke, without mixing any sheepes milke therewith, for it maketh the cheefe lesse sauourie and more whitish : it is true indeed that it may be made to looke yellow, some saffron mixt therewithall, as is vsuall amongst the inhabitants of Poictou. An old cheefe all mouldie, braied and mixed with the decoction of a salt gammon of bacon, & applied in forme of a cataplasme doth soften all the hard swellings of the knees.

The fifteenth Chapter.

Of hens.

AS concerning the ordering of pullen, which is the chiefe thing that a good hufwife is to regarde, there must care be had that the hen-houle be euery day made cleane, euen so soone as the pullen

pullen be out, and the dung put aside for the fating of the meadowes.

The baskets for them to lay in oftentimes shaken vp, and refreshed with new strawe and nestes, and their pearches and ladders scraped euery weeke. The roose or vpper part of the house shut in euery night at sun-set for feare of fulmers, and opened euery morning at sun-rise. Their water pots to let them drinke at must be kept cleane, and filled with cleane water euery daie, and that twise in winter, and thrise in sommer. Let their water be cleere alwaies, least otherwise it cause them to haue the pip, which thing happeneth as soone vnto them of the filthinesse of their water, as of the want of it : let her cause to be cast out vpon the dunghill oftentimes fresh straw right ouer against the barne, where the pullen vie to scrabble, and neere vnto the same place, let her cause to be put sand, dust or ashes, to procure them the pleasure of dusting themselves in the sunne, and pruning of their feathers : let her cause to be remooued far from them the residence of wine or drosse of the presse, of whatsoever fruits, and from the place of their haunt, for such things keepe them from laying. And if further behooueth her to haue this care, as to see that throughout all the hen-house, there be neither lath broken, nor any place of the wals hauing any lome fallen either without or within, or any sheete of lead lifted vp or raised, thereby to preuent the danger of cats, foxes, weasels, pole-cats, fulmers, and others beastes giuen to rauin abroad in the night, as also the kite, henharrow, and owle, which sometimes will not let to swap into the very brood-house to catch and carie away the chickens.

And to the end you may not lose any of them, you must cut off the great feathers of one wing from such as vie oftentimes to flie ouer wals, that so also by this meanes you may keepe them out of your gardens : for they would take it vp for a custome, and it would keepe them from laying : and for a surer preuention of the foresaid mischiefes ouer and aboue that which hath beene said (for it is not good to clip the wings of cocks or capons) you must fasten and set rowes of thorne fagots vpon the tops of the wals of the said gardenes and all other places else where.

The broodhouse shal be built aside from the farme place, far off from the lodging of the chiefe lord, because that such birdes are lothsome, doe foule euery thing, and spoile whatsoever household furniture : turned toward the east, from the winter & northern quarter, neere vnto the ouen of the kitchen if it be possible, to the end that the heate thereof which helpeth them to lay, and the smoke which is very wholsome for the pullen may reach euen vnto it.

It shall haue a little window right vpon the east, by which the pullen may come forth into the court in the morning, & go in againe at evening : it shall be shut at night, to the end they may nestle themselves

more

more safely from the danger of such beasts, as are apt to offer them wrong: without, and on the side next the court they shall haue prettie ladders, by which the pullen may flie vp vnto the window, and into their house to roust and rest themselves for the night time. This hen-house must be well laid with lome & smoothed both within and without, to the end that cats, fulmers & snakes, & other dangerous beastes, may not come neere vnto the pultrie: and that neere vnto this hen-house, in the midst of the court there be certaine trees or arbors for sower grapes, to the end that pullen may haue shadow vnder it in sommer, and that chickens may haue couer and defence against the kite, the owles, and other such rauinous birds. It is not good that they should sleepe vpon the plaine floore, that so their ordure and dung may not hang vnto their feete, for thus they would growe to haue paine in their feete and to become goutie. For this cause you must set all along the hen-house a foote higher then the floore, and two feete one from another square perches not round, because that if they should be round, the pullen could not sit fast vpon them. Right ouer against the henhouse, and a little way off from it, you shall prepare a dunghill, for the benefit of the pullen after this sort and manner. Cast a great deale of earth into a great hole of purpose made for such an end, which you shall besprinkle with the blood of oxen and other beastes kild onely for the hide, afterward you shall cast a reasonable quantitie of oates vpon the same, and you shall turne the saide earth the vppermost, lowermost. In a small time there will be ingendred such a great quantitie of wormes, as that the pullen shall haue picking worke there for a long time, and the grasse which shall sticke there will correct the fat which they shall get by the wormes which they haue picked. And when you shall see the prouision of wormes to faile, you may begin againe your watering of the earth with blood, and sowing of oates thereupon as at the first. Some to haue fat capons and of a pleasant flesh, when the mulberies are in season doe plant mulberie trees in their courts, for capons and all other manner of fowles which feede vpon mulberies, become maruellous fat and of an excellent taste and verdure.

To euery dozen of hens one good cocke is sufficient, howsoeuer those of former daies doe allow one to euery fife: and he must not be of colour white nor yet gray, but red, tawnie, or blacke, his body well compact, his crest or combe verie vpright, red, thicke, not notched, toothed or gash with cuts, a well raised necke and high, the pinions and flight of his wings great, his eares great and very white, his bill short, thicke and crooked, his eie blacke in a circle that is red, yellow, or azure; his wattles of a rose colour, standing of a white and red mixture, the feathers of his necke long, golden and changeable, his legs very scalie, thicke and short, his claws short and fast, his spurs

stiffe

stiffe and sharpe, his taile vpright, grosse, thicke and crooking backward ouer his head.

The tawnie or reddish hen, in like manner is the best, and that which hath the feathers of her wings blacke, though she her selfe be

The markes of a good hen.

not altogether blacke: for the graie or blacke colour is but little woorth, because they be hard to bring vp, & sparingly giuen to laie egges, and yet moreouer they be small, alwaies leane, vnhealthfull, and their flesh of small relish. The stature of the hen must be indifferent, her head great, her combe vpright and very red, her body great and square, her necke thicke, and brest large: the dwarfe or little hens do lay oftner then the other, but they are not so fit to be set on egges to bring forth chickens: the greater hens are not so giuen to lay: wherefore hennes of middle size are to be preferred before the other, foreseene that they haue large wings, and their bodies thicke set with feathers, and if they haue fine clawes as the cockes, they are more wilde and not so tame as others. The henne that hath spurs spoileth her egges, hatcheth not so ordinarilie, and sometimes eateth the egges she sitteth on. The hen which is giuen daintily to affect and feede vpon grapes, being the thing that keepeth her from laying, will be kept from seeking after and eating of them, by giuing her the berries of the wilde vine: for this doth cause such a roughnes or edge in her, as is in those that haue eaten sower fruites. The henne that is too fat, or which hath the fluxe of the belly laieth winde egges. The yoong hen is nothing skilfull either to sit or to lead chickens: wherefore you must fat the hen with spurres and the chauntresse or crowing hen, and her that scratcheth and allureth the other hens by clocking as the cocke is wont to do, and that by plucking first the greatest feathers of her wings, and giuing for to eate great store of millet, barlie and paste cut in gobbets, bruised acornes, bran mixt with porage, the huskes of rice, pannickle and otes, or the crums of wheat bread steeped in the water of barlie flower, and to keepe her in a close place where she cannot stirre, and to pull the feathers of her head, thighes, and rump. Such hens thus fattened by the hands of a man, may be recovered at any time of the yeere, but the flesh is not of so good relish as when they grow fat going abroad at their libertie, which thing happeneth and falleth out more commonly at one time of the yeere, then at another, the very right & naturall season of their chiefe fattening being in the moneth of Januarie and February, for indeede in these moneths hens are nothing inferiour vnto capons. The hen that is too fat, shalbe made leane by mixing of fullers earth with her water, and of the powder of a softned bricke in her meate. And if she haue a loose belly you must giue her for her first meate, the white of an egge roasted and beaten in a mortar with the double quantitie of bulleis. And for the madde hen which breaketh her egges and eateth them, you must

cast

cast alablaster vpon the yolke of an egge, so long as till it be harde therewith, and so to make this to serue (being fashioned like a shell) for her nest: or else to make an egge of alablaster or fullers earth, and to put it in her nest, and to leane her no more but that only egge after she hath laid. Vnto a yoong hen, which falleth to clocking, you must take one of her small feathers and thrust it through her nostrils, for it is not for a yoong hen to do any thing but lay egges, and for the olde to sit. Our huswies (in that point too leuere and iniurious) do plucke away all their feathers from vnder their wings, euen all ouer their bellies, and do therewithall cast them into the water to coole their heate withall, or else they keepe them fasting fower daies together, in a chicken coupe. And if you be not disposed to keepe a hen to brood, you must by and by, or within two daies after that she hath brought forth her yoong, let her forth againe to haue the cōpany of cocks, to the end she may forget them and begin againe to laie: and therewithall to rub the pulled belly of a great and fat capon and one that is yoong, with stinging nettles, and after to deliuer him the chickens to broode and leade.

The hen is subiect to the spots of the eies when she is olde: to the rheume and distilling of watric humours at her nostrils, by hauing taken colde, or hauing drunke frosen water, or at least such as was too cold, or by reason of the henhouse being left open in the night, or by hauing roused vpon the trees in the open aire, or finally by not hauing found the house open, or some other couert to runne vnder in the time of raine. Vnto the loosenes of the belly, when their meate is too thinne, or when they haue eaten some herbes apt to worke the same, or when the hen house hath bene open all night. Vnto the pippe of the toong, either for want of drinke, or for drinking troubled and filthie water. To fleas and vermine when they sit, or when they haue not wherein to tumble and roule, or to make themselues cleane, or when their dung is let to continue a long time together in the house: and to the bitings of venomous beastes which haunt the dung-hill and old wals, as the scorpion, snake, spider, shrew, lizards, and newtes of the wall.

For the scab and inflammation of the eies, you must bath them in the water of purcelane, or in womans milke; and for the spots you must rubbe the eie with sal ammoniacke, cumin, and honie braied together in a mortar, and that a much of the one as of the other, except you haue the skill to take them vp, or to cause them to be taken and lifted vp with a needle.

For the rheume you must put a feather crosse their nostrils, and warme their water, and sometimes chafe their feete, especially little and yoong pullers, which are wont to be wrapt in cloth a certaine time for the same, or else in feathers, and then put into a pot and set in

in a warme oven, or neere vnto some fire in some stand contented in place. And if the rheume or matter of the running both in nostrils be settled in some place, as vnder the eies, or towards their bill, you must launce the impostume gently, and give passage for that, to come forth, which is therein contained, and put in place a little brayed salt.

For the loosenes of the belly, some make them meate of the husks of barlie steeped in wine, and incorporated with waxe: and some doe mingle with their water the decoction of a pomegranate or quinces.

And if that pullaine be costive, especially the yoonger sort, they are prouoked with a wilde oate: and some vse to pull off the feathers of their rumpe, and vpon the inside of their thighs, to the end that their dung may not be long detained and kept within their bodies, because that so it might stop the passage: and as for hens it is sufficient to put hony into their water by themselves.

For the pippe, some vse to wash their bill with oile wherein hath steeped a clove of garlicke: and some make them to eate stauesacre amongst their meat: and for to cure the yoonger sort, some put them in a sieue made to dresse fetches, or darnell, and perfume them with pennyroyall, orgaine, hyssope and line: and some do holde the head of the puller over the fume, the bill gaping: and in case of extremity, to take it quite away from them, some do vse to open their bill, drawe out their toong very gently and softly, and after with their naile raise the higher part, and draw downe to the end or lowest part thereof, the white which is seene to grow vpon the top of the toong; and after it is raised vp and rooted out, without any breaking of skin, they rub the toong with spertle, or with a little vineger; or else they touch it with a brused clove of garlicke.

For fleas and vermaine they must be washed in wine, wherein hath bene boiled cumin and stauesacre: or else in water, wherein haue boiled wilde lupines.

Against the biting of venomous beastes, you must anoint the place with oile of scorpions, and applie vpon it some muthridate, and further cast some small quantitie of treacle into their water pot, and cause them to drinke.

For the danger of beastes, especially of cats and fulmers, which come in the night time vnto the henhouse to eate the hens & egges, old writers do giue counsell to cast at the entrie of the doorte, and to scatter thereabouts bunches of rue, as also to put some tender sprouts of the same vnder the wings of the foule, or else to besmeare about the wals of the hen-house, and round about the window, the gall of a cat or of a foxe.

Furthermore to keepe pullaine from foxes that they do not eate them: it is good now and then to mingle amongst their meate the

flesh of a foxe sodden and shred into verie small pieces: for as some say their flesh doth keepe and retaine a certaine smell thereof, which is the cause that foxes dare not come neere vnto them.

Hens begin to lay in Februarie and March, and some of them in those moneths being part of their first yeare. They which begin to lay at a yeere and a halfe, or at two yeeres are better to be liked. And then they must be very well fed, and that sometimes with oats & fenu-greeke for to heate them. And if you be desirous that they shoulde lay great egges (for commonly the fattest hens lay the smallest egges) mixe and temper fullers earth among their meate, or else put pouldred bricke among bran, and temper them together with a little wine and water, and make them an ordinarie meate thereof: or else make them all their meate of barley halfe boiled with fetches and millet: or else perfume them in the night with brimstone, for this will keepe them found also: if you giue vnto them yong nettles chopped and boiled with bran, they will lay great store of egges.

They leaue laying about the third of Nouember, which is at such time as the colde beginneth: but if vpon curiositie you would keepe by themselves some of the fairest to lay egges all winter long, you must feed them with tosted bread steeped from euening to morning, and giue them to their breakfast: and for their meate in the day time and at night to cast them some little quantitie of oates, barley, or wheat, which doth warme them, or some mustard seed, which about all other things causeth hens to lay egges good store, that is to say, in the sharpe cold times of winter, which thing you shall proue verie true by experience if you make triall of it: or else to feed them with earthwormes, which will also cause them to lay egges in great number. You must not let them sit presently after their first yeere of laying: and when they are past three yeeres olde, you must care them: you must also dispatch and make away with those that are barren and lay not at all: and as for those that doe lay verie much, you must change their nests often, and marke their egges to set them in time if it be possible. When they are casting off their feathers, otherwise called of the common people mouting, you must not suffer them to goe out of the place whereinto you haue shut them, except it be to refresh them when it is verie faire, and then to keepe them that the eagle and kite doe not fall vpon them.

It is vsuall to set hens the second yeere of their laying, and so the third and fourth, and so let any set many hens at one time, and vnder their straw some pieces of iron for feare it should thunder, or else some bay-leaves, or the heads of garlicks, or else some greene grasse: for some say that this is good against the pippe and the monstrous fruit. They are put there in the growth of the moone, after the twelfth day of the new moone vntill the fourteenth saith *Florentine*: and *Co-*

Inmella

Inmella saith, from the tenth vnto the fifteenth, so the end that the hens may hatch in the next new moone, for to that ende they stand not in need of any more daies then one and twentie. And the nests of these hens must be made in the bottome of a tunne or pipe, to the ende that when they come off, they cause not any thing to fall or roule. Some perfume the straw that they are to sit vpon, before they lay the egges therein, with brimstone, to keepe the hen for hatching before her time. And you shall set vnder her the egges that you haue marked, and of those the fairest and newest, and if it be possible chose of her owne. And looke that they haue begone laide since the seventh of Februarie, and before the two and twentieth of September: for such as are laid at any other time are nothing woorth, no more then those which were first laid, or yet those which were laid by the hen without the helpe of the cocke: and there must alwaies care be had that they be odde, that is to say, in Januarie fiftene, in March nineteene, and after Aprill one and twentie. The greatest part of the inhabitants of *Lyons* doe admit of no other number then three and twentie. After the second of October they set not any more, neither indeed ought they, if it be not in owens according to the use of the inhabitants of *Malitha* and some of those of *Beauterem*, but hens are too much punished, and put to paine to breed and bring up chickens in winter. As also there is a common opinion received, that after mid June, hens are small woorth and cannot increase so rightly, and well to the purpose.

If curiositie draw you to set egges vnder hennes which be not their owne, as those of the gooles, peacocks, or Indian hen, or else of ducks, then let them be put vnder the hen some seauen or nine daies before, and after adde thereto of her owne some such odde number, as hath bene spoken of before. But and if they be seaunts egges, you neede not to let the hen any sooner vpon them, then and if they were her own, for they require no more time to be hatched in: and if you would haue them all hen birds, then let such egges as are more round and blunt, for the long and sharpe pointed ones are commonly cockbirds. Some are carefull not to put one after another into the nest, but set them in rows in a wooden platter, and thence let them slide downe into the nest verie softly. And care must be had that neither cockes nor any other hens may go in to sit vpon them, and to that end twise euerie day to let meate and drinke so neere vnto the hen, as that she need not rise for to feede herselfe: for if but for her meate, she once cast off her care of them, it will be much adde to get her to returne vnto them againe, if she be not a free and verie kinde hen: If the hen haue small care to returne vnto her egges to sit vpon them equally, it will be good sometimes to turne them ouer softly, when she shall be from her nest.

H 2

There

There are some women that cannot stale to the end of the hatching, but about the fourth day after the setting of the hen, they will be heaving euerie one of them vp one after one to looke vpon in the cleere sun-shine, and if they see not bloodie streames or threads within them, they cast them out and put vnder others in their places. And in like maner at the one and twentieth day, if they finde that she stayeth from hatching, they take off the hen. But good sitting hens will not returne any more to their nests, after that the egges haue bene touched. Likewise the good huswife saith, that as for the egges which are vnder the hen, they ought not to be touched till they be hatched. Likewise they must be well choisen and viewed in the sunne betwixt both her hands, before that they be put vnder the hen. Such as doe any thing doubt that the egges are not all good, and that the chickens cannot come forth by reason of the hardnes of the shell, must not faile to bath them about the eighteenth day in a hollow dish and warme water: and to take away such as swim about the water, putting the rest vnder the hen againe. But you must not force the hen to rise off the nest in your thus doing.

You shall greatly pleasure the hen, if when the chickens begin to chirpe, and there be found some which will not let the chicken come forth by reason of the hardnes of the shell; that then you helpe her to breake the same: howsoever indeed this is the part of a good conditioned hen, as also to rise at your face if you come neere to her, after she hath once heard them cheape or chirpe vnder her.

The little chickens newly hatched must be put vnder a sieue, and lightly perforced with rosemarie, for to keepe them from the pip: and for the space of two daies you must not giue them any thing to eat, but put them vnder some hen that hath not many; and which is not either of partridge colour or wilde and vntamed; that thereby they may be kept warme whiles the other are in hatching: or which is better, to put them to follow some capon so soon as they be hatched rather then any hen: for by that meanes they will be better defended both from cold and rauinous birdes, as also better fed; besides that hereby the hen will be the fitter to fall to laying of egges againe. It is true indeed that there must choise be made of a sound and courageous capon, to plucke away his feathers from vnder his belly, and to nettle him with the strongest and most stinging nettles that you can get, and after to make him drunke with bread steeped in wine; and to put him vnder a basket made of Osiers with his broode of chickens, and so leaue him there sometime, to the ende he may fall in loue with them. So soone as he shall be at libertie he will beare them vp, keepe them, leade them, and become a more foolish, doting or true louer of them, then the hen her selfe would haue bene: howbeit the naturall dame is vere carefull, and giuen to keepe them

them vnder her wings very wisely, without doing them any manner of harme or hurt. When as therefore they be two daies old, you must crumble them some soft bread and cheefe, or els some barlie meale, and garden cresses, softened and infused in wine and water, with a few of the leaues of leekes chopped very small, and a little sodden; and this will be good for them against rheumes and the pip. And after this time for the space of fifteene daies they must be kept vnder a cowpe with the hen or capon: and then at the end of those daies to let them run about both leader and followers, giuing them still the same nourishment to feede vpon. And if you haue many sitting hens that haue hatched at one time, giue and put the chickens of the one vnto another of the eldest and most vsed to leade, or els to a capon, as hath bene said, and let the yonger henes returne againe to the cocke: but see that you put not aboue five and twentie or thirtie vnto any one hen, because she will not be able to couer or broode about that number. Againe there must good care be had, that the hen which leade them be not curst and brutish, that so she may not hurt them as she is scratching, or set them in a heat by flying, neither yet that she be giuen to much climbing, or gadding into such places as her lide ones cannot follow her into. Wherefore it shalbe good not to suffer them to go so soone to the court-yarde, but rather for the space of fortie daies to keepe them that they goe not from the place where they were hatched. You must likewise beware that the snake doe not breathe vpon or hisse at them: for the smell of such breath is so pestilent vnto them, as that it generally killeth them all. The remedie is to burne oftentimes neere vnto their cowpe, harts horne, galbanum, or womens haire: for the fume or smoke of these doth driue them away.

It is a paine to goe about to hatch chickens without the heate of the hen, and although the thing may be done, yet it is not so certaine nor so profitable. They are set on a row, the sharpe pointed end vponward, in an oue very meanly warme, & vpon warme hens dung, which must be renewed euery sixe daies, and ouer and vnder them thus set, some doe put bags of feathers, and they must be stirred now & then: after the eighteenth day they must be bathed in warme water, & the one and twentieth, they must be holpen to breake the shell. Againe it may be done otherwise: the same day that you set a hen, (to the ende that you may the better remember, because it is not so easie to number the daies as to tell the eggs) you may take as many eggs as you haue set, and put them vpon bags full of hens dung (well dried, sifted and compassed about with downe, or such soft feathers as are on the inside of the thighes) and made after the manner of nestes. And againe, others doe make a bed of the saide downe vpon the bags, and vpon this bed they ranke their eggs, as hath bene said, and after covering them with other downe and bags aboue, in such sort as that the downe

and bags lie close round about and euery where touching the eggs: which done, after three or fower daies they must be turned once euery day, and that so softly and nimble as that they may not hit one vpon another. And at the twentieth day (being such time as the hens begin to picke the egge shels) you must helpe to make way for this your broode to come forth, and after put them to some hen that hath but a few. But there is nothing beyond and besides naturall inclination and disposition to be attempted in any thing.

The hen will sit all winter as well as in sommer, if she haue meate made of bran, mixt with the leaues and seede of drie nettles.

You must make choise of such eggs as are of black pullets, as such as are more wholesome, daintie, full and substantiall, then those of other hens, by how much they want of being so old: let it not be about two daies old, let it be white and long, according to the common verse,

The egge is good and for delight:

Thats long and new, and white in sight.

To know if the egge be new, you must make such trial as we haue set downe to be vsed, to prooue and know such as are good to be set.

The huswife that maketh account to sell eggs, must in winter keepe them warme vpon strawe, and well couered: and in sommer coole in bran, according to the aduise of old writers; but (be it spoken vnder correction) I am quite of a contrarie minde: for the strawe is coole and the bran hot; adde further, that egges kept in bran in sommer doe corrupt the sooner. They which doe couer and powder them with salt, or lay them in brine, doe impaire them, and leaue them not whole and full, which will be a hinderance in the sale of them: and there is no doubt but that the egge doth take some bad relish also by that meanes. The sellar is a good place to keepe them in both winter and sommer.

I doe not intend here to make any discourse, which of the two was first made, the egge or the hen. Looke for the deciding of this curious question in the end of *Macrobius*, and in *Plutarch* his *Opuscula*. And you shall learne a great deale better of *Aristotle* and *Plinie*, then of *Hippocrates*, how the chicken is made within the egge of the white, and nourished by the yelke: seeing that the yelke is of more easie digestion then the white.

As concerning the cutting of cocke-chickens, it must be done shortly after that their dam hath forsaken them, & that they run not cheaping after her, but begin to crow and to fall in loue with pullets, for if they scape the first yeere and halfe, then there is no order to bee taken with them, and you must take the best bodied, and those which are best thriuen and set with feathers, and yet not growne to that full perfection and naturall growth of feathers which cocks are garnished withall: for after you haue made choise of such as shall serue for the benefit

benefit and leading of your hens, to keepe them, as those which are the best made and most bold: you must cut the other, for to feed and fat either in the cowpe or in the chaffe house.

Some men (as for example at *Mans* and in *Bretaigne*) doe put out their eies, as they doe vnto gollings, and giue meate of corne halfe boiled, and of paste well cruist and braked, and made into gobbets, and thus they become fat within fortie daies at the most: but they must be well looked to, and haue all their feathers pulled from about their heads, to the end to keepe them from vermine.

As concerning other particulars of the hen, of the egge, and of the medicines which the husbandman may draw from them for the good of his health.

The hen will hatch chickens of diuers colours, if she sit vpon eggs drawne with variable and diuers or painted colours, as also she will hatch pullets of very pleasant colour to behold, if you make her tread by male pigeons or partridges, or seafants. To be breefe, you shall haue pullets, pigeons, seafants, and such other kindes of foules of diuers colours, if you prouide aboue, beneath, and on euery side of their cowpes, or other place where they make their abode, places of receipt and couertures, of such colour as you shall wish them to be of.

Hens will lay great eggs, if you pound bricke and mixe them with bran and wine, bray them all very well, and giue them to the hens to eate: or else make a fine powder of bricke, mixe it with barley bran, and giue it them to eate: some for the verie same purpose doe molle the fullers earth that is red, and mixe it among the hens meate.

If by the space of fowre daies, or seuen at the most, you steepe an egge in very strong vineger, you shall so soften the shell, as that the egge may easily be so handled, as that you may draw it through any sort of ring that you shall weare vpon your finger, and thrust it into such a vial, as you your selfe would wish to haue it put in: likewise you shall bring it to his former shape, if you steepe it in coole water. In like maner an egge steeped in aqua vitæ for some space of time doth quite waste and spend it selfe.

If you would keepe egges long that they should not breake, set them so orderly in baskets, as that they may stand right vp, and that the end which is sharpe pointed may be vpward, and by this meanes a man may carrie such burden of them, as shall be laide vpon him, without breaking any of them. Likewise this is a thing very true and well approued, that an egge hath so firme and strong a frame, as that no man be he neuer so strong, is able to breake it betwixt the palmes of his hands, being taken and holden long waies.

It hath bene obserued of a long time, that the egges laide after the new of the moone in the moneth of August, or in the wane of the moone in the moneth of Nouember, as those likewise which are laide

on the day of the Natiuitie, or on the day of the Ascension, are lasting and durable, and not easily corrupted. Whereof there cannot be deuised any other reason, than that in some of them the shell is made hard and not to be pierced through of the aire, by the coldnes of the time: and in the other, there is a most quicke exhaling and expending of that which might be corrupted within the egge, by the heate of the time, and season then being.

Some finde within the stomacke of a capon, a stone of the big-
nes of a beane, which maketh a man strong and lustie vnto the act of carnall copulation: and withall maketh him louing, fauourable, and gracious amongst women.

Some holde it for an vndoubted trueth, that for want of fire, an egge may be roasted, being turned and whirled about a long time in a sling.

An egge will take any forme of character that you will, on the inside thereof, if you write vpon the shell with inke made of galls, allome and vineger, and after that such writing is dried in the sunne, put the egge in brine that is very strong, and after boile it and take away the shell, and there you shall finde the writing.

The well of the egge emptied all out, and filled with Maie dew, and laide forth afterward in the sunne shine at noone day, is easily lifted vp into the aire, without the aide or assistance of any other thing.

An egge armed with threed, and put into the midst of a hot burning fire, keepeth the threed from burning at all.

A hen slit in two, and applied all hot vnto the bitings of venomous beaits, draweth out the venome thereof: or otherwise, if you take and plucke the fundament of any living fowle very bare, and applie it to the parts offended by the stinging of a snake, or to the carbuncles and buboes rising of the infection, doth the like. And this sheweth that a hen hath a naturall contrarietie against poison. And this may further be knowen, because that hens doe eate venomous thinges, as roades, vipers, snakes, apes, and other serpents without their taking of any harme thereby.

The inward membrane of the hens stomacke or maw, as also of a capons dried and powdred, is a soueraigne thing against the fluxe of the belly, grauell in the raines, and difficultie to make water.

The broth which is made of a hen or old cocke, is good to loosen the belty: and yet more effectually, if one stufte a hen with mercurie, germander, wilde saffron, and such other herbes: also the broth of a hen or cocke, is singular against euery disease, if she be stuffed with herbes appropriate and fit for the cure of the said diseases.

The stones of a capon nourished and fed with meate steeped in milke, are soueraigne for the speedie restoring of them which are worne

worne away and consumed by continuance of long sickness.

The fat of a hen washed in rose water, is good for the chops and clifts in the lips, as also for those which happen in the hands by reason of winter colde.

The gall of a hen or capon dropt into the eie, doth take away the spots of the eies, if you mixe it with the water of eiebright.

The dung of a hen dried and finely powdred, and applied to the eies which haue lost their haire, causeth the same to come againe, if you mixe it with hony, or oyle of linseed: if it be tempered with oile of roses and applied, it is good against burnings: being braied with vineger and hony, it cureth within an houre such as are neere strangled by eating of mushrooms, for it maketh them to vomite a thicke and flegmatike humour. A Physitian in Galens time did cure al manner of old colickes, giuing the sicke to drinke of this dung with hyppocras made of hony and wine.

A hard roasted egge eaten with vineger, staie the fluxe of the belly, if you mixe with it the powder of harts horne.

A cataplasme made of the yolke and white of an egge well beaten with the iuice or water of plantaine and nightshade, applied vnto burnings, doth quench and extinguish them.

The white of an egge beaten, and with the powder of frankincense, masticke, and galls applied vnto the browes, doth staie the bleeding at the nose.

The yolke of an egge swallowed alone staie the cough and such other distillations as fall downe vpon the lungs and other parts of the brest.

The yolke of an egge which is laide in the full of the moone, doth cleanse & take away all maner of spots appeering in the face. The thin membrane or skin which is on the inside of the egge shell dried, finely poudered & mixt with the white of the egge, doth heale the clifts of the lips. The egge shell made into asbes and drunke with wine, doth staie the sperting of bloud, and is good to whiten and cleanse the teeth, to comfort and incarnate the gums. The egge shells out of which there haue come chickens, being powdred & mixed with white wine, do breake aswell the stone of the reines as of the bladder. The white of the egge mixed with vnquencht lime, the shell of an egge burnt to ashes, old rile well powdred, and bitumen, maketh a cement very excellent to glue and ioyne together againe the broken partes and peeces of glasses. An egge spread vpon wood or any kinde of garment doth keepe the same from the butting of the fire.

The sixteenth Chapter.

Of Geese.

The countrey farme being for the most part vnprovided of the benefits and easements of water, especially running streames, is not

not so fit to breed and nourish geese, except for private commodities sake it fall out that the farmer do make him some fishponds or standing lakes of his owne, and at his owne proper costs and charges. For the goose as well as the ducke doth loue to swim, and to edole, plunge, and tumble her selfe every daie, neither doe they tread almost anie where else but in the water. There is great profite, and there is great losse also thereof: profite, because the charge of keeping or feeding them is not so costly, as their watch and warde is good and gainfull, being indeed better then that of the dogge, as hath bene shewed long agoe by the geese of the Capitoll in Rome, who awaking the souldiers and standing watch, were the cause that the enimie was repulled and driven backe: againe, she declareth when winter draweth nigh by her continuall squeaking and crying, she layeth egges, hatcheth gollings, affoordeth feathers twice a yeere for the bed, for writing, and for shaites, which are gathered at the spring and Autumne. The losse or discommoditie is, because they craue a keeper, for otherwise they will bruse and knap off the yong sciences of trees, the herbes of the garden, and the shootes of vines, as also iniurie and hurt the corne when it is shooting and putting forth his stalke, as well by breaking it, as by dunging vpon it. In such sort as that in the countries where wilde geese (which are fowles keeping together in flocks as well as cranes) do make their geatest and principall haunt, as in Holland, Heinalt, Artoys, and elsewhere, there is found sometimes a great peece of corne all wasted and destroyed in lesse then halfe a day: and the house or tame geese doe no lesse harme, if they be let alone and suffred to doe it, for they pull vp the corne by the roote; besides that, where as they dung, there will nothing growe for a long time after.

The best goose and gander is of colour either white or gray; and she that is of a mixt or two colours, is also of an indifferent goodnes: notwithstanding the white doth abound more in laying of eggs then the others, and hath also a better flesh, and it is good to make choise of such a one as hath the knee, ioints and space between the legs great and large. The goose goeth ouer her laying time thrise a yeere, if she be kept from sitting and hatchings; but indeede it is a great deale better when she is set vpon eggs, because the yong ones thereby brought forth do nourish better then the eggs, as also doe increase the flocke. And at every laying time some lay twelue egges and moe sometimes, others but fiue at the first, fowre at the second, and three at the last; and these three seuerall times come betwixt the first of March and the last of Iune. And they doe neuer forget the place, which you shall haue brought them to, at the first to lay in: so that looke where they lay their first egges, they will lay all the rest, and in the same place also set them if you will. Likewise you must not let them lay out of their walke

walke or fold, and for that cause you must keepe them shut in at such time as when you thinke they will begin to lay: and if you take not vp their eggs, they will begin to sit so loone as they haue their full number; but and if you take them away as they be laid, they will not cease laying till they come to an hundred, yea two hundred egges, yea so long and so many, as some say, as vntill their fundament stand gaping and open, they not being able to shut it, because of the effect wrought by their much laying.

Geese loue not almost to sit any but their owne egges: and at the least you must see that the greater part that you set her on bee her owne. And she is not commonly to be set vpon fewer than seuen or nine at the least, nor vpon more than thirteene or fiftene at the most, and you must looke she be set vpon an odde number. And who so putteth vnder the strawe whereupon she sitteth some nettle rootes, doth preuent that the gollings when they be hatched, are not so soone hurt. Some geese in a good and fauourable weather do hatch in fiue and twenty daies at the most. And neere vnto the place where she sitteth, you shall place steeped barley, in such quantiry as that she may take it out of much water: for she loueth not to leaue her yong ones, for sometimes she will rather die for hunger, and to the end also that she may not stand in need to stirre or raise her selfe, except a very little for to feede, seeing that thus her egges might take cold. And furthermore call againe to minde that which hath bene said of the hen: you may also set hennes vpon geese eggs, and that with better successe than if they had bene set vnder the goose her selfe, but then not aboue seuen or eight.

The yong gollings must abide ten daies shut vp with the goose, and be fed within with barley meale tempered with honie, branne and water: and now and then with lettuce and tender and new fowdristles: after that with miller and wheate steeped and softened. And at the tearme of these daies to acquaint and accustome them to the meadowes with their dame, but let them be fedde before they go thither: for this bird is so rauenously giuen, as that through sharpnesse in their hunger, they pull the grasse and yong sprouts of trees with such force and violence, as that sometimes therewith they break their own necks. They must be kept from nettles and prickles, from the bay tree and mugguet, for they be bane vnto them: in the house from woolues and foxes, cats and weallos.

Gollings intended to be fatted, must be chosen when they be fower monethes old, and then the fairest and greatest must be chosen: they must be put in a cowpe in some cellar vnder ground, or in some dark and warme place: where the yonger sort is to be kept thirty daies, and the elder sort two moneths. They must haue giuen them thrise a day barley and wheat meale tempered with water and honie: for the

Geese loone to bathe and tumble themselves in the water. The goose is a bird of great profite and disprofite.

Wilde geese.

The memorie of a goose.

How to fatten gollings.

the barlie maketh the flesh white, and the wheate maketh them fat and maketh a great liver. Some doe make them meate with new of drie figs and leaven, and giue them drinke abundantly, vsing to rowle their meate all ouer in bran. Others pull the feathers of their head and bellie, and also the fat feathers of their wings, and doe also put out their eies for to fat them: aboue all things you must not pinch them in their meate or drinke, because they are great eaters, and giuen much to drinke. Thus you shall haue them fat at the most within two monethes.

The common meate of geese is all manner of pulle, tempered with bran and warme water. Many do giue them nothing but bran somewhat grossely boulded, and lettuce, succorie and garden cresses for to get them an appetite, and they set them this meate morning, euening and at noone, and for the rest of the day they send them to the meadowes, and to the water pooles, vnder the custodie of some little small lacke, who may keepe them from going or flying into any forbidden places, as also out of the nettles & briers, as also from feeding of henbane, which some call the goosebane, and from hemlocks which set them on such a deepe sleepe, as that they die therewithall.

Ancient writers haue not permitted moe then three geese to one gander, but we doe freely allow sixe, and cause to be taken from them the downe or soft feathers on the inside of their thighs, and the great feathers of their wings to write withall in March and September: for the quills of the dead geese are not so fit for all vses, no more then is the wooll of slaughtered sheepe, or those which die of themselves. And seldome doe we see much fewer then thirtie gollings in one roome, howsoeuer our predecessours would not put any moe then twentie together: for the greater doe beate the lesser and hurt them, and for this cause they must be put into the goosehonie, and kept asunder with hurdles, in such sort as sheepe are kept asunder, and they must haue new straw oftentimes, and that such as is cleane and very small: for their house must bee alwaies drie, and oftentimes made cleane for feare of vermine.

And moreouer they are subiect vnto the same diseaies and casualties that hens be: and therefore they must be tendred after the same manner. Which that I may not repeat, I would haue you to searce it out in the places concerning the same.

The golling though she be of hard digestion, in as much as she is a water fowle, and also abounding with superfluities: yet indeede the gollings which excede not two monethes olde, are very much commended in the spring time by reason of their daintinesse: as the olde are in winter stuffed with great chesnuts: her liver also is of verie pleasant taste and eating.

The grease of geese is profitable in this point: if it be mixt with the

the iuice of an onion, and dropt into the eare, it allwageth paine and draweth out water. The goole tooing dried and made into powder is good against the retention of ones vrine. The stones of geese eaten by an incontinent woman after her naturall courses, doe not only prouoke carnall copulation, but also make apt to conceiue. The dung of geese dried, powdred and taken in a morning the waight of one dram with white wine, doth throughly cure the iaudise, if it be continually vsed for the space of nine daies.

The seuenteenth Chapter.

Of duckes, drakes, teales, brant duckes, water hens, small duckes of the lakes, swans, cranes, storks, and other water fowles.

THe ditch or fish-pool which we haue appointed to be in the midt of our court and straw roome, may serue for the ducks and other birdes liuing in the water: and neere vnto the saide pond there must be provided for them a low rooffe, lightly couered for them to sit vnder in the night, as also in the day as they please: for as for any great diligence and industrie to be vsed about these fowles, indeede there is no such neede, except it be for the keeping of them from cats and weasels, kites, eagles, vultures and serpents, which are very noysome vnto them. In the place of their haunt they must haue some corne cast, pulle, and the drosse of the riddle or searce must be cast about the edges of the pond, and also within the same, to cause them to be puddling in the mire, you must also let them haue the libertie of such ponds as you put your fish into which you meane to salt, as also of the next riuer, as you doe your geese: notwithstanding it were good that some should see that they haunt or frequent not your ponds with fish, because in deede they will eate vp the small therein. But in other points they need not so much attendance, seeing for the most part, they are nothing in loue with gardens, and as for their nests to lay in and to sit they make themselves, and there is no care greater then this: namely to know their haunt, especially that of the wilde ones in or about what place of the ponde they vie, that so you may make their eggs to put vnder some hen to sit them, thereby to make them tame: for the fowle that is thus ordered will be better then that of the yeard, and which stirreth not out of the court, or from about the sides of the streets to tread. To take such wilde duckes as are about your ponde to make them tame, you must cast the lees of wine or red wine in that place of the pond side, where you haue accustomed to cast them: mixt of wine and corne with leauen and flower tempered together, and you shall take them when you see them drunke: or else to take of the roote and seed of Henbane a good quantitie, and lay it to steepe in a bafen

A place for ducks to sit in.

The ordinario food of ducks.

The eggs of ducks set upon by a hen are better then if they were hatched by the duck herselfe.

Wilde duckes may be tamed by the same way as the other fowles.

are drunke.

Meate for geese.

The quills of dead geese are not so good as those of the liue.

The diseaies of geese.

Geese grease.

basen full of water a whole day and a night; afterward put thereinto wheat, & boile all together vntill the said corne be well steapt & swelled, afterward you shall put of the same corne in the said place: for the wilde duckes will runne vnto it, and as soone as they shall haue eaten it they will fall downe all astonished and giddie. This kinde of foule is made fat in such manner as the yoong geese, that is to say, with the same foode: onely it remaineth that you should giue vnto them besides that, the small of the fish, and so you neede not to cowpe them vp: and as for your common ones, the more you suffer them to runne the better it is for them.

You may make your profit of this bird in as much as the flesh therof is verie pleasant to eat, especially about the necke and breasts: the feathers therof are smaller, better, and more wholesome to sleepe vpon then those of geese. She laieth egges in great quantitie, but not so good or delicate as those of the hens; but yet of vse to make cakes, fried meates, and other daintie deuises: adde hereunto that you may fet them vnder hens.

When this bird trimmeth her feathers with her bill, it berokeneth winde. Also some hold the blood thereof hardned and drunke with wine is good against all manner of poyson. The drake applyed aliue vnto the bellie is a soueraigne remedie for the fretting of the guts and colicke: in so much that some say that this disease thus cured returneth vnto the drake, and that in such sort as that he dieth of it.

Teales, yoong duckes, water-hens, and small duckes of the pond, will neuer be made tame, but otherwise you may more easily take them, then you can the wild-geese. We may say as much of the Woodcocke and Curlew, and other birdes haunting the water and rivers, and liue notwithstanding vpon the land: for which cause they were called by men of olde time, birdes of a twofold or double kinde of liuing and feeding.

Swans haunt and loue to resort to some particular places onely, as in watter, wandring and solitarie places. There are great store to be seene in such places towards *Towers, Angouleme, Cognac*, the riuer of *Shuram* (which is reported to be floored with swans & paued with troutes) *Samcure* in *Fraunce* as also in *Flanders* and towards *Kalattia*, which some saie to haue bene in that respect called the Valley of Swans, and may be made tame, and may be put either in ponde or in fens, but indeed they destroy & spoile very much fish. Sometimes they feede vpon the greene corne as the golling or wilde goose, and do make great spoile and waste therein. It is sufficient for two paire to take their pleasure in your pooles, or fower if they be verie great, and one paire onely is inough in your fishpond, and they must haue a house apart in the orchard or garden couered ouer a little and free from

from disturbance, often made cleane and refreshed, for they defile verie much. If they haue not inough whereon to feede in the place of their abode, you must cast them some soted bread, or some of the smallest fishes. This is a great eating fowle and chargeable to be kept, he maketh his nest himselfe, and hatcheth but once a yeere, and three egges at the most at a time, but he is a verie beautifull and pleasant bud. There is a certaine kinde of swanne which hath his right foote deuided into fingers and fashioned with nailes and clawes or talons, as birdes of the pray haue, whereupon in striking into the water he catcheth and footeth his praie, but his left foote is fashioned after the common manner of others, and with it he roweth vpon the water. Such a one was seene and killed at the Abbay of *Sully* neere *Dampmarin*, in the yeere 1554. This kinde of swan feedeth no where but in the water, & vpon his pray, and is altogether wilde, and cannot handfomly be tamed: but the common swan is not such a one.

Socrates in *Plato* saith that this birde is dedicated to *Apollo*, because of the gift of diuination which he hath, by which he foreseeth his death, and singeth very sweetely and melodiously when he perceieth the same at hand, as seeming thereby to foresee what good death doth bring with it. I haue obserued that he doth not only foresee his owne death, but also the death of men, especially when he appeereth in such places as he was not wont to haunt. *Witnes* hereof is *Saint Bartholomew* his day in the yeere 1572. two or three daies before which were seene many swannes, flying, swimming, and diuing in the riuer of *Seine*, betwixt *S. Clou*, and the port of *Nully*.

Cranes are not much vnlike to swannes, and are not birdes of continuall haunt, but yeerely remoouing from the countries that are more hot vnto those countries that are more cold. Their departure is about September; and their returne shortly after the spring feede time: and although they doe addict themselues vnto watter places, yet they feed for the most part of that which the drie lande yeeldeth, and not of things afforded by the water, for they liue and feede vpon corne as doe the wilde geese. There is no cause why you should make any great account of the crane; for although he stay a certaine time with you, yet he layeth not any moe then two egges all the yeere long. Wherefore if you be willing to keepe of them, you may doe it rather to please your sight withall, then for any hope of increase, for they neither lay nor sit any moe than two egges: and further, their flesh is of a verie hard digestion, especially if it be new killed; but if you will eate it, stay sometime after the taking of them, and hang them vpon the arme of some fig-tree that they may growe tenderer: also eate them rather a long time after they haue bene dressed, then whiles they are yet warme. When you see them flie aloft in the aire without making any noise, then looke for faire weather

The blood of
ducke.

The drake cu-
reth the colicke.

Teales.
Yoong ducke.
Water hens.
Small ducke.
Woodcocke.
Curlew.
Birdes of a dou-
ble life.

Swans.

Palencia the
vale of Swans.

How manie
Swannes are
inough to be
together.

Cranes.

ther: but and if you see them rest themselves vpon the ground, be ye assured that it will be raine.

If your farme be neere vnto marshes and places where snakes, lyzardes, adders, and other such like beastes abound: you may set vp some small spire or turret about your house, or plant vpon some piece of high mounted ground, some well spred tree of a great height, for the alluring of storkes to the same, that they may helpe to free your house of those saide venomous beastes, for they will kill them to feede their yoong ones therewith. But yet perswade not your selfe that you can easily draw and allure them, nor yet retaine and keepe them summer being once passed, for vpon winters returne they will bee packing into another countrie. Notwithstanding there are some, which not hauing benee disturbed in the time of their airing and bringing vp of their yoong ones, doe euery yeere repaire to their wonted aires, and that by a long flight out of a farre countrie, and do aire and nest themselves willingly also in the tops of high towers not frequented, as iudging the place to be such as will not suffer any man to do them annoyance. And in the meane time you neede not take any care of their nest, laying, sitting, or feeding, for they be birds careful mough of themselves, and not needing the helpe of any other: and which do come and go in such sort as one cannot perceiue them: in such sort as that we may rather see them when they be comen, then foresee their comming, for asmuch as their comming and going is in the night. Some do think that they haue no toong: make no account of them for to eate them, seeing they are of a very euill iuice, and venomous feeding: and yet this good is in them, that he which shall haue eaten of a stork, shall not haue his eyes bleared or running all that yeere. It is obserued in this birde, that the yoong do feede the old that breed them, when they cannot flie any more nor get their pray.

The eighteenth Chapter.

Of Feasants.

Hens of Numidia. IT is a point of great curiositie to keepe feasants, which *Columella* calleth hens of *Numidia*: but he that can do it, hath both pleasure and profit: and he must be such a one as almost doth nothing else: for this birde is chargeable to maintaine; she will haue her house by her selfe, raised high and leaning to the inclosure or wall of the court, and long also, that her troughes may be in the aire, and where the sun giueth. And every seuerall tirde must haue her owne roome, and yet there must be but one doore vnto their hen-house for the cleansing thereof, and giuing of them meate. The rest of their house shall be all open vpon the forepart, and yet in such sort as that it shall be sure and fast,

fast, by being thicke latted and of clouen boardes, about the height of a fadome below, and very well couered aboue.

Feasant cocks and hens are hard to tame if they be not so hatched, or else taken within the yeere, for the elder sort growe sullen and male contented, and do accord and buckle themselves either to lay or sit: and as for the yoong they must be gently handled, vntill they be well trained, and can easily be content with, and apply themselves to the enduring of a constrained aire, and that such a one as is not like to that where they were taken. There must be one cocke to euery two hens. The hen hath but one season wherein she vseth to lay, and that is March, at which time she beginneth and so continueth vntill she haue orderly laide twentie, and after she sitteth them all together, or else fiftene of her owne, and some others of another kinde, if you put them vnder her: and she sitteth thirtie daies, and in the time of her sitting you must vse her with the like diligence that you do the hen; but this must be all within her owne house. The yoong ones being hatched, shall bee fed with flowre of barley boiled and cooled, and afterward with the flowre of wheate, and sometimes you shall mix heere-with or else giue them by themselves some grasshoppers, and egges of Ants: and you must oftentimes giue them fresh water and cleane, for they are subiect to the same diseases that the hen is.

Men of old time were wont to fat their feasant cocks and hens for feastuall daies, or bankets and feastes onely, and not for broode, and gaue vnto them the first day honied water and strong wine, to cause them to forget their naturall place: after that, of the flower of barley, tempered with water, of ground beanes, and of cleane barley, of whole millet, of turnep-seede, and linseed boiled and dried mixt with the flowre of barley; and for to heate and cleanse their stomackes they gaue them mustardseed for fiewe daies, and so fatted them vp in their coupes for threescore daies.

This is the thing that diuers cookes of Paris, with certaine other rich vittailers, do know very well to do: and they must (as saith *Columella*) giue them their meate to eate, to the end they may be fat when they are vsed in bankets: for but few of these wilde feasant hens, do giue themselves to lay, & bear the yoke of seruitude both together.

The nineteenth Chapter.

Of Peacocks.

THE Peacocke is a birde of more beautifull feathers then anie other that is, he is quickly angry, but he is as far off from taking good hold with his feet: he is goodly to behold, very good to eate, and serueth as a watch in the inner court, for that hee spying strangers to come into the lodging, he faileth not to crie out and to

advertiseth them of the house. It is true that he is not kept with a little colt and meate, being a great eater, and quickly digesting his meate, noisome to the house, for that he spoileth the gardens, if there be not some little meddow ground for him to frequent, he breaketh the rooffe and high place of the house: and the cocke being over ranke by nature, doth breake the hens eggs, thereby to keepe her from sitting, that so he may the more freely enjoy and use her. The cocke liveth a long time, as from twentie, to fivie and twentie yeeres; but the hen somewhat lesse, both the one and the other somewhat troublesome to reare and bring vp whiles they be yoong, but they neede not to have any great care taken of them after they have once left the dam, except it be in keeping them from hurting the corne. They loue a hot and temperate aire, and thats the cause that they are not brought vp in many cuntries of Fraunce but with much ado. The place where they most abound in all the countrie, is toward Lisieux in *Normandie*, for from thence there come great numbers to Paris, for great and sumptuous bankets and mariages, there they make them fat with the drosse of cider and perrie.

People of olde and ancient time did cast Ileets on the backside of their gardens, onely for peacocks, and there set vp some little shed for them at their pleasure to repaire vnto, and another for the partie that should feed them. And in Italie vnto this day they vie in places neere vnto the sea shore, to bring vp peacocks in Ileets somewhat neere vnto the sea, that so they may preuent such harme as the foxe might otherwise do them, which was also the drift why our ancient predecessors tooke the same course: but we which make not so great account of them, are content to keepe them in some roome ouer the hens, even in the highest part of the henhouse, for they loue to roult on high, & in an open aire, sitting very often for that cause vpon trees, but we provide them some place below, whither to repaire in the day time. This place must be kept very clean & looked diligently vnto, even as the henhouse, for this bird is subiect vnto the same inconveniences and diseases that hens be, and must have the same remedies administred vnto them. The place of their abode and haunt must be strawed with straw, or greene grasse, for the hens do lay but seldome sitting downe low, as is manifest in that her eggs are founde oftentimes dropt downe from her vnder the pearch, & this hapneth by their falling from her as she is asleepe: these birds bring forth verie well after they be three yeeres old: but before nothing or verie little.

The peahen hath three severall times or seasons of laying in the yeere: but she that is set hath but one, and passeth ouer her other times in hatching and leading of her yong ones. She beginneth her first laying time at mid Februarie, and laeth fivie eggs one after another:

ther: at the second she laeth fower or three, and at the third three or two. If the cocke and the hen tread not, you must bring them to it by such fooode and meate as will set them in heate, as with beanes roasted in hot ashes. And to know when the cocke is in his pride or heate, you neede no other signe then his viewing of himselfe, and couering of his whole bodie with the feathers of his taile, and then we say hee wheleth.

When the peahen sitteth, she withdraweth and hideth her selfe from the cocke in the most secret place she possible can: for he ceaseth not to seeke her, by reason of his excessive ranknes and lustines of nature: and if he find her he beateth her, to cause her to rise from off her eggs, and then breaketh them. If while she sitteth she be covered with a white linnen cloth, she will bring forth chickens all white, and not of the colour of the vine bud. And to that end you may shut her vp in cowpes or houses overlaid or garnished with some white cloth or paintrie, to the end that whatsoever she looketh vpon while she sitteth, may be of a white colour. At the end of thirrie daies, when the yong ones are hatched, and the hen diligently fed in the place where she did sit them (as we haue said of the hen) she must be put vnder a cowpe in some place where the cocke cannot come, for he hateth and hurteth his yong ones, vntill they be grown to haue a coppell vpon their heads: and at such time as this is growing out of them, they must be kept very warme, for then they be very sicke, and for the most part die.

You must feede the yong ones, the first day with barley meale tempered with wine in manner of thicke pottage, and for the thickning of it some put thereto soft cheefe well kneaded, pressed, and purged from whay, for whay will hurt them greatly. Sometimes they must haue grasshoppers given them, their feete pluckt away, weelless, spiders and flies for their physicke; for they drive away vermine naturally, so that there is scarce any found where they haunt. After fixe monethes they eate boiled barlie as the dam doth, and are suffered to run abroad, but euen then they must be kept from colde and raine, for they cheape and hang the wing by and by, especially in this countrie, where they are hard to bring vp, if they be not hatched by mid Iune: for when autumn doth finde them very yoong, they doe neuer hold out winter.

They which will haue the peahens to holde their three severall times of laying must set their first eggs vnder hens that are great, well gouerned and olde, and that in the beginning of the growth of the moone, that so the peahens may hold on their severall courses of laying. And as we haue already said in the feeding of hens, there must be put vnder the hens some fivie of the peahens, and nine of her owne: after the tenth day the nine hen eggs shall be taken away, and other

The peacocke walke.

The diseases of peacocks.

The nature of Peahens.

The sitting of the peahen.

A peacocke of a whit colour.

The feeding of yong peacocks.

The laying of Peahens.

nine put in their place : by this meanes you shall finde by the ende of thirtie daies, that all will be hatched together : and thus you shall vse many hens at one and the same time. And seeing the peahens egges, for the greatnes of it, cannot be well turned by the hen, you shall turne it your selfe very softly at such time as the hen is a feeding, and marke with inke the place you leaue vppermost, that so you may knowe thereby whether the hen doe turne them or no, for else you might possibly lose your time and labour : and when all are hatched, giue all the chickens to one onely hen, and the yong pea-chickens to a peahen, and see that the hen leading her broode doe not haunt where the peahen and her chickens doe come, for so she would leaue her owne, for the disdain and ielousie she conceiueth in seeing the fairenesse and greatnes of the others.

Peacocks are very sicke when they moue, and then they must be hartened with honie, wheate, oates and horse-beanes. They are very hot in the dogge daies, so that then you must not let them want fresh and coole water, and euery cocke would haue fise or sixe hens for change, for he is grieued at them that are ready to lay, and faileth not if he can to breake their egges.

The flesh of peacocks is melancholike and of hard digestion, but to make it tender, you must kill your peacocke in sommer a day before you eate him, and in winter fower daies, and hang some heauie thing to his legs, or else tie him vpon some fig-tree staffe, because the wood of the fig-tree hath vertue to make flesh tender that is tough and hard : the roasted flesh of a peacocke is well kept a whole moneth, and looeth nothing either of his smell or good relish. The dung of peacocks is very soueraigne against the diseases of the eyes, if it may be found : but the peacocke so much enuieth the good of man, that he eateth his owne dung, for feare that any man should finde it.

The twentieth Chapter.

Of Indian hens.

WHosoeuer hee was that brought vs these birdes from the island of India lately discovered by the Spaniards & Portugales, whether wee call them cockes or peacocks of India : hath more fitted and provided for the tooth then for any profit. For they may rightly be termed cofers to cast oates into, a deuouring gulfe of meate, and wherein there is no other pleasure to betaken, but onely in their crie and furiousnes when they are come to bee great ones : or continually cheaping whiles they be little : besides that both the one and the other are ill fauoured and ouglie to behold, for the deformitie of their heads : for the male hath no combe, as our cocks, but in stead thereof a red fleshinesse, and vnder his chin a great wide

The diseases of peacocke.

The flesh of peacocke is hard.

Indian hens good cofers to house oates in.

wide and long throte, which swelleth and changeth into many colours when he beginneth to be angrie. It is verie true that his flesh is fine and delicate, but without taste and of hard digestion. And this is the cause why men vse to powder them, larde them much, and season them with spices. There is much more pleasure and goodnes in the flesh of a peacocke.

The meate fit for this kinde of bird is the same that is good for hens, and so made, and with like diligence, and because his propertie is to be abroad, to feede vpon grasse, wormes and herbes, therefore it remaineth that we set downe what is required ouer and aboue. And the farmer may well say, that looke how many turkie he hath in his yard, euen so many mule coultes hath he in respect of their feeding. Their ordering is lesse troublesome then that of the peacocks, saue that they doe not so well endure and abide the cold, neither doe they require to be pearched so high in the open aire : but they eate vp and make great waste in gardens, and are filthie as gollings, and therefore some must be ready to make them cleane euery day. In winter they must be set in a warme place and drie : their pearch must not bee aboue eight or ten foot from the earth, because they do not flie high.

As concerning their laying and siting it is altogether like to that of the peacocks, and their eggs may as well be set vnder hens, and led afterward by the same whiles the Turkie-hens do accomplish their feuerall times of laying.

Their diseases and remedies are also all alike, so that it were in vaine to speake of them heere againe.

The huswife shall not make any great account of Turkie eggs : at least he that loueth his health, shall not esteeme of them for to vse them : for physitions hold, that eggs of Turkeys ingender grauell, and minister cause to breede the leprosie.

The one and twentieth Chapter.

Of Turtle doves, partridges, quails, stock doves and thrushes.

THE place to put these kindes of birdes in (seruing rather for food and pleasure, then for breeding) shall be ordered after the manner of the fasant house, that is, after the manner of a great coupe, so leaning against the wall of the backyarde, and open toward the light, wouen and wrought with the strings of a small bow, put through woode, after the manner of birde cages, with a doore of the same. And within especially toward the corners, there shall be great store of perches, and branches of boughes of Iuniper, baies, and other trees, within which there shall be tied against the said wall, small batkets to allure them to lay and sit in, if so be they haue any inclination

That a peacocke is better meate than a turkie.

What meate is fit for turkie.

The times wherein turkie do lay.

The diseases of turkie.

Turkie eggs.

nation thereunto. It shall be of the height of a man: and ouerthwart and euery way, you shall hang perches itaied vp at both ends for seats for them to sit vpon, and vnder their perches much fresh straw, which you must often renew, when you make them cleane: on that side towards the light all along their house, you shall weaue and worke in two boordes of a good length and a third vnderneath them, and there shall you make places for them to eate their meate, and to set their water pots for them to drinke, which you shal refresh and make cleane very often. These birds are all of them such as vse to goe together in flockes, and delight in hot aire, and in colde weather flie ouer the sea out of one countrie into another. And therefore to tame them in such manner as to make them like our house birdes, would be a very harde and difficult thing; and againe we make no further account of them then for their daintines and delicatenes, which is the cause why they are of such request in feasts and bankets.

Turtle doves.

Of all theise forenamed kindes of birdes, there is none more apt to tame then the turtle doves, neither yet sooner fatted: for to take them after they be somewhat great and the well, you must giue them wine: for by the meanes of it they do quickly fall to forget their libertie and freedome; for this birde is of a great stomacke, and beareth it therefore very mournfully, when she perceiueh herselfe taken: for which cause also they almost neuer lay when they be restrained and kept in, neither yet feede fat in winter: quite contrarie to thrushes. They feede vpon barlie, fetches, and almost all other kinde of graine, they desire faire & cleere water, and often renewed, and a large water-pot, that they may bathe themselves therein sometime. Especially they loue miller and pannicke, and make no lesse account of wheate, of which sorts of corne a bushell will satisfie fixe-score birds: and you must not forget grauell, which must be laid by their waterpots for to bee their phyticke, and some also in some of the corners of the house for them to scratch in. If they hang the wing and stirre not out of their basket, you must take them, and looke to their billes whether they haue the pippe or no, and if need be to take it from them: and to their feete to see if their owne dung make them not, that they cannot stirre: or vnder their wings for vermine, and in all other places to cure them, as hath bene said of hens. The blood of the right wing of a turtle dropt into the eie, is excellent good against the stripes and vlcers of the eie. And their dung is good against spots in the eies.

Stock-doues may be fatted and fedde after the verie same maner, but they are greater eaters, and more hard to tame: in winter they loue wine, and do grow very fat, so also do the turtles. Againe you must take heed not to forget your grauell.

The browne or woodcocke coloured partridge, is more easily tamed then the spotted or any other sort, likewise they haue not so delicate

licate and fine a flesh: being notwithstanding well fed, they are little inferior vnto feshants: and you must handle them after the same manner, and giue them all one meate, but that partridges loue now and then to eate corne, and feede vpon greene grassie. The male partridges are very hot, and the hen doth lay a great sort of egges: the cocks also do beate one another for the hens, vntill the one hath ouercome the other; and he that ouercommeth, ouercroweth the other which is ouercome, and maketh him follow and come behinde him after the manner of the hens.

The hen partridge is so fruitfull that she conceiueh at the onely voice or flight, or breathing of the cocke. The meate that they most delight in is miller and pannicke.

The egges of partridges often eaten, do bring fruitfulness vnto barren women, and great store of milke vnto nurces. The gall of a partridge doth cleere the sight, and mixt in equall quantitie with honie, doth heale the brules of the eies: the blood of partridges hath this vertue.

The eggs of partridges. The gall of a partridge.

Quailes (being birdes living altogether vpon the earth rather then in the aire) do not make or builde themselves any nests; anie more then all other birds which are heauie, and cannot so well flie: they be very fierce, and in that respect they are not accustomed to haue either so much scope or light as other birdes. Likewise we see that they are wont to haue their coupe couered with nets or skins, least in flying vpon high, and rising with some boisterousnes, they should beate themselves to death. Some provide them meate-pots and water-pots apart, that is, to euery birde his owne prouision and diet: they loue greene corne, and wheate, and mustard seede is their chiefe and principall feeding. They eate in those countries whereinto they go (being elsewhere then in this our countrie) great quantitie of hellebor. And this is the cause why *Didimus* saith, that their flesh is laxatiue, and that it doth procure the turning sicknes and headach, that it causeth the falling sicknes; conuulsion, and distension of the muscles; and for that cause, that they ought to be kuffed with miller, or boiled therein: or else if any should finde themselves ill after them, for to drinke the decoction of miller, or of myrtle tree berries: and it will be good also to giue the same to quailes to eate. The cocks are nothing lesse hot then the partridge; the hen so, as she hath layde her egges sitteth them, and by and by after she hath hatched her yoong ones, she draweth them into some other place, to the end that such as go about to take them may not finde their place; they be birds vsing to flocke together, and they goe away at spring time, and returne in winter, and in the beginning of Autumne.

Fierce quailes.

Thrushes are not naturally breeding in this countrie, as being an excessive cold place, and hardly at any time do they indure this aire.

Thrushes.

and therefore it were but foolishnes to go about to fat them heere. This bird is addicted to hot countries, as also to such places as where there are great store of oliue crees, for they do greatly delight in oliues, and grow fat at such season as they grow ripe: it is a birde also giuen to make great hauocke and spoile, for the thrushes do powre down themselves vpon the oliue trees in great flights, and hauing eaten their full, they also carrie away at their departure one in their bill, and one in their claws, after the manner of men of warre. They are found also and made fat in the mountaine and hilly countries, but it is in winter time: for they gather fat, and fill themselves in colde weather, if it be any whit moderate. The men of old and ancient time did much esteeme them, and sold them in the time of the *Romaines* for ten Sous a peece: thus also to this day do the *Italians* and *Spaniards*, and in this our owne countrie those of *Lions*, *Prouence*, and *Anuergnac*: but they are not so great on this side the mountaines, as they are beyond. This birde is more sullen then any of the aforenamed, and dieth shortly after she is taken if she be carried out of her ordinarie aire, or if she be not put presently amongst other old tame ones: they must haue their meate cast them vpon a very cleane floore, and farre from their pearches, and some cast them dried figs stamped with the floure of meale, and that so much, as that there may something remaine more then they can eat: and sometimes for change of diet, they may haue cast them the fruite of masticke or mulberrie tree, or the berries of iuic and wilde oliue trees, and yet notwithstanding their meate pots must alwaies be full of millet: for this is their chiefe meate. Againe, you must see them provided of cleere water as well as other birdes aforenamed.

The two and twentieth Chapter.

Of the Douehouse.

THe profite that commeth of the keeping of a douehouse, is nothing lesse then that of the keeping of a henhouse: especiallie in respect of the selling of yoong ones and others, which euerie yeere increase innumably: for there are some farmers which sell at euerie flight, two hundred, & three hundred paire vnto the vitrailer: the care to be had about them is not so great as that about other birds, neither the cost so great, inasmuch as they get their own livings the most part of the yeere, and in that they lay fixe or seauen times a yeere two egges a peece: yea and ofner and greater if you change the yoong houledoues pigeons with those of the coate, after that they be once eight daies old, to the end they may accompanie the cocke pigeons which go by themselves without any matches; but this must be done so cunningly as that the dams do not perceiue it: It is true that this

this bird is of great charges, and wasteth much in respect of grounds: and for this cause there is no ground-pigeon-house allowed, but to such as be lords in fee-simple: neither yet very oft any doue-houses in vpper roomes, except it be to such as haue a competent quantity of eareable ground.

Let vs then prepare to our good liking, and for the ease of the husbande a ground doue-house, out of the noise of folkes, the dashing of trees one against another, and the roaring of waters, and let it be set in a place somewhat raised: or else let vs build it right in the midst of the bafe-court, which is the place of our countrie house before in this booke appointed, and that after the fashion of a stone towre made for a winde-mill, or somewhat neerely resembling it, but let it be distant a flight or two from any water, to the ende that the olde pigeon may warme that which she bringeth for to giue to her yoong ones. For it is certaine that as the pies and sparrows, the male and the femall doe sit by courses, and as while the one of them is seeking her food abroad, the other is sitting vpon the egges: so doe these for the safety of their yoong ones, vntill such time as they bee out of their holes abroad. And I would not haue you to vnderstand that the doue-house should onely lie open vnto the East quarter in this countrie, but that it take part also of the South, because this birde doth greatly delight in the sunne beating and calting his beames vpon their house, and entring in at their windowes and loope holes or higher lights, especially in the winter time: and further, that vpon the South there be provided a shutting and opening window in winter to giue some heat vnto the pigeons. There must not any window be made vpon the Northside, or if there be any for to let in the coole aire in sommer, yet it must be very close stopt vp while the cold indureth. Let the South window be turned toward the barne doore; and by the side of the said doore let there be a water pot set vpon a pillar of stone for the pigeons to drinke at, and let that water pot be made in maner of a basen, diuided into many partitions to drinke at, to the end that when the pigeons haue pickt vp the corne scattered from the fanne, or striked abroad by the flaille, they may haue their water neere and easie for many to come by together, either to drinke or bathe themselves in. And you must procure and see that this doue-house be built and laide with a good and broad foundation, well covered, and the floore close beaten and lomed ouer, to prevent the danger of the dung, which doth vndermine and corrupt the foundation: it must also be well and close laide and drawne ouer with mortar within, and the chinkers or clefts which may grow must oftentimes be scarped out and stopt for feare of rats or mice, which is a mischief often happening where there is not any plaister to come by: and it must also be drawne ouer in like maner on the outside, for the crackes that happen

Where a ground doue-house is permitted and lawfull to be had.

Pies and sparrows, male and female, do sit.

A dove window.

Beasts to be kept out of doue-houses.

Some. The value of this bird in times past and yet also.

The ordinarie meate for thrushes.

The profite of a douehouse.

happen in lime and sand are instead of ladders, for fulmiers, weasels, cars, and other beastes to climbe vp by. And for the very same cause, you shall make round about the doue-house on the outside two out-casts of hewd stone, or round rings of plaister as broad as three or fower chesse of stones. The one of these rings or outlaies shall be about the middes of the doue house, and the other close vnder the window, at which the pigeons vse to goe in, and vpon which the pigeon also may sport and turne herselfe round. As concerning the falling window and chiefe entrance into it, it must be made higher then the dor-window, and larger also. And yet I meane that this window without be round compassed with white plates well nailed to the wals, and that is shut with a falling lattise thick wrought, made to rise and fall by an engine euening and morning, thereby to preuent the danger of owles and iennie whippers. The holes made of earth troden with straw are more kinde for the pigeon, then those of boord, or square tiles, or of plaister, howsoeuer they be subiect to growe full of chinkers and vermine which infeeble the pigeons when at any time they leaze vpon them. And therefore if you will haue them good, you must draw them ouer with a strong crust of lime within and without. Againe, howsoeuer you make them for matter, yet they must be made so large as that the pigeon may turne herselfe in them, keeping her feathers vnuffled; and so high as that the pigeon may stand vp right in it and not touch the top with her backe. If either of these two points be missing, then she leaueth her hole desolate and forsaken, and oftentimes the house to.

It will be good also in respect of some beastes which are enemies vnto pigeons, to hang in the doue-house the head of a wolfe, which partly by the smell, and partly by the shape driueth away such beastes: or else to sticke some branches of Rue in the windowes or doores of the doue-house. Vpon the pinnacle of the roofe make the picture of a pigeon either of potters clay or of plaister, to draw such as flie by, thither. Provide in some place about your doue-house good store of pots for sparrows with stickes of thorne to hang the pottes on; and others to rest the sparrows vpon: and withall beware that this mournfull birds doe not take vp his habitation in your doue-house, for he would make wilde and estrange your yong pigeons.

To store a doue-house, you must first consider the contents of it, as whether it be made to containe manie, or but a meane sort, or but a few, and so to put therein an answerable number of pigeons. Twentie paire of pigeons are inough for three hundred holes: likewise if the doue-house bee of a thousand holes or moe, then so small a companie would not be inough; neither indeed would they loue it, they being of so small a number, but would goe away or die in the ende.

The

The pigeons wherewith you minde to store your doue-house must be yong ones taken when they are halfe downe, and halfe feathered together with the old ones their dames, and so put at libertie in your doue-house, or rather in great coupes, and cause them to be fed with fetches and water with some skilfull handler of pigeons twise a day, so long as till they become to eate and drinke by themselves: for by this meanes they will soone haue forgotten both their old house, as also the old ones, and so will yeeld themselves willingly to tarrie in such doue-house as wherein you will first lodge and put them: which the old ones would not doe, for being translated from another place, they would finde out the way to take their flight directly to their former and first home so soone as you had made them way to get forth, how far soeuer they had beene brought. The pigeons good to increase store are the ashe, browne and blacke coloured, the rough footed or coppild ones are too mournfull, and keeping too much at home: so in like maner are they which are of colour like to a snailes bellie; the pie coloured ones and the hooded ones, those which glister like gold about their neckes, and haue their eies and feet red, are the freest of all other. The white are strong to bring vp, but most subiect to the kire, and other rauenous birdes, because they are very easily perceined as they flie by a farre off. You must make your choice of the May flight, because there is no such feare of them for the cold, they grow more easily and thriue better, and are sooner able to get their owne meate. About all things let them not be pinched of their meate in the moneths of Aprill and May, because the old are verie many of them sitting, or else haue already hatched.

For to make them familiar and tame, giue them some honie or some little peeces of bread, afterward some fetches, then cummin (for these seedes allure them very much) and sometimes wheate among the ridled scraps, & let them not go out till after fifteen daies of your putting of them in: during which time, you shall cut their winges, you shall keepe a net spread ouer the windowes, to the end that they may haue the light of the day, and yet not be able to get forth; about the end of fifteene daies, you shal permit them the fields, taking away the said nets, and yet not before night approach, the time being clouddie, darke, and inclined to raine, for they will not goe far from the place of their late enlargement, neither will or can they possibly but returne vnto the doue-house, if it were but to hide their heads that night. In doing whereof they will learne to marke the place of their receipt, and not forsake or leaue the same, hauing neuer had the taste of any former choise in any farre remooued place to returne thither againe: further if you lay vpon the window made for them to light vpon at the coming to the coate, a loafe made of red earth, cummin seede well brused, honie and brine, all being well boiled together and

and

A draw lattice window.

To store a doue-house.

and dried in the oven : for hauing picked vpon this lumpe, they will neuer faile to returne thither againe, they are so much giuen to the pleasing of their taste ; and further by the very sent and smell of this remaining about their bills, they will be the meanes to allure others along with them euen to their coate, which for the foresaid commoditie sake, they will learne neuer to leaue or forgoe.

you shall also keepe them from flying away, if you giue them lentils steeped in honied water, or boiled in some cuted wine : or else drie figs mixed with the meale of malt and honie. Some say also that pigeons will neuer goe away, if there be set vpon the turret of the douehouse, the head of a bat, or the branch of a wilde vine, or if the doores and windowes of the coate bee rubbd or annointed with the oile of balme : as also that pigeons when they flie into the fieldes will bring home others with them if you rub their wings with the saide oile of balme : or if you giue them before their going thither fetches, besprinkled with wine, or shall haue kept in such licour for them the seede of Agnus castus : for other pigeons after they haue smelt the fauour of your pigeons mouthes, will not faile to come with them to their pigeon house.

Perfumes for the douehouse. Perfume oftentimes your douehouse with iuni- per, rosemarie, and sometimes with a little fine frankincense ; for that doth mightily retaine and keepe them, and causeth them to loue their owne house more then any other. When you shall perceiue that they begin to lay, giue them then what libertie you can : and you shall see that by casting of them morning and euening a little cleane corne vnder the barne wall, and far from the dung, and in causing the water-pot wherein they bathe and refresh themselves, to be oftentimes made cleane, that they will draw diners others from other places, in so much as that your twentie paire in fortie daies will haue stored your house with twise, yea thrise so many : for they bring forth yong thrife, and those which are good fowre times a yeere : and you shall not neede to care for any thing, but to keepe the douehouse cleane.

And for this cause it behooueth him that hath the charge of the douehouse to goe into it once a weeke at the leaste, and that in the morning, or at the times of releefe, when as the pigeons are in seeking their meate, and abroad in the countrie thereabout : for seeing that they doe ordinarily keepe their noonetide in the douehouse, if hee should enter in at that hower, he should make wilde and estrange the yong ones, yea the old ones themselves. In going in he shall whistle them, and cast them something to eate, to the end they may be accustomed with him and acknowledge him : he shall emptie and fill vp againe their water-pot with cleere water, he shall pare the floore, he shall cast out such as he shall finde dead, he shall make cleane the holes, to the end that they may not gather any fleas, lice, punies, or mothes : especially in sommer he shall not put vp againe into their holes

holes such as may be fallen out, he shall cull out the barren that hee may put them in some place by themselves, that so he may fat them, and afterward either eate or sell them : and, if he perceiue the traine of any snake or adder, he shall set a long earthen pot vpon the taile or bottome, and shall put within it a pigeon, and placing it right in the trade and walke of the adder, he shall set by it some kinde of little foote-pace or such other thing, whereby she may creepe vp vnto the top of the pot, and cast herselfe in afterward : for the adder cannot come forth againe, and so you shall cleanse and rid the douehouse. It is true that pigeons doe require some cost in winter, when either through frost or snow, or when the corne is shot, they cannot find any thing in the field ; but this paine is not passing two monethes continuance or thereabout, that you need to feede them with corne, with the drosse of the wine-presse, or the stones of grapes, of which things there may be store and provision inough gathered, during the vintage time vpon a great heape in the house court. Likewise at this time they afford you a flight, which is called the March flight, and they are the most fat, tender and daintie of all the yeere.

You shall keepe well the dung which you take from the pigeons, *Pigeons dung.* not mixing it with that which the kine make, or the calues, or the sheepe, for it is very hot and serueth to fat and amend the fennie and wet places of your part of corne ground, or of your meddowes, or the yong plants and tender herbes, and to refresh and relieue all trees subiect to coldnes and moiture. You may also make your vse thereof for the Sciatica, in making a cataplasme thereof with the seede of cresses and mustard, and putting thereto a little of the philosophers oile : as also against headach, if wrought in a mortar with the oile of the kernels of peachstones, you apply it to the place that paineth you.

The two and twentieth Chapter.

Of the neate heard.

Notwithstanding that we haue yeelded and giuen the ordering of the kine vnto the huswife, and that oxen are to be kept and ordered in their meat after the same maner : notwithstanding in countries and about such farmes, as where they are kept for the plough and sale, there is provided a man which hath no other charge but to thinke vpon and order them, obserued and noted that he hath almost as much pains and labour to take about these, as about a horse. It is true that a cow is not of so great charge to maintaine and keepe, neither in respect of her meate, neither yet of her handling and managing, neither yet in furniture : but the force and strength whereby the oxen doth cleaue the ground and drawe the cart, requireth one that should doe nothing but attend them : notwithstanding that he must feede

feede two for one, and that three of the best oxen in *Bourbon* or in the Forrest doe not so much, as one good horse of France or of *Beaux*. In like manner it is out of doubt that the labour of oxen is not admitted of, but where meere necessitie forceth, because there is no convenient and commodious keeping of herdes of horse, or where horse is not to be come by but out of some far cuntry. For though the feeding be good and singular for oxen, as in *Flanders* and elsewhere, yet it falleth out so that if they can haue horse to doe their worke, they do like better thereof then of the oxen. Euen as in *Prouence*, *Languedoc* and *Auvergne* men doe vse the labour of their mules and their yong colts rather then of oxen and kine, because they effect not or dispatch their worke so well, or yet so speedily; howsoever yet the labour of the oxen is marvellous good, auailable and profitable in strong grounds, for they drawe the ploughes deepe into the earth, and turne ouer great furrowes, as may be seene in *Italic*, where there are great oxen, long and broad breasted, in *Gisnoigne*, *Bourbon*, *Poitou*, *Anion*, and *Maine*. Againe men of ancient time vied no other beast but oxen, because that oxen are more sparing for the profit of the farmer: for they are contented to feede vpon pasture without any other foode or prouander; besides the great profit and good prouision comming of them. For being either shoulder-shot or brused in any part, or growne impotent and vnable to worke by reason of old age, they are fatted, either for to sell or to kill and salt for his vse: profits and commodities which the other kinde of cattell (I meane the horse) doe not afford.

The oxen-house.

The oxen-house must be built of stone, paved with grauell, or sandie ground, somewhat descending and sloping, that so the moysture may not stand. It must also stand vpon the south, that so it may be the more drie, and lesse subiect vnto colde and frostie windes: it shall be nine foote wide, and only of such height as that the oxen may stand vpright, and the oxen-keeper may haue space inough to go round about them, to see and serue them with fodder: as also to the ende that seeing oxen will be striking one another with their hornes, the weaker may haue space to withdraw himselfe. The racks must be so high, as that the oxen cannot easily reach them.

The oxen-keepers charge.

The charge of him that is to keep the oxen, is to be gentle & louing vnto the oxen, dressing and giuing them their meat, prouiding them good luter, either of straw or some other thing, to rub them euening before they lie downe, and in the morning to currie them and wipe them cleane gently, washing their tiales oft with warme water: to keepe their house cleane, and not to let hens or swine come there in, for feathers will kill oxen, and the dung of a diseased swine ingendeth the murraine or plague: to giue fresh straw vnto these cattell, and to cast to them in sommer the greene sprouts and tender shutes of the arbers of vines or others, and in winter of beanie stalkes and

and grasse euening and morning. Let him be skillfull to discerne when plough oxen haue laboured much or little, that he may accordingly giue them a proportionable quantitie of meat, and also such as shall be necessarie: he may not let them take paine or labour in verie hot or verie cold weather, neither yet when it is verie moist: he may not let them drinke quickly after their trauell: but if they be heated, so soone as they be come home, he shall cast a little wine into their throates, and shall not tye them to their manger, vntill such time as their wearines be ouerpast. When there commeth together any companie of feltiuall daies and rest, he shall grease their hornes and vnder the pasterne, together with the hoofe: or else he shall put vnder an onion, roasted verie soft betwixt two coales, tying it therto with a cloath: let him oftentimes make cleane and refresh their pasternes, and not suffer them to cleaue or rend: and to that ende let him euery yeere cause to be repaired the pauement of his oxen-house, which will serue also to keepe away beastes and vermine which are wont to annoy oxen. Let him remooue them one far inough from another, least they should strike one another. When they labour, let him water them twise a day in sommer and once in winter, and that in cleere, cleane, and coole water. For as hath bene saide heretofore, the oxen secketh after the water that is cleere and most bright, as the horse after that which is troubled. Let him carefully looke vpon their comming from field whether any of them haue got any thorn in his foot, if they be sweatie, if the collar or the yoaake haue caused them any hurt about their head, or if they be chafed about the necke, if they haue bene much prickt with the goad, or with the gadflie, or hornet, and let him accordingly apply some thing for the healing of them.

The gelded oxen is better meat, better marchandise, and better for labour, then the bull, whose flesh is more hard and tough like a hide, and more troublesome to driue: wherefore of a hundred calves that the oxen-keeper may haue, he shall not keepe aboue two to bull the kine; the rest he shall geld, all of them about when they are two yeeres olde, for after this time he cannot doe it commodiously. It would be done in Autumne and in the later ende of the moone; and the ashes of vine branches mixt with litharge must be applied to the wound, and three daies after pitch melted and mixt with the saide ashes. You must not let him drinke the day wherein he is gelded, and he must for the same day also eate but a little meate. The manner to geld him is to take with two straight rules of wood as it were with quitches or pincers the strings of his stones, then afterward to open the purse and cut out his stones, in such sort as that he leaue the vpper end thereof whereto the said strings are fastned. For by this means the calfe is not so much subiect to effusion of blood, neither yet will it be altogether spoild of courage, not hauing all his pride taken away, but some

The gelded oxen more profitable for worke, then the bull.

The time to geld oxen.

The manner of gelding the oxen.

some little left behind and reserved which may still expresse his first and naturall forme. Hauing gelded him, you must feed him well that he may be fit for labour, and feed him according to the seasons and times, cheering and cherishing him by sometimes giuing him a little salt, sometime rubbing his head with your whole hand, stroaking his backe, and rubbing the rest with louing and gentle speeches: notwithstanding so long as he is in the house, let his hornes be tyed, and he close made fast to the cratch. Couple him with another of the same greatnes, grosse, age & strength, tie them the one by the other, lead them into the fields tyed together, to the end they may one of them loue another: let them oftentimes see the oxen that draw the plow, or which till the ground, or doe any other manner of worke: and to the end they may loose their naturall wildenes, lead them to heare the noise of mills, of men, of forges, and other things which make great rumbling: neere vnto the time when you would haue them to draw, which is from two yeeres and a halfe to three, giue them the yoke and beele fit for beastes of their age, and sixe daies after you shall fasten them to the waine with the teame, to draw it through the fields, or fower daies after you shall fasten vnto the teame a piece of wood or other load. In the ende accustom them to be put to draw before oxen, which are in the plough encouraging and cherishing them and that without anie stroakes, vntill such time as they be made cunning: trouble and wearie them not too much with labour the first yeere.

To buy oxen.

If you buy oxen for labour, take them of the same coast and quarter that your farme is: for they cannot acquaint themselves so easily with a strange aire, as horses doe: and if vpon occasion you buy them in a strange countrey, then buy them such as were bred in a barren and plaine countrey, and those will thrive and take well with euerie place, whether the aire be hot or tender, or subtil and thin. Furthermore, it remaineth that you chuse them of three yeeres olde or thereabout, for sooner you cannot traine them to labour, though you haue bought them: doe not labour them much for the first yeere, and especially in the time of great heat, feeding them rather with good hay then with grasse; so they will grow able by little and little to indure all paine, and will feare the heat the lesse, and will continue sound and cheerfull a longer time, yea and they will spend you lesse: for your cattell not feeding vpon grasse, you shall gather the greater store of hay in your medowes, and better then and if your beastes had broused the grasse, being but yong and peeping out of the ground. You shall know how old they are by looking in their mouthes, for within tenne moneths of the first yeere they change their fore-teeth: and sixe monethes after the next, and at the ende of three yeeres they change them all, and when they be in their middle and best age their teeth

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are white, long and even: but when they grow old, they become short, vneuen and blacke.

Labouring oxen must not be too fat nor too leane, and those which eate softly and with leasure doe abide and continue better in their strength. The good ox must be of a meane size or stature, gentle to handle, ready and quicke when he is spoken to, not craving the goad: and yet notwithstanding quicke also when he is prickt, and going forward readily: in regard of his nature well limmed; short and broad, of a square body, stout and stiffe, hauing a round muzzle, great eares very hairie and matches, a wide and curled brow, a great and blacke eie, haire curled, and as it were waued, hornes strong, quicke, of a reasonable greatnes, and blacke: his brisket hanging downe even to his knees, his head short and well compacted, broad shoulders and breast, a great dewlap and belly, a round rumpe, firme and sound legs, a long taile vnto the ground small and thicke tufted toward the end, straight and plaine backe, stretcht out ribs, large reines, strong thighes and linevie, a short and broad hooft, short haire shining thicke, and thicke fet, colour blacke and red, this is the best: the second and next thereto is the bay, the pie coloured and the spotted: the white is the worst of all: the gray and yellowish are indifferent: his hide and skinne thicke and well fed, betwixt fowre and eight yeeres olde, for at this age he is in his full strength and lustinesse.

The ox thus made will serue you to labour and worke till he be tenne yeeres olde, and after that you may far him and sell him, for he liueth till fowreteene or sixteene yeere olde: you may also fit for the geares and vnto worke such kine as are barren or gelded. But and if you buie oxen already trained to the yoke and fitted for the carr or plough, your ox-keeper must deale verie aduisedly with them at the first, whether it beeat the plough or any other labour, and finde out his manners, and how he hath bene handled, and what qualities the bringer of them vp, hath vsed and accustomed them vnto, to the ende they may be nourished and continued in the same, to make their worke the better: but and if you will acquaint and fit anie of your owne herde vnto labour, your ox-keeper must take the paines, and mult for the more his and their ease knowe their nature, and (if I durst so say) the complexion of such as he would handle and breake: if he be a slow and sluggish beast, if he lie downe often, if he be quicke, furious and heady, swift to lift and lay about his heeles, or to vse his hornes: if he be dull of the pricke, trembling, going backward rather than forward, fearefull to goe into the water, then you must first beate him from these faults, before you go about to headstall him, if so there be not any other thing that might rather hinder and forbid him. And know that for to do these things is somewhat to soone before he be three yeeres old, and somewhat too late when he

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is past five. Meate and faire words doe accustom an ox to the yoke, sooner than feare. And there is no course more expedient, than that which huntsmen doe vse about a yoong dog not yet made readie to range, coupling him with another dog, which is already fitted, old and staied: for if your ox-keeper do couple a yoong ox as yet a nouice; with a well experimented and sure old one, and yet so as that they be of one pitch and strength, (for this is a principall thing to match them in greatnesse, strength, and nature) then he which hath bene already accustomed to worke, will guide and direct the vnpractised vnto all the turnings of the yoke, to all the fashions of the cart and plough. And if the ox be hard to be nurtured, and yet a comely beast, and in your iudgement fit for the draught, then put him in a great yoke, betwixt other two of his owne stature, which are gentle and well reclaimed to their worke, and in three daies you shall see him to buckle himselfe handiely vnto it also.

And if you will onely tame them, acquaint him by little and little to indure a rope, and the fastning of it to his hornes: and after a few daies tie him fast to a stake, and there let him stand fasting some certain time: if he be stomackfull, when his heate is somewhat ouerpasse, cause him to smell your hand oftentimes, that so hee may be acquainted with you, and claw him betwixt the legs, and euery where else, speaking him faire. Afterward let him draw a Brise or two made fast in the yoke: and now and then set him to the empty tumbrell, and cause him to draw a little prettie way, after put into the tumbrell some loade, to trie his strength, and in like sort acquaint him with your cries, wordes and goades.

If you haue bought an ox ready vsed and accustomed to draw, and that you doe not know his complexion, you must trie and finde it out when he is yoked, as if he be restie, trembling, furious, or if he will lay himselfe downe in the heate of the day, and not to correct him for his faults, neither with whippe, neither with blowes with the goade: for the one maketh him furious and raging, and the other hardeneth him: but rather to binde his legs and so let him stand and fast a certain time, for this fault commeth seldome to any but such as are ouer-fed. Likewise there is a certaine manner and way to be followed in feeding of them, and the lacke of skill therein is not a little fault, neither in respect of the soundnesse and safety of the beast, neither yet in respect of the easinesse of the worke, which is attained when the ox is rather somewhat fat than too leane: for the beast that is high fed, if he be outragiously heated by too much labour, is in manifest danger of death, by reason of the moulting and running of his grease throughout his body, and though he escape and die not, yet will he neuer do any good.

Oxen are not to be fed so frankely and full in winter, when they labour

labour not: they loue the straw of pulse, as offerth this, peas and beanes. They are famed with barley boiled, and beanes bruised and broken and as for hay it is not grudged them, and though he hath it not so largely as horses haue, yet it is his only meate when he laboureth. In the country of *Limosin* and elsewhere, where there is great store of great turneps, men vse to fat them therewith, but such a beast is not so strong, neither his flesh so fast and solide. The yoong sproutes and buds of vines de refresh them in summer, and some do willingly giue them fagots to browse vpon at night. They loue aboue all other thinges the yoong buds of the vine, and of the elme-tree, and such like account they make of the drosse of the wine presse. The sheaues of wheate and rie are good for them; and sometimes bran mixed with siftings, both these puffed them vp, and make them nothing strong. The acornes do make them scabbed, if they do not loath them, and if they eate not all their fodder. Coleworts boiled with branine; make them to haue a good belly, and do nourish somewhat; so likewise doth barley strawe mixed with bran. There may be mingled amongst their prouander the drosse of the wine made for the seruants, but not before it be washed and dried. But without doubt it is better to giue them such drosse before it be washed, euen such as it is, and so it will serue them for their wine and meate, and will make them faire, deliberate, and powerfull. Nothing is better to fat them, then to feede them with the grasse which groweth in the medowes in Autumn after that they haue bene cut.

The ox is subiect to fewer diseases then the horse. And for to *to keepe oxen* keep him from the most ordinarie, old & ancient men did purge them from diseases. in the end of euery one of the fower quarters of the yere, and three daies following. Some with lupines and cypres-berries brayed together, as much of the one as of the other, and set sooth to infuse in the open aire one night, in a pinte or three halfe pintes of common water: others with other simples, according to the custome and diuersitie of the place and countrey. He is knowne to be sicke or sickly if he eate not when he hath good store of fodder or prouander before him.

To helpe the ox to a stomack, when hee hath not tast in his meate, *To get an ox to* by reason of being ouer-wearied or ouer-heated: it is vsed to rub his stomack, toong and roofof his mouth with salt and vineger.

If he be become fainte and vnable to do any thing, there must be giuen to him euery moneth beaten fetches, steeped in the water which is to be giuen him for his drinke. *For faintnes and disabilitie to doe any thing.*

To keepe him from tyring and wearines, rubbe his hornes with turpentine made thinne and liquid with oile: but beware and take good heed that you do not touch his muzzle or nostrils therewith, for oile causeth them to loose their sight. *wearifomnes.*

The rising of the
hart.
Colicke.

Against the rising of the hart, or desire to vomite, his muzzle must be rubb'd with garlicke or leekes brused, as also given him to swallowe or thus, that is, or with a pint of wine, especially when he is troubled with the collicke and with the rumbling of his bellie: the colicke is knowne by his complaining and stretching of himselfe in his necke, in his legs, and in his bellie: as also by his often lying downe and rising vp againe, by his not abiding in a place, as also by sweating in such sort as if he had bene in a bath of water. Some adde thereto the oile of nuts, and others giue him boiled onions in red wine, and others mirtles with bay-berries steeped in wine, and they also cause his flesh to be prickt about his hooues, or his taile vntill it bleed. The colicke commeth to him of wearines, and more in the spring then at any other time, because as then he aboundeth most with blood. In this disease he must be walked, and couered with a couering of wooll.

Swelling.

Oxen become swolne and blowne vp by hauing eaten ouer ranke grasse, especially if therewithall it were ouerladen with dew: you must take a horn bored through at both ends, annoint it with common oile, and put the fore part of it three or fower fingers into the fundament, and to walke and course them thereupon vntill they breake winde, and letting still the horse alone in such manner as is aboue saide, you shall rubbe their bellies with a barre.

The stichie,
mallet or hammer.

The stichie hapning to the ox, being otherwise called a mallet or hammer, is knowne when the beast hath his haire standing vpright all ouer his body, not being so light and liuely as he was wont, hauing his eies dead and dull, his necke hanging downe, his mouth driue-ling, his pace slowe, his ridge bone and all along his backe stiffe, without all desire of meate, and scarce any thing chawing the cud. This disease may be cured at the beginning, but hauing once taken deepe roote, refuseth all manner of cure. Whereunto take of Squilla or sea onion, small shred, three ounces, the rootes of melons beaten as much, mixe all together with three handfuls of grosse salt, and steepe them all in a pint and a halfe of strong wine, and euery day you shall giue of this vnto the beast the quantitie of a quarter of a pinte:

The fluxe of the
bellie.

Vnto the fluxe of the belly, which sometimes continueth till blood come, and weakeneth the beast much, there must be giuen to drinke in red wine the stones of raisons, or galles and myrtle berries with old cheefe delaid with grosse and thicke wine, or the leaues of the wilde oliue-tree, or of the wilde rose-tree: keeping the beast therewithall from eating or drinking any thing for the space of fower or five daies. And for the last refuge or extreame remedy it is vsed to burne him in the forehead with a hot burning iron.

To loosen an
oxes bellie,
To keepe him
sound.

For to loosen the bellie of an ox, you must cause him to drinke in warme water two ounces of oliues made into powder.

Admit that you would feed and fat him for labour, then you must wash

wash his mouth euery eight day with his owne vrine, and thus you shall draw from him much flegme, which taketh from him his appetite, and doth iniurie him in his meate. And if this flegme haue caused him to haue the rheume (which you shall know, when you see him to haue a weeping eye, and therewithall also without any appetite, and hanging downe of his eare) then wash his mouth with thyme stamped in white wine, or else rub it with garlecke and small salt, and after wash it with wine. Some cleanse away this flegme with bay-leaues stamped with the rindes of pomegranats: others iniekt into his nostrils wine and myrtle-berries.

The ox pisseth blood either by being ouer-heated or too much cooled, by hauing eaten euill hearbs in the Summer time, and especially at such time as the deaw lieth vpon the grasse: the remedie is not to suffer him to drinke any water or other thing: to cause him to take downe a drinke made of three ounces of mustard-seed, three ounces of sea-millet, both stamped together, an ounce of treacle, all boiled in two pintes of white wine, afterward dissolue therein two ounces of saffron, and make the beast to drinke it.

Against the rheume and eyes that are swolne and puffed vp, it is vsuall to let the beast blood vnder the tongue: or to make him take the iuice of leeks, rue, smallage and sauiue well purified.

For the spots in the eyes, there is commonly made an eye-salue of Spots in the Sal-armoniacke moistened and foked in honie: some againe vse to annoint the eye all round about with pitch well tempered with oile, because there is danger in the honie, as which might draw bees and wasps about the beast continually.

If he haue the barbes (which is a fleshie substance growing vnder the barbes, the tongue) they must be cut, and afterward rubb'd with salt and bruised garlecke together: after this his mouth must be washed with wine, and with a paire of pincers you must pinch away the wormes which breed vnder the same tongue.

To cleanse the inward parts of the sicke beast thorowly, there is nothing more souereigne than to take the drosse of Oliues after the oile is pressed out, and to vse it oft about the beast.

Vnto an ague which may befall him by ouer-great trauell in hot weather, with heauinesse in the head, swolne eyes and extraordinary heat, which is felt by touching the skinne: the remedie vsed is to let him blood vpon the veine of the forehead, or of the eare veine, giuing him therewithall cooling meat, as lettuces and others, and washing his body with white wine, and giuing him colde water to drinke.

If the pallate of the beastes mouth being heaued and swolne, doe cause him to forsake his meate, and often times to grone: it will be good to let him blood vpon the veine of the sayd his pallat: and then after his bleeding, you shall giue him nothing to eate but garlecke well

foked, bruised and husked, with the leaues of the same or other greene thing, or very soft hay, vntill such time as he finde himselfe well.

The disease of the lungs is so desperate and vnreouerable both in oxen and kine, as that there is no other remedie, but to wash the stall wherein they haue stood with warme water and sweete smelling hearbs, before you fasten any other therein, which also in the meane time whiles this is in doing must be bestowed in some other house. This disease happeneth vnto them by reason of euil hearbs, or naughtie hay which they eat, or of the ouer-great abundance of blood, but most of all through horse pisse, and yet more especially by keeping the beastes houses too close and ouer-much shut. And this is the cause why mares nor horses (yet very well asses) can or ought to be left in oxen-houses, because that the breath of asses doth preferue cattell from this disease.

For the cough there is ordinarily giuen to drinke the decoction of hyssope, and to eat the rootes of leekes, stamped with pure wheat: others giue to be drunken seuen dayes together the decoction of mugwort.

If in drinking he swallow a horse-leach, and that the same do fasten herselfe by the way in his throte; then he must be cast downe vpon his backe, and warme oile powred into his mouth: but and if she be got into his stomacke, there must vinegar be powred in.

If he happen to haue his horne broken or shiuered, take sixe ounces of turpentine and one of gum arabicke, boile it all together, and with that ointment rub the horne all about euery day, for the space of tenne or twelue dayes: which being expired, beat bole-armoniacke with eight whites of eggs, spread this composition vpon plegers, which you shall lay vpon the horne, leauing them there three whole dayes: afterward when these plegers shall begin to be drie, take them away, and in place thereof spread round about the said horne, sage made into powder; the horne will heale.

To fasten a horne which is very loose and readie to fall off: first you shall set close and fast the horne in his place, afterward you shall anoint all the vppermost part of the head, for the space of fise or sixe dayes with an ointment prepared of bruised cummin-seede, turpentine, honie and bole-armoniacke, all of it being boiled and incorporated together, afterward you shall foment the horne with a decoction of wine, wherein haue beene boiled the leaues of sage and lauander in sufficient quantitie.

If the necke be swolne that it causeth some suspicion of an abscesse or apostume: then you must open the apostume with a hot iron, and put in the hole where it was opened, the roote of fowbread or of nettle, and this you shall renew often: it will not be amisse to giue him to drinke a great pot full of the decoction of medicke fodder, and in like

The disease of the lungs.

The cough.

Blood-suckers swallowed by oxen.

His horne broken and shiuered.

A loose horne.

The necke swolne.

like manner to let him blood.

If the necke be chafed, put vpon the same an emplaster made of the marrow of the thigh bones of an ox, the same and grease of a male goate, and swines grease, all being mixt in like quantiry and molten together.

If the hinder part of the necke be pild and growne bald and bare without haire, annoint the place with a liniment prepared of fixe ounces of honie, and fower ounces of masticke, all boiled together.

For the hardnesse of the hinder parts of the necke, let him take his rest certaine daies, during the which time rub the place with butter, honie, larde of porke and new waxe in equall quantiry, all being molten and mixt together.

For the swolne chine, make an ointment of the roote of elecampane well boiled, and stamp with hogs grease, the fat of a weather or male-goate, rawe honie, frankincense and new waxe: with which you shall rub the said chine or hinder part of the necke thrise a day, euening, morning and at noone tide.

If he be so leane as that his skinne seeme to cleaue to his ribs, foment his skin against the haire with wine and honie, being in some warme place or in the sunne: after annoint him with the lees of wine and hogs-grease, all mixt together and made in forme of a liniment.

For the paine of the belly, giue him to drinke treacle or mithridate mixt with wine, afterward let him bloud the next morning vnder the toong, and in the nostrils, or else cause him to drinke the decoction of rue and cammomill finely powdred, and let him rest at the least seauen or eight daies, giuing him but small to eate, and keeping him well couered in a warme house; fower ounces of turpentine incorporated with a little salt finely powdred, is a singular remedie for the disease, if you make him take it in manner of a bole, pill, or drinke.

For the falling out of the draught-gut, take three ounces of turpentine, cause it to be put vp into the draught by some litle boy which hath a long arme and leane, to annoint it diligently, and this to be continued for the space of fower or fise daies: in steed of the turpentine the grease of a hogge wil serue for an ointment.

For the loosenes of the belly, which commeth of hauing eaten herbes, or such other like things of harde digestion: first keepe him from eating of any grasse or herbes for two or three daies, in the which time you shall giue vnto him the leaues of the wilde oliue-tree, plantaine, horsetaile, and sometimes of nightshade berries, and againe during this saide time, you shal giue him but litle to drinke, this is to say, iust nothing for the most part. Otherwise, see that he eate no other things for certaine daies, then the leaues of orgaine, and garden southernwood, and enerie day you must allow him onely the quantitie of two eawers of water.

The necke head or chafed.

The chyne pild and bald.

The chyne growne brawny and hard.

The chyne swolne or puffed vp.

Hide-bound.

Paine in the bellie.

For the falling out of the draught-gut.

Loosenes of the bellie.

The belly
bound.

To loosen his belly, take two ounces of hiera, one ounce of aloes hepatica, mixe them both well in warme water, and cause him to drinke them in the morning.

A broken legge.

If he haue a broken legge, for to set it, drawe it your selfe, or cause your seruants cunninglie to stretch the leg with a rope, right out, not more to the one side then to the other, that so the broken bones may be ioyned and placed againe in even sort: afterward let loose the two parts that so they may ioine close together; apply about the place pleagets dipt in a composition made of the whites of eggs, bolearmenack, & dragons blood: then tie vp the member so strong & straight, as that the two ends of the bones broken may ioine & grow together againe: about these bands apply yet other moe pleagets wet in wine, for the comforting of the sinewes. And to the end that the vpper and lower broken bone may not growe hard or get any other ill disposition or qualitie either by reason of the binding, or else by reason of the fracture it selfe, you shall rub both the one and the other part, with a liniment made of an ounce of turpentine, with as much butter and oile.

For a legge out
of ioint.

For a legge out of ioint or displaced, restore againe the bone into his place, and binde it vp after you haue annointed it with hogs-grease.

A sweld foote.

For a sweld foote, make an emplaster of the leaues of elder-tree and hogs-grease well boiled and mixt together.

For a strained
or hardened
foote, sounder.

For a foundred foote, take the rootes of mallowes and hollihocks, boile them in a sufficient quantitie of water, stamp them and straine them through a strainer, to that which is stained out put halfe a pound of hogs-grease, three smal pots of very strong wine, boile them altogether, vntill the grease be melted, then put thereto of linseed well bruied and beaten in a mortar, and so boile them altogether to the consumption of the wine. Applie some part of this cataplasme vnto the foote, and let it remaine there three whole daies: and then taking awaie the same applie the rest for other three daies.

Lamenes or sur-
busting.

For surbusting, boile honie and hogs-grease in white wine: apply vnto the foote this emplaster, and there let it remaine three whole daies.

Pricking of the
foote.

For the foot pricked with a naile, glasse, thorne, or anie such other thing that is sharpe, cut the horne of the hooft as neere vnto the prickt place as possible you can, afterward drop into the hole of turpentine and oile both hot: and lay a plaister of honie and sweet seame melted together all over the foote.

The clawe lo-
wen.

For the claw that is clouen or shuiered, take honie, new waxe and turpentine, of each an ounce, and make an ointment, which you shall apply round about the clawe for the space of fiftene whole daies, which being past, adde vnto this ointment aloes hepatica, mel rosatum, and roche allum, of each halfe an ounce, couer therewith the whole

whole foote, after you haue bathed it in warme wine mixed with hony.

For the claw hurt with iron or stone, dig and pare away the clawe. *The claw hurt.* uen to the bottome of the hurt, with a smiths paring knife: drop into the fore hot ointment made of old swines grease, & fewet of the male-goate melted together, and put into the fore tents of tow dipped in in the said ointment.

When the hooft is like to go off, you must first salue it with the ointment spoken of before for the shuiered hooft or claw, and that so long as vntill the horne of the hooft be somewhat fastned to againe: afterward you must foment it for the space of five or fixe daies, thrise euery day the whole foote with wine or vineger, wherein haue boiled vnquencht lime and hony of each seuen ounces. *The going off, of the hooft.*

For the pissing of blood, cause him to drinke the iuice of plantaine *Pissing of blood* with very good oile: and afterward take the powder of tartar, and of wilde gourds, mingle them with red wine, and the whites of eggs, and make him to drinke them with a horne. And if this do not stay his pissing of blood within fowre and twentie howres he will die.

If he stale not but with paine, let him bloud of the bladder veine, *Not to be* and cause him to take a drinke made of hony, oile, and white wine all *able to pisse.* boiled together, for three mornings one after another: afterward let him rest for eight daies.

If he haue a stone in his yarde, first cast the oxe downe vpon the ground; after let him take holde vpon his pille with pincers, some- *The stone in the yarde.* what higher than the stone lieth: then let him make incision in the side of the oxe his pille to draw out the stone, and then lastly consolidate and heale vp the wound with turpentine walshed fowre times in the water of horse-taile.

If he haue the stone in his bladder, take two ounces of sea fennell *The stone in the bladder.* stamped, two drams of cloues, and a dramme and a halfe of pepper: poune them altogether, and make him drinke them in red wine warm. If after you haue continued the same some certaine daies the stone come not forth, then in the end you must cut the bladder, and so draw it out.

If his pille be hardned, annoint it with the ointment made of the *For the hard-
nes of the pille.* stamped rootes of hollihocks and fresh butter twice a day.

For his shoulder out of ioint, you must first set it in againe, and af- *The shoulder* terward binde and roule it vp againe with splenters, very close and *out of ioint.* fast.

For the strangles or glandules which happen vnder the oxe his *Strangles.* throate, and spring from the braine ouer-cooled, plucke away their glandules, and after couer his head with some couering, and chafe and annoint with butter his throate oftentimes.

If his palate be swolne, open the swelling quickly with an incision *The palat of his
mouth swolne.* knife,

knife, or hot iron, that so the corrupted blood may runne forth: after giue him for his meate some grasse or soft haie.

If he haue the Ranula vnder the toong much swolne, then open it with a hot iron, or a very sharpe incision knife, afterward rub it with salt and oile so long as till all the corrupt matter be runne out: then in the end giue him some tender herbes or grasse to eate.

When his toong is clouen or chopt vnderneath, annoint those cleftes with an ointment made of aloes, rorche-alome, and honie of roses, all being mixt together, then wash them in wine wherein sage hath boiled, or some such other drying herbe.

If he haue lost his appetite, cause him to swallow raw e egges well beate together with honie, and mingle salt among his meate, or giue him in drinke some horehound finely powdred with wine and oile: or stampe the leaues of rue, leekes, smallage, and sage, and giue him them to drinke with wine.

For the eie that is troubled and darke, blow within it of the powder of cuttle bone, sugarcandie and cinamome very finely powdred.

For the swolne eie, apply thereunto a cataplasme made of the flower of wheate mixt with honie or the water of hony, after the manner of pappe for children.

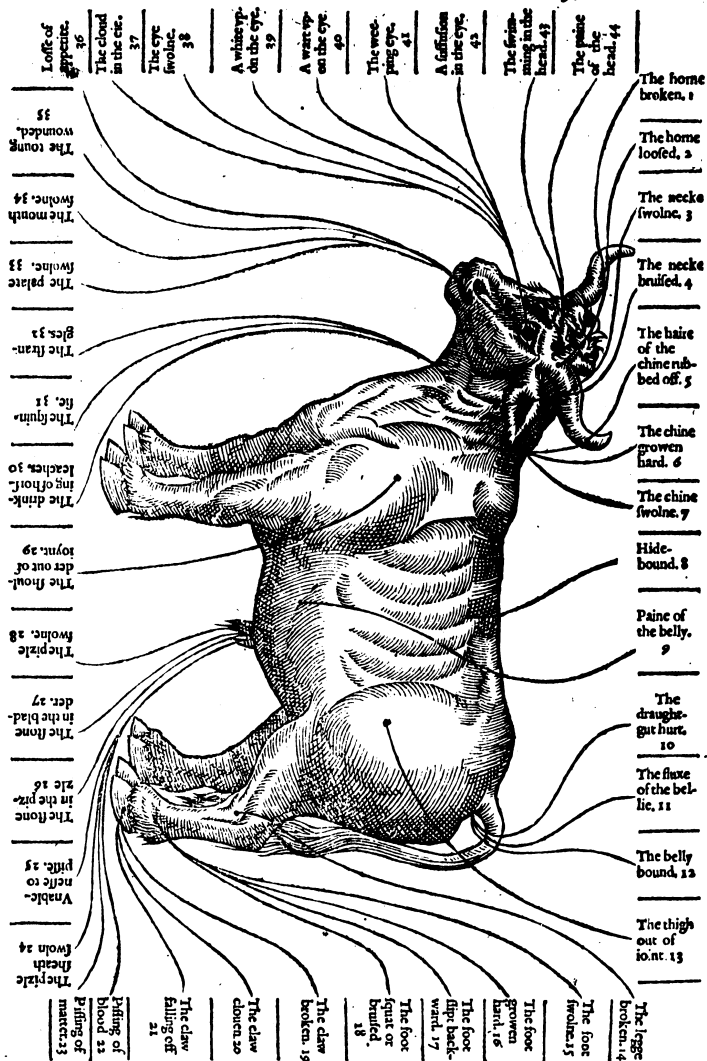
For a white vpon the eie, applie thereto a cataplasme made of fal gemma and masticke finely powdred and mixt with hony, continue and vse this oftentimes.

For the leeke of the eie or tumour called Porrum, growing vpon the eielid, foment the place with the gall of any beaſt whatſoener it be: or which is better, ſnip away the tumour with a paire of cyſers: or make it fall away with a threed tied very ſtrait, afterward annoint the place with ſalt, vineger, and aloes boiled together.

For the weeping eie, blow into it Tutia and vitrioll, made into fine powder.

For the cataract, which is nothing else but an abundance of waterishnes ingendred either by ouermuch colde, or by too long ſtaie and reſpite within the eie of the oxe, in that place where the warrie humour is placed, vpon which the glaſſie humour ſwimmeth, as the cryſtalline againe vpon it. For the cure thereof take ground luie and ſtampe it long in a mortar of wood, of the iuice ſtrained out of it make a medicine for the eie: inſteed of this herbe, if you cannot recover it, take the berries of iuie or the leaues, and draw the iuice of them in manner aforeſaid. Continue and vse the one medicine or the other for many daies both morning and euening, the cataract will conſume and waſte away. It is certaine that who ſo inſteed of water ſhall vse wine, ſhall ſeeme to deale more fitly and better to the purpoſe.

Epiphora



Epiphora.

Epiphora a disease of the eie called a drie inflammation of choler, is when the beast seeth not but by halfe, whether it be of the one eye or of both, bloud taken away from vnder the eye doth correct and amend the sight, and further you must continually drop honie into it vntill it be perfectly cured.

The bleered eie.

For bleered eies which come with continuall falling downe of excrements out of the braine, take myrrhe fine, frankincense and saffron, of each two ounces, mix them all together, and dissolue them in cestern water, make thereof a collirie to drop into the eies.

An ague.

For the agues of oxen, you shall know it by their being exceeding restless and trembling all ouer their bodie; by their great heat in the midt of their forehead, and towards the roots of their hornes, and in their eares; their mouth is verie hot and sweat abundantly, and withall eat almost nothing at all; the hanging out & drawing in of his tongue verie drie; heauie in his head; his eyes distilling and halfe shut; his muzzle filled and all to be drieled with flegmatike water, and his talking of his breath long, and yet notwithstanding he doth not without great paine and much distance of time, complaine himselfe or turne often. The first day that you shall perceiue him thus sicke let him fast all the day long; the next day let him bloud in the morning whiles he is fasting, and that vnder the taile in small quantitie. Fiue dayes after you shall feede him with the decoction of clot-burre with honie and brine; at the least you shall offer him this before all other meat either Greene or moist, as shall be the crops of lentils, and other yong sprouts and buds which you shall thinke meet and conuenient for the beast: wash his mouth thrise a day with a sponge dipt in vineger, and after that, you shall make him drinke verie colde water in like maner three times, and so you shall let him goe into some pasture ground vntill his ague haue cleane left him.

The cough.

The cough of an oxe must likewise be as carefully looked vnto as that of the horse, for it must not be suffered to grow olde and endure long vpon him, seeing it is not curable but at the beginning, you shall make him take fasting halfe a quarter of a pecke of barley meale, wherein you shall put a whole egge the shell excepted, and with a quarter of a pinte of cuted wine, you shall make him drinke it with a horse or otherwise: or else take of dogges-grasse and stampe it, after mixe and steepe it in warme water with beane meale, cold gruell, and the meale of lentils, all this being well mixed, you shall give it to the beast early in the morning. For an old cough it is sufficient to take two handfuls of hyssop olde or new, and make a decoction in common water: after when you haue strained it, you shall mixe therewith of the flower of starch two parts, and cause the beast to take them thus. The distilled water of hyssop may be put amongst, or else the decoction of mints and hyssop together. The iuice of leekes is good for the same being pressed

pressed out well and strongly and given with oyle oliae: for these hath not bene knowne so old and long! growen a cough, which the rootes of leekes, washed, made cleane, and given in decoction with the flower of wheat, hath not put downe and rebated the strength of: Of the same effect is the flower of the euerlasting, are commonly giuen and vsed, or offred with honied water, at such time as the oxe drieleth most at his mouth.

For all manner of paines in what parts of the bodie soeuer they be, causing the oxe that he can neither goe nor doe any other thing well, make fomentations and apply cataplasmes with the decoction of camomill, melilot and linseed.

For the ach of the head, bray garlicke in wine and make him let it down through his nostrils: after bathe all his head with the decoction of the leaues of sage, marierom, lauander, rue, bay leaues and walnut-tree leaues in wine.

Scabs are healed with duckes grease mingled with oyle oliae: or else take the gall of an oxe and powder it with sulphur viuum, adding thereto myrrhe, oyle, and vineger, and a little plume allome well brayed and small pouned. Exulcerated places caused either without manifest occasion, or else by some accident, are verie much holpen with the powder of galles wel brayed in a mortar: so are they likewise by the iuice of horehound, wherein hath bene steeped the soote of a smithes forge.

In the diseases of the flanks wherewith oxen are oftentimes tormented: you must make a cataplasme of three handfuls of the seed of the flanks coleworts, with a quarter of a peck of starche well pouned together & mingled with cold water, applying it afterward vnto the pained places. But the most soueraigne that may be found, is: to take of the leaues of cypresse without the boughes, three handfuls, and to doe as is abouesaid, adding thereto strong vineger to knead and dissolue the same in. But if this will not, then take three ounces of perrosin, or colophon which is more hard, and dissolue and make them liquid at the heate of the fire: and whiles it is yet good and hot, mixe therewith the flower of barley, and make it all boile together, and so you shall apply this cataplasme verie hot vpon the flanks and so vp to the raines.

It is to be knowne that the oxe hath paines in his reines when he seemeth to draw his hinder partes after him, and cannot lift his legges behinde for his best ease; he staggereth and solteth behind; he beareth not vp his taile, but suffereth it to draw all along after him; his stale hath an ill sent, and all his hinder loynes shew heauie, mooue not but constrained, and that in mincing manner. If there be any inflammation about them he pisseth red as blood. If this continue and that he cast forth much such, there is then no more remedie: but and if it be but a little coloured with blood, there is some hope of recovery.

For

For this disease you shall cause him be let bloud vpon the taile veines behinde, or else of the veine called the mother veine, which is found alongst the flanke, to draw neere vnto the reines. For his drinke make him to take the iuice of leeks with warme water, or else his own vrine.

Inflammation.

For the inflammation of the muscles aswell outward as inward of the reines and flanks, which commeth of some fall that the beast hath taken in some hard and stony place, and which hapneth not without the company of a contusion, appoint that the ox which hath fallen, so soone as he commeth into his house, do not remooue from one place, bathe the hurt part with cold water: after that vie and applie vnto it comfortable liniments and seared clothes which may not be too hot. The markes of this disease are, the outward parts ouer against the reines are hard, the cuds hung short being gathered into the body, and that in such sort as that there is not much of them left out to be seene; he stirreth not his hinder legs with any ease: and when he is laid, he riseth not but with very great paine.

Paine in the heele.

Of very great cold gotten by hauing trauelled in snowie and frozen places; or else after some thaw: the fault also may be committed in not hauing his pasterns so well bathed with vrine, and couered ouer with dung as they should at euening after his labour: for vpon these causes the heele groweth exulcerated, and maketh shew as though it would fall off and loose his place; there beginneth a bearing out, which afterward turneth to an vlcere, and troubleth the gate of the ox: the place must be very deeply scarified, and a light fire applied afterwarde to the places scarified, and againe vpon the places so scorched the sweete ointment, otherwise called ointment of roses, with a defensatiue of vineger and water, and so bound vp and rouled. The core once fallen out, the place must be washed with vrine and vineger made hot: after this there must be an emplaster or cataplasme of melilot made, either of the fore appointed, or of olde swines grease, wrought and plied betwixt your two hands.

The cuds swollen.

If the cuds be swollen vpon any occasion whatsoever, you shall anonie them euening and morning with sweete seame, or else bath them with strong vineger, wherein shall be tempered fine fullers earth, and the dung of oxen. Some holde it for a naturall remedie to haue the dung of a dogge to cure the swellings of an oxes genitories, if so that they be often rubbed therewithall.

The incubited or bewitched ox.

The ox is enchanted aswell as the horse, either by hauing eaten, or by hauing passed vnder the crosse of a charmed straw, or ouer a marked log: the signes are, he becommeth sad and not so cheerefull and quicke as he was wont at his worke, yea he consumeth and pineth away, if there be not provided for him a very good remedie; cause him to take downe through his nostrils; bitumen iudaicum; brimstone, baie berries or iuniper berries, all mingled with warme water. So

So soone as you know that the ox is sicke of any disease whatsoever it be, cause him to take this purgation, the root of the sea-onion, of haits thorne, and of common salt, all being boiled in water & taken in the same water warme, and giue him nothing to drinke or eat vntill it haue done purging. And to the end that you may keepe him from being sicke all the yeere, at the beginning of the Spring, Summer, Autumne, and Winter, cause him to take downe a drinke made of the leaues of capers, mercurie, and cypres pouned and mixed in water, and let rest in the vessell one whole night, and so continuing this for three mornings.

If he haue beene bitten of any adder, scorpion, or shrew, or mad-dogge, it is ordinarie to anoint the wound with oile of scorpions, or with sope tempered and softened in vineger: also some vie to wash them with the decoction of butter-burre.

And against the stinging of hornets it is accustomed to rubbe the place with ceruse tempered in water, and some doe sprinkle the place of the ox his feeding with the decoction of bay-berries, thereby to cause the ox to auid and keepe away; or else they rub the oxen themselues with the said decoction: and if he be alreadie stung, some do moiten the place with the oxes owne driuell.

The small beast abiding in the grasse, called of the Latines *Buprestis*, and resembling in some sort the beast which the French-men call *Fonillemerde*, if it be eaten of oxen, kine, or horse, as they feed in the medowes, it so swelleth them as that they burst and die, as we haue obserued in many in the yeere past 1572. Now if the Neatheard doe perceiue that any of his oxen or kine haue eaten any of these beasts, he must make them presently to drinke some cowes milke, or the decoction of dry figs, or dates in wine, and withall giue them very strong clysters.

For the scab, some rub them with bruised garlecke, sauorie, brimstone, and vineger of galles stamped in the iuice of catmint, or horehound and iuice. And as for vlcers they are rubbed with mallowes stamped in white wine: and as for cornes and apostumes they must be killed with strong leauens, onions, lillies, or squils and vineger, and afterward to digge them out and wash them with the beasts owne stale hot, and also put into the hollow places tents of tarre, and finally linte dipt in goats or oxes sewet.

For the paine of the eyes, if they be swollen and puffed vp, there must be made an cie-salue of the flowre of wheat kneaded with honie and water.

If there be in them euer a spot or naile, you must take sal-armoni- Spemacke, and make an ointment thereof with hony.

When the ox hath his cie continually trickling downe teares, and beraeth all his cheekes with the humour dropping downe from it.

it, take of the pappe that is made with wheate flower, and make a cataplasme to be applied vnto the eie. The wilde poppy, stalke and root stampd with hony, serueth to make a medicine for this purpose.

Paines of the flanke.

In the paines of the flanks which often times torment oxen, you must make a cataplasme of three handfuls of colewoort seede, with a quarter of a pecke of starch well stamped together, & tempered with cold water, & after apply it vnto the parts pained. The best remedie that can be found for them, is to take of the leaues of cypres without the boughes three handfuls, and to doe as before, adding to them strong vineger to worke and dissolue them in.

Paines in the reines.

In the paines of the reines, you must let him bloud in the veines vnder the taile behinde, or else the veine called the mother veine, which is found along the flanks drawing neere vnto the reines: for his drinke giue him of the iuice of leekes with warme water, or else with his owne vrine.

Scabs and lice.

For the scab, you must rub it with his owne stale, and with old salt butter, or anoint it with petrosin melted in white wine. Vnto lice, you must vse the decoction of the wilde oliue tree with salt, and you must take away the bladders which he hath vnder his toong. For the paine of the lunges, some make him drinke the iuice of leekes with sweete white wine: and some put into his care the root of hazle tree.

Difficuly and hard fastning of his breath.

For the difficultie of breathing, some doe pierce his eare, or the great skinne of his throat, with the root of beare-foot, or lions-paw, or hellebor.

Shoulder pitch.

If hee haue his shoulder pitcht and shrunked, you must let him bloud vpon the foot behind and on the contrary side: and if both his shoulders should be shrunked, then you must let him bloud on both his hinder legs.

The necke broken.

If he haue his necke broken, and the chine bagging and swolne, you must let him bloud vpon one of his eares: and if it be in the midst of the necke, then of both, and lay vnto the discaise an emplaster made with an oxe marrow and sewer of a male-goat, molten in equall portions in oile and tarre, or melted pitch, as alio to rubbe the swelled part with a collop of bacon without any fat, and which is of a hogge, and a litle heated, and this to be continued morning and euening, the space of fve or six dayes.

Swollen feet.

If his feet swell, you must apply vnto him a cataplasme made of the leaues of the elder tree, stampd with seame made of hogs-grease.

The skin cleauing to the bone.

If his hide cleaue to his bones, you must bathe him with wine, either alone, or mingled with honie.

The halting oxe.

If he halt by taking cold on his feet, you must wash them with his owne stale, olde and warme: if it come through abundance of bloud falling vpon his pasterne and foot, it must be dissolued by rubbing it hard

hard and scarping it. If yett it will not away, and be not withstanding but newly fallen downe, you must cleaue the horn of the hoofs at the tippe thereof euen to the quicke, and so cause it come forth, and wrap his pasterne in a leacher pouch, in such sort as that the water may not hurt him till he be whole. If he halt by reason of some sinewe hauing taken a blowe by some other beasts heele, then you must bathe his legs with oile and sale. If it come with any swelling in the knee, you must bathe it with vineger made hot, or with the decoction of millet and lincede. In all such haps you must burne with a hot iron the part diseased, and then put vpon it fresh butter washt in water and vineger, and after in the end to make an ointment with salt butter and the greafe of a male goat. If it grow vpon anie splint or dash against any stone of stocke, you must bathe the place with hot stale, and lay vpon it old hogs-greafe melted in oile and tarre. And there is nothing that will more keepe them from halting then to wash their feet with cold water so soone as they bee vnyoked, and after to chafe them with old hogs greafe.

If the horne cleaue or shiner, you must first foment it with vineger, salt and oile mingled together: after put vpon it olde swines greafe melted with new pitch, or else to greafe it there with speck-greafe for fve or sixe daies, for this will stay the cleauing of the horne, and make it close and fast where it was shinered or any way fundered.

The horne cleauen.

If an oxe doe put forth new and yong claws, his hoofs being fallen off, then make an ointment with an ounce of turpentine, an ounce of honie, and as much of new waxe, and therewith you shall annoint the claw for the space of fiftene daies: after that wash it with warme wineboiled with honie: or else applie thereto a cataplasme made of aloes, honie of roses, and halfe an ounce of allome made in powder.

The hornes of his hooves fallen off.

Buffles or wilde oxen called busses, are better for drawing of a load, then in the turning of the ground: for they are neuer so free, nor yet so stoutly standing to their worke, cleane contrary to the oxen of France which are fitter for the tilling of the ground then for the cart, as being more strong, more nimble, and fitter to toile so great diuersitie of groundes, as we haue in France, whether they be mountaines, tops of hills, vallies, voided fields or plaines: to be breeke, where ground is soft, rough, light, hard, white, blacke, and of diuers natures. In Italie about Pisa and along the Marene (as it is there called) their busses, of which they haue great store, are employed in draught, being fastned by couples one after another to the number of twentie or thirtie together in one reame: the cheefe which is made of the milke of the females, and turned round, is of an vnfauoury taste, but when it is cut in slices and fried in a pan it is saourie. Wilde oxen, which are called in Provence and Languedoc brans or branes, are not fit for anie thing by reason of their great furiousnes and wildnes, except onely for

Busses or wilde oxen.

Oxen called Brans.

the shambles: such oxen are brought vp in the fennie places of *La-
marque* and vpon the sea coast, far from the haunt of other beastes or
walke of man.

As also the bull which is brought vp in the pastures of villages,
and keeping among the herdes of other beastes, and acquainted with
men, is not good or profitable for the plough, for that he is too sturdy,
and will not match himselfe with gelded oxen. Neither yet is there
any great good reaped of the labour of a gelded cow: but you must
keepe and fat the bull by himselfe for the kine, which shall be put to
take him about the moneth of May, Iune and Iuly, and one bull
is enough for threecore kine.

The oxen intended to be kept to be fatted & sold, shal not draw but
some once or twice a weeke, & that when it is faire weather and a good
season, and that the earth is easie and gentle, and they shall meddle
but with little burdens, onely to exercise them: and they shall eate
nothing but barlie, hay, and sheaves, and sometimes the yong buds of
vines, and others such as they loue: and that ox which hath wrought
in the morning shall rest at afternoone. The auncient Romanes did
fasten some small quantitie of hay to the hornes of such oxen as would
strike with the horne, to the end that all that met him shoulde take
heede. And hence riseth the French prouerbe: He weareth hay on his
horne, pointing out a hot & wrathfull man, in as much as oxen, horse,
asses and men themselves become fierce and outrageous, by being
ouerfed, and eating their full according to their harts desire.

When as once the farmer doth perceiue that his draught oxen is
vnfit for labour, he shall feede him sometime not letting him doe any
thing, after which he shal kill him and salt him in peeces, for the yeere-
ly nourishment of his familie, and by the same meanes shal referue
the marrow and the gall of the ox for his seruice and vse when hee
shall haue neede. For the marrow of the ox doth very much good in
resoluing and softning hard tumours. The gall of the ox is yet better
then that of the bull, it doth thoroughly heale the vlcers of the funda-
ment mixed with the iuice of leekes: being dropt into the care it doth
take away the buzzing of the care: being rubd about childrens na-
uels it killeth the wormes: being mixt with honie it is good for the
inflammation of the throte: mixt with the iuice of beetes and drawne
into the nose, it putteth away the fit of the falling sicknes: it is more
profitable then any other thing to giue a yellow die and colour vnto
skins and brasse: being scattered and sprinkled vpon seedes, it maketh
that the reaped corne will not be deuoured or eaten with mife.

There is sometimes found in an oxes gall a stone of the bignes of
an egge, and of a yellow colour: which giuen in drinke is very good
against the stone and iandise, applied vnto the nostrils it maketh the
sight more cleere, and hindreth the falling downe of rheume vpon the

the eyes. In like manner husbandmen may doe themselves much
good by the vse of neares dung: for it cureth the stings of bees,
resolueth swellings and all manner of tumours, mitigateth the paine
of the sciatica, and maketh a great deale lesse the swelling called the
kings euill, mixt with vinegar: it wasteth tumours coming of a
dropsie, being fried in a pan, with the flowers of cammomill, melilot,
and brambles, and applied vnto the swolne testicles, it restoreth them
vnto their naturall proportion and bignes.

The fower and twentieth Chapter.

Of the hogherd.

OF all the cattell that serue for foode, the most rauenous, the
most filthie, and the most harmefull (that is to say the swine) is
had in great estimation and much commended amongst vs for
the sweetnes of the flesh, whiles yet it sucketh & is yong, both for the
fouet and salted partes thereof, as also for the larde, the skin, and the
bristles thereof. The rauensouines and greedie feeding of this beast is
witnessed by the sowe which the French king killed in hunting, within
whose bellie were found sixe pailles full of grapes. Their filthines and
stench, their wallowing of themselves, their eating of stinking and fil-
thie things, as also the harme that they doe, may be answered and
prooued by their rooting vp and widermining of wals by the foote
and bottome, the trampling which they keepe about trees, meadows,
and vnsworne places. For this cause in a farme of great reuenues (such
a one as we describe in this place) there needeth a speciall man onely
for that purpose, to gouerne and guide them in the fields: euen such a
one as knoweth to dresse and order his herd in good time, and in
cleane and cleanly sort to put the pigs that are wained in one place
with the bores and hogs: and the sowes with their yong ones into a
second place by themselves; and yet further, the sicke and diseased
into a third particular place by themselves. Fresh straw oftentimes
giuing them and renewed, doth fat them as much as their dreare: and
you must take care that their troughies be alwaies cleane, and against
variable weather the hogherd must haue in store much acornes, Swines meat,
beanes, crabs or wilde peares, or some other rotten fruit, or some ma-
ner of pulse, or some washings of vessell: and for want hereof some
steep barlie together with bran and colewortes, or boiled turneps, or
great nauets, to offer vnto them: and euery day when they come
from the field, let the huswife procure in readinesse for them, some
daintie hot meate, as whay, the droppings of the cheefe mingled with
bran and water; hauing first had three or fower boiles together: for
besides that this good attendance wil cause them to make haste home
and not to forsake their companie to run straggling abroad, when the

hogherd would haue them to come home: these hot drinke and meates doe also heate the colde meates, which they shall haue fed vpon in the field all the daie long, and thirdly they will rest better in the night, and lastly not become so subiect to diseases: and let there be speciall care had that their meate be not cold nor too thin, least it cause them the fluxe of the belly.

Let the floore or pauement of their cote be laide with thicke paving stone, and every moneth renewed with grauell or sand to dry vp their pisse, for this beast though he be sluttish and dirtie, doth notwithstanding prosper best in a cleane house that is well kept and maintained. And to the end that the corruption of the aire which this kinde of beast maketh in close places may not cause him to haue either any ill sent or other diseases to grow vpon them in their cotes, especially when they are in any number together: it behooueth that the doore thereof be made with thorough lightes of great barres, or clouen bordes, to the end that their euill aire may passe away, and that which is good may come in place continually, and it is meete that the doore should giue downe verie neere vnto the causey, to the ende that they may not lift it vp with their snouts, and cast it off the hinges: for this cattell can hardly indure to be shut vp, but gnawe and bite with their teeth, whatsoeuer it bee that hindreth them from comming forth where they are inclosed.

The hogs which you intend to keepe in and to fat, shal not come forth of their sty being alone and free from others, neither shal they haue any light but at the doore which is made to go in at for to dresse them. The care about them is not so great as of other cattel, excepted onely the keeping of them cleane, and knowing how to make them good meate, so long as will they be fat, for after that they will euery day leaue some of their meat, not stirring out of their place, as though they were without feeling and power for to moue, in such manner as that though the great height of farnes that they are growne vnto, and the thicknes therewithall, myse may sometimes make their nests vpon their backs, and yet they not feele them, for they are sometimes seene to heape such quantitie of fat vpon the liue flesh, as that there are some hogs found a foote and a halfe thicke of lard.

Keepe not aboue ten boares for a hundred sowes, and so forth proportionably: the rest as well males as females let them be wained, and gelded after a yeere old, or sixe monethes at the least, howbeit the most infallible time & opportunitie is, when they begin to growe hot and go a brimming. Suffer not aboue eightene pigges ordinarily to sucke one sowe, but sell the rest at eight or ten daies old: and a yeere after waine and geld the rest, and so put them to the field: keepe those especially which haue a short and broad head, the snout set high and long without, the brest fat and broad, the chine of the necke large,

large, his feete short, his thighs greas, and in shereft very short, grosse, square, and well packt together, of colour blacke or white, and full of bristles vpon his backe, for to make bores: and those which are very long, side bellied, great headed large buttocks, and sides giuing out, likewise all of a white colour, a small head, and short legs, for your sowes: of the rest make prouision for the house.

Let not your gylt go to bore, till she be past a yeere old, and let the bore be betwixt three and fower: for after he be past fise he must be gelded to be fatted. The time to put your sow to the bore whether it be to breede, or to put vp to feede, is best in the first quarter of the moone, and vnto the full, for before it is not good, no more then it is in the old of the moone: and it shall be from the beginning of Februarie vnto mid March, or a little after, to the end that in Iune, Iulie, and August, your pigs may grow to haue some strength, and may be well growne and thicke of haire by September: for winter pigs are hard to reare, and not so kinde as the other: because this kinde of cattell is more chill then the others, which is the cause that in many places they haue their cote and stie provided and dressed with lime and strawe, although they haue sufficient store of stone, lime, sand and plaster: you must also beware that the bore keep not companie with the sowes that are with pig, for he would but bite them and cause them to cast their pigges.

This beast is a great eater, and cannot indure hunger, especiallie the sowes, which in this necessitie haue bene seene sometimes to eat their owne pigs, and those of others, as also children in their cradels, which is no small inconuenience: and therefore you must haue care that their troughes be neuer emptie.

For to make hogs very fat, you must geld them. It is best to geld them in the olde of the moone, in the new, or in the wane, and in the spring or September, the time being temperate. If you gelde them yoong, the flesh will be the better, but then they growe not so much: if you geld them growne somewhat bigge, they growe a great deale more, but then the flesh is not so good: and therefore it will be good to do it when they are betwixt fower and sixe monethes old, and at the most not to go aboue a yeere. They are subiect vnto many diseases, and the hogge is knowne to be sicke when he hangeth the eare very much, and doth become more slowe and heauy then hee hath bene accustomed, or that he is found to be without appetite: for your better certaintie when there do not appeere any of these signes, pull from him against the haire a handfull of the bristles of his backe: if they be cleane and white at the roote, he is sound and healthfull: but and if that they be bloudie or otherwise spotted, he is sicke.

But he is subiect especially to be meazled, because of his much and filthy feeding, and this is the cause why some do search the rootes of

his tooing, & others behinde the eares, when he is carried to the markets to be sold in faires or in good townes. And I thinke that this was the cause why our forefathers made it not an ordinarie thing to eate, and that the Iewes do abhorre to eate it at all. This disease is not cured but with great difficultie, notwithstanding it will in some sort be cured, if his stie be euery day made cleane: if he be suffered to walke and go into the fieldes in the fresh aire: if he be caused to bathe or wallow himselfe oftentimes in sea water, or salt water: if he haue baie berries beaten and mingled amongst his meate: if there be giuen him the drosse of the wine presse mingled with branne and leauen. Now there are three infallible signes to know the swine to be meazled, as if there be found vnder his tooing blackish pustules: if he cannot carry himselfe vp right of his hinder legs: & thirdly, if his bristles puld off his backe shew bloudy at the rootes. Likewise for that the hog, by reason of his filkhines, for the most part hath one fault or other betwixt his skin and flesh, how sound soeuer he bee, it is good after he be killed to haue his haire swinged off with straw, rather then to scald them off with hot water: for the fire doth draw out a great deale more easily then warme water, that whatsoeuer it is, that may be betwixt the skin and the flesh.

He is also subiect vnto the paine and swelling of the spleene, and to the murrain, which in contagious times, doth a great deal the more easily seaze vpon foule and filthie bodies, and such as are of a badde feeding.

Against his want of stomacke to his meate, it is vsed to cause him to fast a day and a night close shut vp in some darke place, that so he may waste his superfluous humours and fall to eate his meate againe.

For the ague he is to belet blood in the taile, and for the rhume & swelling of the kernels of the necke, or yet when he is but suspected to be meazled, he is to belet blood vnder the tooing.

For paine and swelling hapning vnto him in the time of frutes, when there is great store, & that he feedeth his full vpon the rotten: he must be caused to eate old capers well scoured from salt through bran and water: as also much coleworts as well red as others, and some doe make him a speciall meate of tamariske.

For the scabs and kernels of the necke, some vse to rub him with beaten salt with the flower of pure wheate:

If he haue eaten of henbane, which ancient men haue called the hogs beane, or else of hemlocke, he must be made to drinke the decoction of wilde cucumers well warmed, for to cause him to vomit.

He must about all other things be well kept with drinke in the time of the dog daies, and other such hot times, and to suffer him to moile and tumble in the dirt at his pleasure: for thirst causeth him to become poore and leane and in weake estate.

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The Egyptians do greatly honor the swine, & giue him manifold thanks for hauing first shewed them the maner of tilling the ground, by cleauing and cutting of it with the forepart of his snout, and as one that by litle and litle hath taught them to make the ploughes culter: in like manner they which dwell in low and soft places along by the riuer *Nilus*, haue no increafe of the earth but what they toile and labour out of the same with the plough: but the peasants do nothing but put their swine into their fields and goe after them with seed, and because that swine haue the gift to dig vp the earth with their snouts, and to tread in the corne with their feete, they vse them to ouerturne all their ground out of hand, and so to couer the seed; which the countrey people haue cast vpon the same.

Furthermore, the good housholder besides the good prouision that he shall make for himselfe and his family of the porke cut in pieces and well salted in his larder; shall further gather his greafe for the axe-trees of his waines and carts. Againe, the good huswife shall make her profit of it in like manner for the diseases of her family, in as much as it is verie good to draw to a head all sorts of apostemes being mixt with leauen, as also to heale the moulds of the heeles, if the powder of galles be mixt therewithall, and the ashes of the flower of barley.

It is vsed in a common prouerbe, that the swine hath nothing in him but it is good, his ordure and dung excepted; but experience sheweth the contrarie: for the dung of a swine fried with fresh butter and equall quantitie of lumps of cluttered blood spet out by him that bleedeth abundantly, being giuen to the partie so bleeding to eate, doth stay and stop presently his spetting of blood.

It remaineth that wee declare how we ought to salt swines flesh. To powder All manner of cattell (but especially the swine) which we intend to vse for meat, must be killed in the new of the moone or in the first quarter. For if you should kill it in the decrease of the moone, looke how much the longer you defer to salt it, so much the more time and fire must it haue to boile it, when you should vse it; and for this reason a sauidge or such other like meate doth become lesse by a quarter when they are boiled. For this cause also it is that the skilfull husbandman will not buy these kindes of beastes to make his prouision of, if he be not sure that they were borne in the increase of the moone: For otherwise also they doe grow but litle, and their flesh is not of sufficient waight when as one hath kild them. Kill therefore your swine in the increase of the moone, and let them not drinke the day before you intend to kill them, that so their flesh may be the more drie: for and if they drinke the salting time will haue the greater quantitie of superfluous moisture to drinke vp: also the flesh will be the better if they be kept fasting but one halfe day before they be kild. Now when you

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haue thus killed them in their thirst and halfe famished, it shall be for the best to take out as many of the bones as you can, for this wil cause the salting to be of better effect preserving the flesh the longer from corruption. After cut the flesh in pieces and put it into the salting tub, making as many beds of salt grossly braied as there is of flesh, the one above the other. And when the salting tub shall be in a maner full, you shall fill vp the head with salt, and presse all downe together with verie heaue waights. Some put these pieces and the salt within a table-cloth, or within a sacke that hath two mouthes, and shake it vp and downe therein that so it may take salt in euerie place, and afterward lay it orderly in the salting tub, drawing salt vpon euerie bed. In some countries they vse not in such sort to cut it in peeces to cause it to take salt, neither doe other some put it in salt brine in a close powdring tub: but after that they haue made it into pieces, they deuide all the larde in two, and salt these two halfes all of them, making the salt to pierce and enter into them with a rowling-pinne: and this thing is not done at one time, or in one daie, but at two or three times, and in two or three daies space: after they hang them to the iouice of some boarded floore, or to the crookes set vp in some vaulted rooffe, if so be there be any vault: and the lard thus salted is more fast, of a better taste; and if it fall out to be long kept, and to passe a yeece, it groweth to be of a golden colour, so it is better to salt and keepe it thus for them which desire to haue that which is excellent good, rather then after any other fashion that hath bene spoken of heere-tofore.

The fiae and twentieth Chapter.

Of the shepheard.

IF the greater part of the profit of a farme depend vpon and consist in the keeping of cattell, which is performed by that part of increase which the farmer spareth in his fodder, siftings, ridlings, and such other things which cost him nothing but the paine to gather and lay them vp: then I dare be bold to auouch it, that the most profitable and fruitfull prouision for the countrie house is of such beastes as bring forth wooll. It is true that there must all diligence be vsed to keepe them from colde, from the purples, from the scab, from two much ranknes of blood, from the rot, and other such inconueniences, as sometimes spread and proceed from one to another, and that hee hath likewise care and doe his whole indeuour, in keeping them both in the fieldes and at the cratch: but it is as true that there riseth as great profite and commoditie to the farmer. For besides the dung which they make, and which exceedeth all other kindes of dung in goodnes, for the great substance, strength and hartning which it gi-
ueth

ueth vnto the grounde, they bring yet infinite other commodities: as by wooll, whereof are made cloth, hats, caps, and manye other stufes: by their fells which serue for furre or for leather: by their milke, whereof are made cheeses verie excellent, as may be seene by those which the towne of *Bernne* doth afford; and finally by their flesh, which is so good and excellent of it selfe, that no continuall vse of it doth euer make it the lesse pleasant in the eating; so that for certaine it may be saide of it, that if the flesh of this beast were as scarce as that of the fawne, hinde, and other venison, it would be the onely venison of request before all other in the world. And this further is to be seene and obserued for a rare and singular commoditie, in all the foresaid things proceeding from these cattell that bring forth wooll, and not lightly to be passed ouer of the husbandman: namely, that there is not any one of them which is not alwaies readie, and of present employment, and whereof there are not moe buyers then sellers, so that the husbandman needs not doubt of any long staying for the sale thereof. For first of all the dung is in employment the verie first hower: the wooll no sooner shorne but it is greedily catcht vp; and so soone as the mutton is flead, you haue a cheapman for the flesh, and an other for the fell. The cheefe will either serue you at your table or else the marchant. But and if you bee not disposed thus to retaille the severall commodities of this beast, you shall finde chapmen to buy them in grosse: which is yet more, if you be not able to abide vntill they bee full growne, and in their ripest season, to bee made money of; yet then may you finde to content your selfe and procure pence by selling away such of the lambes as may be culled out of the whole flocke. Let it not then seeme strange if we teach the good husbandman, that he attend and haue a speciall care ouer his sheepefold, and that in a higher measure then ouer any other of his cattell. Wherefore he shall set his sheepehouse in the highest part of his court, right in the face of the South sun: to the ende it may bee the lesse annoied with moisture, and more open to a wholesom aire which shall be of such length, as that his flock may haue roome therein without treading one vpon another, setting it round about with mangers or sheeperacks of a low pitch for to fodder them in. There shall be a floore of sawed boordes betwixt the sheepe roome and the rooffe, to the ende that they may be the warmier in the winter, and that the snow, which may bear in at the dore, doe not fall downe vpon their fleeces, and so melting with their heate, pearce downe vnto the skin and make them colde. Hee shall haue a sheepeherd for to guide them, which shall be gentle, louing his flocke, nimble, of a loud voice, and able to whoop well, given to make pannes, able to reckon, and by nature inclined to good, and honest things: for there are but few of this profession now adaies (especially in these times)

The profits of sheepe and mutton.

The setting of the sheepehouse.

The care of providing sheepe and the profits thereof.

and cities) but that by their slothfulness and great leisure, doe give themselves to some euill deuises, practises and malice, rather then to the good and profite of their masters; so that of them ill disposed, we daily see to inue and grow many thefts, filching and pilfering pranks, outrodes, witchcrafts, and infinite other mischiefs. On the contrarie, the first shepheards of Egypt and other places were the bringers to light of Astrologie, Physicke, Musicke, and many other liberall sciences: and I know not whether I may father the worthie arte of warfare vpon them or no, as also policie, principalitie, and the gouernment and welding of kingdomes: for sure I am that they did intrench themselves in the field, and there liued vnder cottages, and cabines made of boughes many yeeres, obseruing at leisure the courses of the starres, the dispositions of the seasons, and by long vse and obseruation, marking the goodnes and prosperoufnes, as also the inconueniences and hard succelles of times, in such sort, as that of the shepheards of those times came and sprung, the men of deepe knowledge and vnderstanding: the hieroglyphicks may witnes the same. To conclude therefore, there is great care to be had in the choosing of a good shepherd.

But I vnderstand and set downe with my selfe that a good farmer to the end he may haue a faire flocke of sheepe, doth buy them yalhorne, not hauing a graie or spotted wooll partie coloured, because of the vncertaintie of the colour. Hee shall reiect as barren, all such as haue teeth of more then three yeeres, and he shal make choise of them two yeeres, hauing great bodies, long neckes, long deepe wooll, silken, small, and bright shining: great bellies, and couered with wooll, great paps, great eies, long legs, and a long taile. Hee shall much esteeme the ramme which is tall of body and long, which hath a great belly and couered with wooll, a long taile, and a thicke fleece, a broad forehead and thicke set with haire, blacke eies, and beset with strong wooll, grosse stones, large loines, great eares and couered with wooll of one colour, not diuerse coloured in any part of his bodie, well horned, and notwithstanding but small hornes, writen and turned backe rather then streight and open, his toong and palate white, to the end that the lambes which he shall beget may haue their fleeces all white: for if he should haue it all blacke, or else bespotted with blacke vnder the toong, howsoeuer he may be of a white wooll, notwithstanding the lambes which hee shall ingender will haue mingled and spotted coates, either with blacke or graie, and so by this meanes will become of lesse account and profite. Although the horned ramme hath this discommoditie, that finding himselfe armed by nature, he seeketh to do nothing more then to fight, and is so much the more earnest with the sheepe, vrging them mightily thereunto: notwithstanding, he is much better then one without hornes, for hee knowing

knowing himselfe without hornes is not so ready to fight, and is also lesse hot by nature. Now the shepherds are wont to bridle and correct the heat and furie of a ramme that is too headie and disposed to fight, by binding to his head a good strong board, stricken full of naile points on the side toward his forehead: for such a one wil keepe them from pushing one at another, seeing they cannot iurre but that they must hurt themselves: or else they bore their hornes through, neere vnto the eares, for so are some shepherds accustomed to do.

The sheepecote, as well as the swinecote, shall be paved with paving stones, and made to hang ouer the court towards the dunghill pit, where must be set some rosemarie of Beaux, in respect of the smell of the sinke, conueighing their pisse: it must be situated (as hath bene said before) vpon the south: for these cattell howsoeuer they be well couered by natures worke, are notwithstanding such as cannot indure or away with colde, and as badly can they abide the heate of sommer: and therefore they must haue made for them a long house, very low, and sufficient wide. The situation of the mangers shall be about a foote and a halfe from the floore, and there shall bee high, straight poles, and set thicke, made fast vnto the said mangers, that so the sheepe may be kept from going on the other side of their racks. The shepherd shall keepe his racks and hurdles for voided rooms, and making of separation betwene roome and roome verie cleane, and he shall also make them so fast, as that they may not in any case fall, and that so the rams may not go vnto the ewes, nor the lambes vnto the diseased sheepe. He shal be careful to make his ewes take ram after the first two yeeres, for the space of the next five after insuing: for when the seuenth yeere is once past, they begin to faile and wither away: and againe, the female taking ramme before she be two yeeres old, bringeth forth a feeble and a weak brood without any strength; but and if she bring forth before that age, you must sell her lambes: the ram that is to ble some ewes must not be vnder three, nor about eight: one ramme will serue to ble some fiftie ewes: the time most fit to couple and put them together, is about the winter solstice, which is in the month of Nouember, to the ende that the ewe which goeth with lambe five monethes may lambe in the spring, in which time she shall find the grasse beginning to spring, & so shall returne home with her vdder well filled, to suffice for the feeding of her yoong, which will be growne to good perfection by Easter; at which time the butchers will be readie to buye them. Furthermore, for some daies before that the ramme and the ewe be coupled together, you must giue them to drinke salt water, so the ewe will hold better, and the ramme will be the more lustie: but after that the ewe is with lambe, you must not let her drinke any such water, because it would cause her to lambe before her time. If the farmer desire to haue many weathers lambes,

it will be good according to the counsell of *Aristotle*, to obserue and spe out a dry time when the northerne winde bloweth: and then to cause the flocks to feede drawing directly vpon the same winde; and in that very time, and after that sort so make the ewes take ramme: But and if he woulde haue many ewe lambes, he must draw them to feede vpon a southerne winde, and so let the rams couer them.

The lambing of ewes.

When the ewe is in lambing, care shall bee had to helpe her if neede require, drawing the whole lambe out of her bodie, if it lie ouerthwart and can not come forth. For this poore bealt is pained in lambing as women bee in bearing of their children: and oftentimes (being voide of reason) shee trauaileth with much greater paines. The lambe being come forth, it must be lifted vp and holden right, and afterward put to the teates of the ewe, thereby to vse it to suck the dam, and yet not so forthwith, but that there be some of her formost milke drawne out first, which otherwile might hurt the lambe. Afterward it shall be shut vp with the dam for the two first daies, after that it is lambed, to the end she may keepe it the warmer, and it may the better learne to knowe her. In the meane time care must be had to feede the ewe with the best hay that may be found, and with a little bran and salt amongst, to keepe her in a house very fast and sure, and not to suffer her to goe forth of three or fouer daies: to carrie her water to drinke a little warme, and wherein is mixed a little of the flower of miller and of salt: to drawe from her her first milke, because it is not good. And so soone as her lambe shall begin to know her, she may be let loose to goe feede in the fieldes, and to keepe the lambe fast in a warme and darke house, vntill such time as it begin to play the wanton; out of which house it shall be let loose morning and euening to sucke the dam at her comming home and going to the fieldes. And after that it shall be growne a little stronger, you shall giue it within house some bran or very small hay, and that the best that is to be gotten, to keepe it occupied with al the time that the dam is in field.

What lambes are to be kept for the furnishing of the flock.

The wise shepherd will not keepe for to store his flock, any other lambes then such as are the grossest, most corpulent and strong, and which will well be able to hold out winter, and as for the rest he will learne them the way to the towne to seeke a new master: he will be alwaies sure to keepe a good round number to vphold and renew the losses that may fall by death or by sickness.

To geld lambes.

The wise shepherd will not geld his lambes, till they be betwixt five and sixe monethes olde, and for to geld them he shall vse the meanes set downe in the gelding of calves. In winter he shall fodder them with the best sheaves of corne in the barn, and he shall rake together the scatterings which they make from time to time, which after will serue for litter for the kine and horse.

For

For want of corne sheaves he may fodder them with the greene *Fodder for* boughes or leaues of elmes, or else of the ashe tree, gathered in their *sheepe* season, or with autumnne hay or the after crop. The tree called *Cytisus* is good for them, if it may be found in this cold countrie, and being a thing so much desired and sought after of the goates, as they who by the vie thereof are made fruitfull in milke, so likewise is the fetch: notwithstanding the straw of pulse will be necessarie for them when they cannot haue any other thing, but that all other manner of fodder is gone and not to be come by.

As concerning the time when they are to be led forth to feeding, *What time* in winter, autumnne and spring time, you shall keepe them close in the *sheepe should* morning, and you shall not carrie them to the fieldes, vntill the day *be caried to* haue taken the frost away from off the ground: for at these times the frozen grasse doth beget in them a rheume and heauines of the head, and looseth their bellies. In sommer he shall carrie his flocke to the fresh pasture by the point of day, when as the tender grasse is covered with the dew; and toward noone he shall looke out either vaultes and hollow places of the earth, or else the couert and shadow of some thicker, to keepe his cattell from the heat of the sunne: or else some old oke stretching forth his boughes, or the Forrests and place of tall timber trees which giue a shadow. And in as much as this bealt is very tender about the head, and is greatly offended by the sunne, he shall be carefull in sommer during the great heate, to obserue when the canicular daies begin, that so before noone-tide he may draw his flock to feede vpon the west, and after noone vpon the east. For this is a thing of great moment, that the head of the sheepe which are feeding, be turned contrarie to the sunne, which oftentimes hurteth that kind of cattell, at such time as the canicular daies come in.

In cold and moist weather as in winter and spring time, he shall *To water* water them onely once a day: but in sommer twise, that is to say fouer *sheepe* howers after sunne rise, and at night, after the heate is rebated and well ouer past.

The shepherd shall order and gouerne them with great gentleness, as it is most requisite for all herds of whatsoeuer cattell that it be, *A gentle sheep-herd.* who must rather be and shew themselves leaders and guides of their beastes, then lords. Guiding them to the field, he must alwaies goe before them, to hinder and keepe them backe from running into fieldes where they might feede vpon euill and hurtfull grasse: and especially such groundes as wherein the water vseth to stande, or where the ground hath bene ouer washt with some flood and breaking forth of some riuer, because that by pasturing in such places, they could not choose but in lesse then fortie daies be tainted and die; except they were releued and succoured by some good meanes. He shall rather keepe a white dog then one of any other colour to follow his sheepe, and

and he himselfe also must be appareled in white : because that sheepe are naturally so inclined to feare, as that and if they see but a beast of any other colour, they doubt presently that it is the wolfe which commeth to deuoure them: this dog must haue a collar of iron about his necke, beset with good sharpe pointes of nailes, to the end that he may the more cheerefully fight with the wolfe perceiuing himselfe thereby to haue the aduantage, as also that the wolfe may not take occasion to hang him in his owne collar : if it happen that his sheepe be scattered, to call them in and bring them together againe, whether it be for keeping them out of harme, or to cause them to knowe his call, he must whoop and whistle after them, threatening them with his sheepe-crooke, or else setting his dog after them, which he shall haue trained to doe them that seruice, but he may not call any thing at them : neither may he goe far from them, neither yet take himselfe leaue to lie or sit downe : he must accustome them to two sortes of cries, the one pleasant and shrill to make them goe forward : but to call them backe, to another and diuers cry, to the end that the sheepe hearing these two different cries, may learne and applie themselves to doe that, which is thereby commanded them. If he walke not, yet he must stand, to the ende he may bee as a vigilant watch vnto his cattel, and he must not suffer the slower or those which are with lambe to straggle from the rest or come far behinde them, by hanging back, when the light footed, and such as haue already lambed doe run before, least by that meanes some theefe or deuouring beast deceiue them and come vpon them busie at their meate. He must sometime make them merrie, cheering them vp with songs, or else by his whistle and pipe : for the sheepe at the hearing thereof will feede the more hungrily, they will not straggle so far abroad, but they will loue him the better.

He shall not draw them into any grounds but such as are tilled, and turned, or to the grassie tops of hils, to the high woods, or else such meadow grounds, as are not moist and wet : but neuer into marish grounds, nor into forrests or other places whereas there are thornes, burres and thistles : for such doth nothing but make them itchie and scurue, and to lose their wooll. Also it is not so good fodder, nor so good feeding, which for long time hath bene in continuall vse, for so the cattell will grow wearie of it, and offended therewith, except the prudent shepherd vse some remedie against it, by mingling some salt amongst it, or sprinkle it with brine or dregges of oile, vpon some floore, and so with their meate he should giue them both saue and appetite.

In the high time of sommer, the shepherd shall come with his flocke to their lodging, and shall fold them amongst the fallowes, and there make his folds with hurdles after the manner of the sheepe
cote,

cote, the couering excepted. And at the fower corners of his folde he shall tie his dogge for a sentinell and standing watch, lodging himselfe in the saide folde, within his cabin of woode which he shall driue vpon wheeles to and fro, as he shall haue occasion to change his fielde and folde. Hee shall clense his sheepecote but once a yeere, and that shall be presently after August, or else in Iuly, being the time when his herd is folded, but neuer in Autumne, nor in winter, for then their dung will serue to keepe them warme. And then forthwith the farmer shall cause the same dung to be carried vnto the leanest parts of his lande, and shall leaue it there on hillockes to drie in the heate of the Summer, vntill October, and then to cause it to bespred vpon the ground, or else to mingle it with marle to dung and manure the earth : howbeit marle must not be reiterated so oft as dung, for which cause he must vse such discretion, as that he must not lay any marle but from five yeeres to five yeeres in any place. It will be good after that the sheepecote is made cleane to perfume it with womens haire or harts horne, or the hornes of goates claws, thereby to driue away adders and snakes, and other beastes which oftentimes annoy this kinde of cattell.

He shall procure his sheepe to be shorne the first hot season falling out in the spring, if it be in a hot and southerly countrey : but in the countrey that is cold and not so warme, about the end of Iuly, but neuer in sommer or in winter, and but from eight a clocke in the morning vntill noone, and that in faire weather, without winde, and the moone growing old. Afterward you shall strake the shorne sheepe all ouer their skins with your drie hande, moistned in oile and wine mingled together, to comfort them withall ; and if there be any snips in their skins, you shall applie vnto them melted waxe or tarre with sweete seame, for this doth heale them and keepe them from the scab, and causeth also a finer and longer wooll to growe vp and come in place. To keepe your sheepe in good plight, you shall giue them bay berries drie with salt, beginning presently after they haue lambed, and continuing vntill they goe againe to ramme : by this meanes they will be fat, sound, and full of milke : after they be once with lambe, you must giue ouer that course, least you cause them to cast their lambes : they must not at any time drinke soone after this meate.

Sheepe are subiect to the scab, cough and bloud, which is an extreme paine of the head, and to the murraine. The three last diseases are incurable, and also infecting : for one of them hauing any one of these diseases, killeth the other of the same. And at such times you must change their aire and cote, and withall looke to them there, and refresh them with strawe, giuing them that which is long and small, and perfuming their cote with tyme, rosemarie, iuniper, penniroyall, margerome, balme, coltsmarie, basill, and other sweete herbes many daies

*The clensing of
his sheepecote.*

Shearing-time.

*The diseases of
sheepe.*

*The shepherds
life in sommer.*

daies together: and presently you must giue vnto the other salt with a quarter of a pound of brimstone mingled together, which will putge them and heale them of the infection. These diseases happen them through eating of euill herbes, or drinking of standing water: or for that the place where they feede, hath beene ouerwalshed with some flood or great streames of water; in which case they neuer faile to fall sicke in lesse then fortie daies: wherefore to meete with such inconueniences, the good shepherd must goe euery day before his flocke, and keepethem from going into the fieldes, where he knoweth that there is any occasion for them to incurre any such inconuenience.

The scabs of
sheepe.

Scabs in sheepe.

For the scab in sheepe, you must make an ointment of the powder of brimstone, of the roote of cypres as much of the one as of the other, mixe them with Rhasis his white ointment, camphire, and waxe to make an ointment of: after you haue for three eueninges rubbed the said sheepe, you must wash them with lee, with sea water or brine, and lastly with common water: the very same remedie serueth for the rotten sheepe.

The rotten
sheepe.

For the cough if it continue, you must make them drinke in the morning with a horne the oile of sweete almonds, and a little white wine being warmed together, and giue them fresh straw, and cause them to feede vpon solefoote: for it is commonly in the spring time that they are troubled with this disease: but and if it should happen at any other time, there may a little fenugreece be giuen them beaten with cumin, and of the powder for hories. The herbe called knot-grasse is very bad for sheepe, for & if they eate any of it, all their belly is swolne and blowne vp, frothing out a thinne and verie stinking humour. You must presently let such blood vnder the taile, in that place which is neere vnto the buttocks: in like manner it will bee no lesse good to let them blood vpon the veine which is in the neather and vpper lippe.

Shortness of
breath.
The sheepe
ague.

For a short breath, you must slit their nostrils as is vsually to be done vnto hories: or else cut their eares one after another.

Vnto the sheepe which haue the ague, it is good to be let blood in the heele, or betwixt the two clawes of his feere, or vpon his eares; afterward keeping him from drinking, were it neuer so little. The most soueraigne remedie to cure them of the ague, as also of manie other diseases, is to cause to be boiled in water and wine a rams stomacke, and giue it them to drinke with broth.

The snuell, or
snout.

The snuell of sheepe, as that also of hories, doth keepeth itselfe so close within the lungs, as that neither by blood lettting nor by drinke it can be expelled. The best remedie is to strangle the beast if the disease continue but two daies: for the other as well males as females doe greatly desire and delight in that which these druelers doe leaue vpon the edges of the racks, and lick it away, thereby themselves shortly

shortly

shortly after falling into the same disease. Certaine matters of mules, rather than keepers of mules, say that there must be hung about their necke a toade of the vine whiles she is liuing, made vp in a bagge of new cloth, and so leaue her there for the space of nine daies: others that he must be put to grasse if it be a horse: and one sheepe by it selie in a fencerall pasture: other say that garlicke and fresh sage must be stamped together, and a drinke made thereof with strong vineger, whether it be for horse or sheepe or any other beast: others giue them to drinke a spoonefull of aqua vite with mithridate. There will no other successe come thereof, but the corrupting of the lungs, and the cough which such haue as are rotten. And as for help for this disease, there is not any other, but euen the auoiding of them out of the way.

The cornes which vse to vex and torment sheepe, are healed with allume, brimstone and vineger mingled together, or with a pomegranate whiles it is yoong and tender and no kernels grown in it, being stamped with allume and a very little vineger: or with gals burnt, and the same shaued and put in grosse, or red wine, and so laide vpon the cornes.

Cornes, trou-
bling sheepe.

Saint Anthonies fire, which the shepheards call the flying fire, is hard to cure, because that neither salve nor burning, nor yet any other medicine can helpe the same. There is nothing else to be done vnto them but to foment them with the milke of goates, and iris good to shed and remooue out of the flocke the first sheepe that shall be taken with this disease.

Saint Antho-
nies fire, in
sheepe.

The blond is a turning about called the sturdie, and it taketh them in the times of the greatest heat; so as that thereupon they turn about, stumble, and leape without any cause, and if you touch their head or feet you shall find them in a very great heat. For this you must speedily take a sharpe horn and make incision in the veine which is about the nostrils, and that iust in the midst thereof, and as high as possibly you can: heereupon the beast will presently faint, but come vnto himselfe againe within a short time after, & that sometime to his good, but sometimes (and that doth often fall out) vnto his euill. Some shepherds haue tried the letting of their blood in some small quantity in the temples, and haue found it to ease them sometimes; as otherwise, for such as haue had the cough or cold, they haue giuen a spoonefull of aqua vite with mithridate.

For the blond
in sheepe.

For the plague there is the like remedies for beastes, as there is for men: and I thinke, that this sort of cattell is the more subiect vnto it than any other, as is also the swine in respect of the filthinesse thereof and stinking of the dung. But for the better preventing thereof, it hath beene deuised and thought good oftentimes to perfume their cratches with such sweete herbes as haue beene spoken of before, as

For the mur-
daine or plague
amongst sheepe.

M

pennirovall

penniroyall, wilde balme, rue and iuniper berries, and oftentimes to make them cate amongst their meate, common melilot in steede of free and mountaine melilot, commonly called Cytisus, and of wilde penniroyall: moreouer organie, as also wilde balme is good as well for this diseafe as for the cough.

If the sheepe become lame through tenderesse of his clawes too much softened, by hauing stood ouer long vpon his owne dung, and that in such sort as that he cannot goe, you must cut off the tip of his so decaied claw or clawes, and put thereupon quicke lime, tying it on with some linnen cloth, and this to be continued onely for the space of a day; and then vpon the day following to applie vnto it some verdigraile, & thus to vie these two things in the like courties, so long as vntill the hooft be whole and found.

If the sheepe haue swallowed a horleach, you must put downe into his throte strong vinegar which is warme, or else oile.

If the sheepe haue any impostume in the vpper part of her flesh, then it must be opened, and salt powned small and burned, and mixed with melted pitch, must be put into the wound.

When the ewe is with lambe, if she haue a blacke tooong, it is a signe that she will haue a blacke lambe, & contrariwise, and so a lambe partie coloured, if her tooong haue spots of diuers colours.

The wolfe will doe no hurt vnto the sheepe, if you tie wilde garlick vnto the necke of him that goeth formost.

It is good also, to succour lambes if they neede, as whether they haue an ague, or some other diseafe: if they be sicke they must be taken from their dams, but giue them notwithstanding their milke to drinke, mixt with as much raine water, if they haue an ague. Oftentimes they haue the scab and itch vpon their chin after they haue eaten grasse couered ouer with deaw. The remedie is to take hyssope and as much bruied salt together, and therewith to rub the pallate of the mouth, the tooong, and all the muzzle, and afterward to wash the vlcers with vinegar, & so to annoint them with tarre & swines greaie.

Beware of eating any sheepes feete, whereout you haue not taken a worm that lieth betwixt their clawes, for this worme swallowed downe doth prouoke vomit, loathing and great paine of the stomack.

As for the rest, the runnet of a lamb drunken is good against all sorts of poysons. The bowels or lungs of a weather newly killed, applied vnto the head, is soveraigne against frensies, & for such as are deadly greued with headach. The lungs of a sheep dried and made into powder, doth heale the kibes of the heeles. The fell of a sheepe newly kild, applied to the broken, beaten or blew partes of the body so made by rods of twigs, by treading vpon or such like, is a speedie and singular remedie for the same, provided that they haue not beene caused by the biting of a wolfe. The wooll of a sheepe doth appeale the aches and

and swellings of such places as it is applied vnto, so that they haue not beene caused of the touch of any wolues tooth, for so in steede of taking away the paine, it would aggrauate and increase it. And which is more, as *Plutarch* maketh mention in his small works, the wooll of a weather or ewe touched with the teeth of a wolfe, doth make it apt to ingender rottennes, but contrariwise in the flesh, as making it more tender and delicate by the biting of it, for as much as the breath of the wolfe is so hot and burning, as that it melteth and digesteth the very bones in his stomacke. Candles made of the sewer of a weather or ramme of it selfe and without any thing mixt with it, put in a chest among clothes or linnen, doth keepe them from the mife. The dung of ewes with wineger doth cure all hanging warts, all hard swellings, whether they be called cats-haires or comes.

The sixe and twentieth Chapter.

Of the goateherd.

Sundry countries in Europe, and particularly some places of Fraunce are to be found, where they haue not the commoditie and benefite of any greater cattell then the goate, and of this they can make milke meates, much better, and more wholsome than that of the sheepe, as other things also accompanying the same, the wooll and skin onely excepted, of which notwithstanding they make chamlet in Turkie, and as for their yong ones, they are sold in their season, and make as good meate as any that can be found. And this time is when as birds doe couple and match together, and other beastes goe to rut, for the yong ones of this kinde being indeede very yong, are apt to be compared with the lambes of the same age. Wittnes to the cookes and vittailers, which craftily fet the taile of a kid vpon the quarter of a lambe, which is found to haue but a skinnie and vnseasonable flesh, without any daintinesse or taste at all saue of the milke.

The goate is fed as it were with nothing: he brouseth and feedeth of all manner of grasse, of pricking things be they neuer so sharpe: all vpon the hedges, bushes, brambles, yea vpon venomous things, lie lo- ueth to brouse the wood of fruit trees: he delighteth to licke the moist wals and rockes tasting of saltpeter, in such sort as that you shall neuer see a goate die of hunget: he feedeth for the most part of a more solide meate then the weather, and climeth into higher places, and where the sunne hath greater power: he is of greater stirring and more giuen to exercise, and therewithall of a more strong and lustie bodie. These haue beene the causes why men in times past haue esteemed them, as they doe also yet in high hillie countries: and we for the few that we haue, doe prouide herdes and houses for them

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amongst

amongst the sheepe, and we separate the male goates in such sort as wee doe the rams. Their house must be paved with stone either by workemen or naturally: for these cattell are not allowed any litter; and that because they like it better to lie vpon the bare and harde ground, then to lie vpon litter: yea and oftentimes they will lie asleepe vpon the very points of rockes, or vpon the steepe corners of high hills toward the heate of the sunne, rather then vnder any shadowe, or else vpon the fresh and soft grasie, but they be of variable complexions: and therefore it is no shame for a man to call another, goatie, if he be found mutable and full of changes in his manners and carriage. And for as much as we are far off from *Languedoc*, *Anuergne*, and the hillie places of *Sauoy*, in which this kinde of provision being a speciall commoditie of those countries, is had in great estimation, we will make a shorter description and discourse both of the maner of ordering them, then we doe in the like case of such as beare wooll, as also for that these two sorts of cattell are placed together vnder one roofe and at one cratch, feeding vpon the like fodder, and are as it were handled after the same manner, and kept in the same flocke.

The office of the
goatherd.

The painefull goatherd shall make cleane their house euerie day, and shall not suffer any dung or moisture therein, or that with trampling they make any dirt, for all these are verie contrarie vnto goats. He himselfe must be of the nature of goats, that is to say, nimble, courageous, rough, hard, diligent, patient, cheereful and bold, and aduenturing to goe amongst the rockes, through deserts and bushes, not that he should follow his flocke into euerie place as other herdes doe their cattell, but that he be euerie day before them. Hee must not be charged with more then fittie, because this cattell is foolish and dissolute, easie to stray abroad hither and thither contrarie vnto sheepe which keepe together, and trouble not their herd with gathering of them togither. He shall beware and not suffer them to feede in colde places, for cold is more hurtfull vnto them than any other thing. He shall draw them forth to the fieldes by breake of day so long as the dew falleth; that so hauing filled themselves of the grasie thus bedewed, they may returne home about nine of the clocke their vdders full of milke: and then againe about three they are to be sent to the fieldes, that they may feed and continue there vntill the euening. In winter time he may lead them to fields, from nine a clocke vntill night without any hurt done vnto them, either by the open aire or colde be it neuer so sharpe, they are of so strong a nature. It is true that if the weather be tedious or rainie, or full of snow, as in winter, he shall keep them in their cote, and giue them to eate the tender sprouts and stalkes of herbes gathered in September and dried in the sunne, and afterward kept in the hay loft or some such other place out of the raine. He shall vse the meanes to cause them to ingender in autumn before

The goats bus-
hous time.

before the moneth of December, as he doth the sheepe, to the ende that in the spring when the trees budde, and the woods begin to put forth new leaues, they may bring forth their young ones. When he would haue his goats to haue good store of milke, he shall giue them to eate inough fuelleasie grasie, or shall tye about their bellies the herbe dittanie, or else carrie them to feede in some place where there groweth great store of it.

To make the
goates to haue
much milke.

The goodnes of a goat must be esteemed and gathered by these signes. If she be one yeere old, and not past five; if she haue a great bodie, firme and swift, thicke haire, great and grosse teats, large beneath the taile, and about her thighes, rather of a reddish or blacke colour then of a white: for although that some say, that the white do yeelde more milke, yet the reddish coloured and blacke are more pleasant, frolicke, and merily disposed: without hornes, rather then horned; for those which haue no hornes doe not cast their young so soone, and they do keepe more conueniently amongst sheepe, then those which haue hornes.

The markes of
a good goat.

The male goat is much to be esteemed if he be not aboute five yeere old (for in respect of his heat which is exceeding great, he doth easily grow old) which hath a great bodie, grosse legs, a thicke and short necke, hanging and great eares, a small heade, blacke haire, thick, neat and long, without hornes: for such as haue hornes by reason of their pushing and eagernes are dangerous, which haue likewise vnder his chaps two bearded knobs or kernels.

The male goat

The profit that the farmer may make of his goats, is their dung, whether it be by folding them vpon their fallowes in the summer time, or that it be such as is made and gathered in their coats: the kids, the flesh whereof is held so dainty: the goat skin, whereof gloues are made; as also counterfait shamois, drie leather or spanish leather, and all the bags wherein oiles are wont to be carried in to and fro: the skin of the male goat, whereof are made the best dry and spanish leather, so much in request for pumpe and pantofles: the sewer of the male bucke, whereof the physicians doe make such vse, and finde so singular in the curing of bloodie fluxes: the skins of kids whereof are made handsome, daintie, and soft gloues, good girdles, purses, and needle-cases: and cheese which shall be made after the fashion of cowmilke cheese. It is most true that some do make them after the fashion of little thinne angelots, and those are the excellent cheeses, which haue bene wont to be made at *Nismes* heretofore as *Plinie* recordeth, howsoever now at this present, *Baus* doth carrie away the name.

The profits of
goates

And now somewhat as concerning the bags made of goates skins for to carrie oyle in, as we haue daily experience out of the countreies of *Prouence* and *Languedoc*: you must first cut from the dead goat the

Bags made of
goats skins.

head onely close by the necke, and the feet at the second joint of the legges: afterward fleying the rest of the legges vnto the priuie parts of the beaſt, to turne the rest ouer all the body, and keeping the haine ſide outward to ſalt it three or foure times, and to rub ouer all the ſkin euery where with ſalt very well: afterward to ſew it and make it into a bag for oile, as it may beſt ſerue: you muſt notwithstanding keepe it alwaies full, blowne vp and tied ſomewhere vp on high, that it may not touch the earth, for otherwiſe it would be gnawed in pieces of vermine. She ſhall not make account to make butter of their milke in any great quantitie, for the milke of goates hath no ſuch ſtore of fat or oily ſubſtance in it, ſeeing there is alwaies much adoe to get forth euen ſome ſmall portion, and yet which is more when it is out it looketh whitish, hard and taſteth like tallow: and thirdly, becauſe in *Languedoc* and *Provence*, they gather not any butter at all being giuen to make cheeſe, namely thoſe cheeſes which are called ſmall cheeſes.

As concerning the diſeaſes of a goat, ſhe is neuer without an ague in this countie, and that in ſuch ſort as that if they be free from it but a little, they die: beſides the diſeaſes of ſheepe, whereunto goates are ſubieſt, there are three other, whereunto the goat is ſubieſt, that is to ſay, the dropſie, ſwelling after ſhe hath brought forth her yong, and the drie diſeaſe. The dropſie hapneth vnto her by drinking too much water, and then you muſt make incision vnder the ſhoulder, and draw forth all the gathered ſuperfluous moiſture, and after heale the wound with tarre. After ſhe hath brought forth her yong if her matrix be ſwolne, or if ſhe be not well purged of her afterbirth, you muſt cauſe her to drinke a great glaſſe full of verie good wine. The drie diſeaſe commeth vpon her in the time of hot ſeaſons, as wherein her teates are ſo dried vp, as that they are like vnto wood for drines, and in ſuch caſe you muſt rub her teates with cream: and as for other her diſeaſes you muſt cure them with thoſe remedies which are ſet downe for the diſeaſes of ewes.

The good huſwife that ſetterh by the health of her folke, ſhall not giue any goates fleſh vnto her people to eat, except it be in time of great dearth and ſcarſitie, becauſe the viſe of this fleſh doth breed the falling ſickenes. Likewiſe our predeceſſours had the fleſh in ſuch deſtation, as that they would not touch it, no nor name it: notwithstanding if neceſſity do force vs to feede vpon it, as many poore peſants dwelling in villages do (hauing good ſtore of goates, and which onely are the ſtore of their powdring tubs, as alſo being perſwaded thereto through couetouſnes) then they muſt boile them in a pot not couered, and in great quantitie of water, with good ſtore of ſpices and cloues, and yet after all this not to eate it before it be colde, ſhe may gather ſome profitable thing both of the male and female goat for the health of her family. For the milke of the female is verie ſingular for the

Butter of goates milke.

The goat is neuer without an ague.

The diſeaſes of goates.

The matrix ſwolne.

The drie diſeaſe.

The fleſh of goates.

Goates milke.

the hardieſſe of the ſpleene, if ſo be that ſhe haue bene fed any ſpace of time with Iuice. The reddiſh and bloudlike liquor or iuice which diſtilleth from her liuer when it is roaſted, is good for the weake eies. *Goates bloud.* The bloud of the male or female goat fried, ſtaieſh the fluxe of the belly. The bloud of the male hardened and dried vp in lumpes, is ſingular againſt the ſtone. *The bloud of the male goat.* The powder of the goates horne burned, *The goates horne.* cleaſeth and maketh white the teeth: drunke with roſe or plaine water it ſtaieſh the bloody fluxe. The ſume or ſmoake comming of the burning of goates horne doth driue away ſerpents in what place ſoeuer that they be. The dung of goates applied in forme of a cataplaſme doth reſolue ſwellings vnder the eares, in the flankes, the ſciatica and other apoſtemes, eſpeciallie if it be mixed with the flowre of barley and water and vineger, or with freſh butter or the dregs of the oile of nuts; which is more. if you giue but ſue trotles of goates dung with a ſmall draught of white wine, the ſpace of eight daies euery morning, it doth heale the jaundie.

Goates dung.

The ſeuen and twentieth Chapter.

Of the dogs kennell.

Vnto the ſhepherd, ſeeing alſo in ſteede of the goatherd, doth belong the charge of the doghouſe, in the ordering of this our countie government, as well becauſe neceſſitie commandeth that he ſhould haue bloodhounds to fight and chaſe away the wolues; hounds and water ſpaniels for the purpoſe of ſuch things as now and then he may meete withall in the fields, or which eſcapeth at vnawares out of the riuers or ſtanding waters: as alſo maſtiues, which are giuen him in charge by the farmer; as being for the garde and keeping of his houſe, and of theſe there ſhall be one or two which ſhall bee kept faſt all the day, chained to ſome poſt reared in the court on the left hand as you goe in, for to giue aduertement of the comming in or going out of ſtrangers, and to make ſuch afraid as might come to doe miſchiefe: but on the night ſuch dogs ſhall bee let looſe, and put amongſt the reſt which come from the field, to bolden them in their charge, as in ranging and keeping the court, as well to defend it from theeues, as to free it from the rauens of wilde beaſtes, which giue themſelues wholly to the purchaſe in the night time. This then is his charge to feed them, to make them cleane, to bruſh them and wipe off the duſt from them, to correct them, reclaim them, teach and ſit them for that which it is needfull that they ſhould doe, and to this end the farmer muſt not withhold from him the great of the ſiftings, which may be prepared for them at euery baking, beſides what may come vnto them for their fees vpon euery purchaſe either of tame or wilde things. He ſhall likewiſe haue care to ſee to the collars that are requiſite about the ſaid dogs, he ſhall ſee them waſhed in the heate of the

M 4

weather

To meete with
the meadnesse of
dogges.

weather for feare they should goe mad: as also that they lie vpon fresh and soft straw after that they haue travelled: they must also be sparingly fed, thereby to make them the more fierce vpon the pray and the readier to courle, and he shall watch with his crosbow or pistoll, to meet with some wild flesh, if any come in those quarters, which his businesse doth draw him vnto.

Three sorts of
dogges meet full
about a country
farme.

I meane therefore that the husbandman should haue care to provide three sorts of dogs in his house. The one called the watch dog, to discouer the secret and couert conueiances of things stolne by men: the second called the shepherds dog, to resist the iniuries and outrages offered by men or wild beafts, and to driue them away: the third called hounds or hunting dogs, and these do not bring any profit vnto the husbandman, but rather hinder his worke, and keep him from his businesse. But I will onelic speake of those which are for the keeping of the house and cattell, and reserve the hunting dogs for to intreat of in our tenth booke, where I intend to speake a word or two of hunting.

The qualities of
a watch-dog.

The dog appointed for the keeping of the farme, must be of grosse and great corpulencie, having his body well and square compact, and rather short than long. Let his head be so great and thicke, as that it may shew to be the greatest part of his body, his countenance somewhat resembling a mans, his throate great and wide, thicke and great lips hollowed after the manner of vallicies, his necke thicke and short, his eares great and hanging, his eyes blacke or azure, fierie and sparkling, his breast broad and full of haire, his shoulders wide, his legges thicke and full of haire, his taile short and thicke, which is a marke of strength, for the long and small taile is onely a signe of swiftnesse, his foot and nailes great, his barke base, lowde and fearefull, he must be reasonably fierce, for the gentle dogs do fawne vpon theeves, and the ouer fierce would not let to leap in the bosome of your familiar friends and seruants, especially let him be watchfull and keeping good gard, not a rouer, running hither and thither, but soon satisfied and staid rather than actiue and busily gadding, he must also be blacke, to the end he may be more terrible vnto the thiefe by day, and nor so well perceiued of him by night.

The quality of
the shepherds
dog.

The shepherds dog needs not nor must not be so great and heauie as that of the farme, and yet notwithstanding he must be strong and lustie, and somewhat ready and light. For he is vsed both for fighting and running, intended that he must watch and hunt awaie the woolues, and if they should cary any thing away then to pursue them, and take it from them: wherefore in this respect it were better that he should be long made rather than short and square, seeing euerie beaust of a long bodie is more fit for the race, than that which hath a short and square body. He must be of a white colour, that so the shepherd

herd may more easily discerne him from amongst the woolues, and know him as well in the twilight, as also in the very darke time of the same. If he be in the rest of his limmes like vnto the house dog, he cannot chooseth but be a good one. Both these sorts of dogs are fed with like meate, as with wheaten bread, the flower of barlie with whay, warme broth and sodden beanes. The shepherd which hath this charge, shall not let either dog or bitch ingender before they be a yeere old, and not after that they be ten yeeres olde. He shall take from the bitch her first litter, for being yong and newly acquainted with such matters, she would not feede and nourish them well, and againe such her feeding of them would hinder her in her growth euerie manner of way: as also the dog of the first litter is of a feeble and weake condition, and for the most part subiect to run mad. Sixe moneths after that the bitch hath whelped, he shall not suffer the whelpes to go forth, vntill such time as they become strong, except it be onely to play and sport themselues with their dam, for feare that in attempting to leape hedge or ditch, they doe not burit and beate out their guts. He shall not let them sucke any other milke but that of their owne bitch, and if it happen that she want and haue not enough, they shall haue goates milke giuen them vntill they be fower monethes old: he shall not call them by very long name, that so as soone as they be called they may knowe that they are called. And againe it is good that their name shuld be of lesse then two syllables. When these whelpes are fortie daies old, he shall breake the tip of their taile, & shall draw out a sinew that runneth along the ioints of the backe, euen vnto the end of the taile, this will keepe them from growing too much in length, and will also be a meanes to keepe them from running mad. He shall make his dogs come after him, and the meanes to doe it (as some say) is to giue them now and then some boyled frogs to eate, or to make it more sure to giue them brused salt, or else to cast them a peece of bread, which he hath kept a good while vnder his arme pits, in such sort as that it be a little moistned with the sweate of them, or else to let them smell the afterbirth of another bitch which he shall haue wrapped vp in a cloth. Likewise hee shall learne some peece of cunning to make that he may not be barked at, nor set vpon by other dogs how raging soeuer they be. And to effect this he shall hold in his hand the eie of a blacke dog pulled from him aliue, or for the more certainty, the eie or the hart of a wolfe, or the tongue of a she wolfe. He shall incense them to fight the one with the other, by clapping his hands, and yet he shall beware that neither of them be overcome, for making of him timorous and dait ardie. He shall not in any case suffer them to eate the flesh of dead sheepe, least thereby they fall to set vpon and snatch vp such as are aliue: for very hardly and with much adoe will they be made to forsake this fault, if once they haue begun

The meat for
dogs.
The time for
dogs and bitches
to engender.

The ordering
of whelpes.

The names
of dogges.

A sinew in the
tailes of dogges.

To make him-
selfe followed
of dogges.

The way to
keepe dogs from
running at you.

To make dogs
fight.

Dogs may not
eate sheepes
flesh.

to care rawe flesh. He shall frame them in their youth to bring, and the better to teach them so to doe, he shall first cast a pretie way from him a peece of bread. He shall bee careful to heale them when they besicke. They are subiect especially vnto three diseases, madnesse, the squinancie, and the paine of the thighes: Madnesse taketh them in the time of extreme sommer heat, and in the excessive cold of winter: and for the better keeping of them from this disease, it will be good: that during the time of excessive heate and colde, they haue often giuen them cold water to coole them withall, and to temper the heate of their blood: or for the more certaintie whiles they be yet young, you may pluck frō them at their tailes end, a sinew, which goeth along through the ioints of the backebone. Or els to take from vnder their toong a little sinew which is like vnto a small broad and rounde worme. To cure them of this disease: so soone as the matter is perceived, he shall cause him to drinke the iuice of beets with the pith of elder tree: or else burne him in the brow with an hot iron: or else to soue him euery day for the space of fiteene or twentie daies together in sea water, three or fower times a day: or else in warme water made salt: for salted or sea water hath a singular vertue against the madnes of a dogge: And these are the signes of a madde dogge: He is more dry and leane then ordinarily he was wont to be, he eateth nothing, neither drinketh, although he seeme to be much altered and strugled with want of them: he hateth water more then any thing else, at the sight wherof he falleth into trembling and staring of his haire al ouer his body, his eies are red and drie, his looke is aside, sterne, and fixed vpon him whom he beholdeth: he doth nothing but run hither and thither without reason, his head and eares cast downe, his mouth very much gaping, hanging out a great blacke and wanne toong, foaming and driueing at his mouth, and situell at his nose, his taile hanging betwixt his legs, barking with a hoarle voice, and hanging his head vpon the one side or the other: he setteth vpon without barking, and biteth whatsoever he meeteth with, whether it be his master, men knowne vnto him, or vnknowne, beast, tree, stone, yea his own shadow, sometimes he standeth still, sometimes he runneth, nowe on the right hand, now on the left hand, other dogs run from him, which notwithstanding hee fawneth vpon if he meete them, and maketh them afraid.

The squinancie, The paine of the thighes, Fleers of the eares.

The squinancie and paine of the thighes, is healed and cured after the same manner that it is in sheepe: notwithstanding the common remedie is to cause them to take a great glasse full of warme bile, and after to open the veine of the thigh, for their exulcerate eares coming through fleas, he must rub them with bitter almonds brused: For to kill the fleas of dogs, you must rub them with sea water, or with brine with water, or with the old lees of oile of oliues.

The

The other diseases may be cured by the same remedies, which we haue already set downe for sheepe.

Shut vp a dog close in some place, for three daies in such sort as that he may gnaw nothing but bones, then gather his dung & drie it: the powder of this dung is good against all bloudie fluxes, if it be taken twise a day with milke, and so continued for the space of three daies, remembering moreover before you mixe the saide milke, to quench diuers small pebble stones made red hot in the fire in it. This powder likewise is very singular in malignant vlcers, and those that are giuen to be rebellious: likewise such an emplaster of dogs dung is excellent for the squinancie.

The eight and twentieth Chapter.

Of the Carter, or horsekeeper.

WE haue heeretofore spoken of such liuing creatures as are for the profit and vse of men inhabiting countrie villages: in that which followeth we will speake of those which serue not onely for men inhabiting the said villages, but also for them which inhabite and dwell in cities and great townes, as are the horse, the mule, and the asse. I set the horse before the rest, as being seruicable for the peasant and countrie deudge, and also affoording great seruices to nobles, princes, prelates, & to be short, to all sorts of men, as being the beast, which is peerelesse, for his comelines, beautie, courage, furniture, profite, and commoditie. Therefore let the carter or horse-keeper to whom apperteineth the charge of countrie horse, be a sober and patient man, louing his beasts well, and neuer bearing them: but well may he acquaint them with the lash, the whisking, noise of his rod, with his speech, and with his call: let them not at any time labour more then they well may, either in draught or trauell, let him currie them cheerefully and merrilie euery morning, and in sommer sometimes after noone: he must not giue them to drinke but at ordinarie houres, and after their rest let him oftentimes vse to wash their feete in sommer with cold water, and sometime with wine or the lees of wine for to strengthen them withall, and with wine if they be dulled or blunted, in the night time putting of their owne dung in the hollow or sole of their hoofe: and if they be chafed or heated, or put out of the loue and desire of their meat, he must wash their throat with vineger & salt: let him not giue them hay, prouender, chaffe, oats, or litter, before they be very well dusted: he must not let them goe without shooes or nailes: and let him be careful that their traile, cart-saddles, collars, bridles, or other parts of their geares and harness, be not torne or rent, or rotten. He must also know to sowe with small threed, packthreed, and shoothreed, to stuffe & make fast his saddles:

A farmer must know the worke and trade of a sadler and farrier.

to

to be short, he must be acquainted with the sadlers trade, as also with the farriers, and therefore he must neuer be vnprovided of his budget and pouch furnisht with tooles and necessities about harnes and saddles, nor yet of his iron stoffe for his beasts feete. He must be verie careful to finde out the cause when he seeth any one of his horses halt, of what foote it is, and in what place of the foote being handled or tried he most complaineth himselfe, and to put about his pasternes sometimes spech-grafe and sometimes dung.

He must also take great heed when his beast do cast the old hoofe, and haue a new growing, and cause some thing to be giuen him for the helpe of the growth of the new hoofe, and when he hath his throate heated to cause him to be couered, if therewith he haue the cough; and if in trauaile he haue taken colde by raine or tedious weather, to giue him then to eate some fenugreeke or anise feede amongst his prouender: to change him when he is past age: and also to take acknowledgement of the loue that one horse beareth towards another, and accordingly to set them one by another in the stable, which hee must euery morning make cleane in summer, carrying out the dung and letting none remaine, and at night giue them fresh litter. He must also cast an eie about and see whether his hortes do grow leane or no, and then to fat them with ferches boiled in water and mixed amongst their oates, as also with miller, pannicke, rice, foddens and mingled with meale of beanes, and a little salt. He must be content to take vp his lodging in the stable for feare of their falling sicke, intangling themselues in their halters, and growing of his beatts, and let him be carefull and wise in ordering and placing his light in such sort, as that it may be out of danger, and to locke vp and keepe his harnes well, and made readie ouer night against the morning, that so when he is to returne to his labour into the fildes, he be not to seeke of any thing. If he haue any mules or yoong colts, he must put them by themselues, and reserue them for some other labour: and if any of his horses fall sicke, if it be not of wearines, dulnes, or chafing, he must put him out from among the rest. If he haue any horie that hath any ill propertie or fault, he shall be carefull how to amend it, as if hee be fearefull or timorous, or if he will not abide while one getteth vpon his backe, or if he will not go by or into any place, he shall hang within his eare some pretie little stone: and if this do him no good, he shall hoodwinke him, or set behinde him at his taile some flame of fire, or some sharpe pricking thing; if he whinie much, he shall tie to his head a stone with a hole through it: if when a man is vpon his backe, he rise and come aloft, he shall hit him with his rod vpon his forelegs: if he lie downe, he must be raised vp againe with rough words and strokes: if he go backward, you shall tie a corde to his cods, which shall be so long as that reaching betwixt his forelegs, he which rideth him may hold

hold it in his hand, and when as the horse shall goe backward, he shall pull it hard with his hand to make him goe forward, for so without all doubt he will go forthright, and amend his fault: if the horse be gelded, he must beate his thighes with a long staffe taken out of the fire very hot, and burnt at the end: or he shall giue him feele of his whiffling rod betwixt his eares: if the horse be hard to shooe, and troublesome to handle and dresse in the stable, he shall put in one or both of his eares a little rounde pebble, and there make it sure with one or both his hands; and keepe them in his eares, and thus he shall make him as gentle and meeke as a lambe.

It is also the carter's part to gouerne his herd of mares and coltes carefully, that no inconuenience may befall them: he shall put them to feede, and shall send them to grasse when it shall be due time, and that in large and marish groundes. Notwithstanding marish ground doth soften their hoofe very much, and maketh them tender sighted, and begetteth water in their feete: and for this cause I could like the high and hillie grounds better, being such as from time to time haue raine or deawes dropping downe vpon them, and not drie at any time, and such as are rather voide and free, then incombred with wood or other bodies of trees or logs: and yet further hauing a soft and sweete grasse rather then a high, grear, and strong grasse. And notwithstanding that mares be not so frolicke nor couragious, as horses be, yet they goe beyond in the race, and stande it out a great deale longer, and againe they be not so chargeable to keepe as horses are, for they are not fed with the best hay, they content themselues to run in pastures all the yeere long: true it is, that in winter and when the ground is all couered with snow, as also in the time of continuall raine, they must be put in some one house or other, and giue them such hay as is good to eate, and in sommer to keepe them in some good coole shadowie place, and well growne with good grasse, and serued with cleere waters: but neuer vpon the rough and ragged mountaines, as well for that they doe hardly feede there, as also because that such as are with foale can hardly blime without great paine, nor come downe without endangering themselues to cast their colts. You shall not suffer the mares to take horse after then euery two yeeres, to keepe and breede of the best kinde and race, and not to bring in a base and degenerating kinde; againe to see that it be about mid March, to the end that at the same time that the mares were couered and horsed, they may easily feede their colts, hauing tender and soft grasse after haruest: for about the end of the eleventh or twelfth moneth they foale, and so their milke is the faster, better conditioned, begetteth also and nourisheth fairer colts, and such as thrive euens as wee our selues would wish: the stallions also thus attended are the stronger, and doe more abound with a well concocted and limie nature, and

A horse going backward.

The courting of mares.

not

The casting of hooves

To make cleane his horse stable,

The faults of horses.

not with a thinne and waterie, and withall they couer them with more courage, and beger greater coltes; and such as are more hardie and strong. He shall knowe that the mares are ready to take horse, when they yeeld a whitish humour, at the place of generation, and that their priuie partes are more swolne, then they were wont to be, as also more hot then ordinarie, and eate not so much as they were wont. He shall let her take horse twice a day, euening and morning before he let her drinke, and this shall be continued but ten daies, which past if she refuse him, he shall put her aside as with foale, and shall take away the horse, least with his furious rage he make her that shee doe not conceiue.

The horse that is lesse then three yeeres olde, is not fit to couer mares, but he may continue good till he be twenty yeere olde. The mare is fit to take horse when she is two yeeres old, that is being three by her foaling time, she may be able to feede it well: but she is nothing worth for this purpose after she is once ten yeeres old: for horse begotten of an old mare are loofe & heauy. One good horse is enough for twenty mares: which at such time as he is to couer them must be well fed, and when the time approacheth must be fatted with barlie, fetches and ciches, to the ende he may the better serue for the purpose: for the stronger and more disposed he shall be to couer them, the stronger will the coltes be which he begetteth. If he haue no courage, but be feeble and out of hart, you must rub the secret partes of the mare with a new and cleane sponge, and after rub the muzzle of the stallion with the same: if the mare will not admit the horse, you must bruse a sea onion, and rub her secret part therewith, for this will warme her: and to haue a horse of the colour that you would desire, couer the mare with a couering of the same colour, at such time as the horse shall couer her.

The mare whereof we desire to haue a good race, must not be vnder two yeeres olde, as hath bene said, nor aboue ten or twelue; and vnderstand withall that being of a colder complexion then horse, so she faileth before them in that worke: she must be well made of bodie, broad spread toward one, hauing a comely and pleasant looke, her flankes and rumpe large, well fed, but a little leane, to the end that she may hold her horning the better, that she haue not trauelled of a long time: that she beare not but euery two yeeres, to the end she may the better feede her colt. When she is with colt you must feede her well, you must not trauell or run her, nor leaue her to the extremitie of the cold, but keepe her in house when it raineth and snoweth, and as long as any great cold weather is, that so she may the better bring forth a perfect colt. If the mare be in foaling, or that she hath cast her colt, you must bruse polipodie, and mingling it with warme water, cause her to drinke it with a horne. If she haue foaled well, you may

The signes of
the mares being
readie to take
horse.

A horse to couer
mares.

A mare for
breede.

The mare readie
to foale.

may not touch her colt with your hand: for and if you touch it neuer so little you hurt it. So soone as she hath foaled in the house, you must succour her with drinke of warme water, mingling salt therewith and meale also both euening and morning, for the space of three daies at the least: after this you must giue her good hay and sufficient corne, keepe her cleane with good litter, that so she may rest at ease: for this her good feeding doth cause her colt to prosper, and strengtheneth it.

After that the colt is foaled it must be left with the mare in a warme and wide place, to the end that cold may not hurt it, neither yet the mare by reason of the straitnes of the place: and when it shall bee stronger, it shall be accustomed to eate hay, to the end that the dams milke failing, it may haue learned to feede vpon a firmer nourishment, but it shall be let run with the mare in the pasture, that so she may not mourne for lacke of the sight of her colt: for commonly mares are sicke for the loue of their coltes; if they cannot see them. When it shall be eightene monethes olde, you shall begin to waine it, and put it in the house built for coltes, afterward you shall tame it, putting a halter about the necke, and that rather of wooll then of coard, that so it may not feele any hard thing to annoy it: and if it will not abide to be tied, you must make it fast with two thongs of leather or of hempe; or with a bridle vnto the manger, that so it may be acquainted with touching and handling, and that so also it may learne not to be afraid of any noise that shall be made: it will be good also to set it amongst others that are already tamed, for seeing them so haltered, it will at length accustome it selfe to subiection: as yet you must speake it faire and touch it with your hand, sometimes rubbing the backe, head or bellie, and sometimes the rumpe, legs and feete, sometimes raising it vp, making it cleane, and rubbing it very gently; to be short, making so much of it, as vntill it become so tame that it know the boy or horseman that carrieth it, and the rider that must backe it, and withall vnderstand their words and voices, and smelling him to know him before he get vp: sometimes you shall set a childe vpon the backe, to the end he may learne to indure to beare one; giue it good hay and good grasse: lead it to water with one already managed and fitted to the hand; after it hath drunke giue it oars, at euening straw it with litter vp to the knees, and in the morning rub the legs and the whole body with the same litter, and after leade it to drinke. When it is three yeeres old, you must breake and acquainte and fit it for such work as you shall thinke meete. As for example, if you would appoint it and make it serue you sometimes to take a iourney vpon, I could wish you to giue it a burning with fire vpon the legs: and this you shall commit to the doing of some skilful farrier, especially in the spring, autumn, & decrease of the moon, and at such time as these yong horse are full two yeeres old; and this must be done as well in the legs

The mare that
doth foale.

To order a colt
new foaled.

To burne the
colt with an hot
iron.

legs before as behinde : such course of burning doth harden and strengthen their loose flesh being soft & not close set together, it doth bring downe that which is puffed vp : it drieth that which hath much moisture in it: it dissolueth that which is gathered together, it burneth away and wasteth rottennes if there be any, and healeth old aches, curing and restoring the declined partes of the body, lessening that which is growne too great, and not suffering it to growe any further. Adde heereunto, that the scab, farcie, and other malanders accustomed to seaze vpon their legs, cannot haue the power to breed vpon them. After you haue thus burnt them with a knobd hot iron, carrie them to pasture, and that at such an howre, as when the dewe is vpon the grasse : for so it will do them a great deale more good, then any thing that a man can giue vnto them in the stable, for so also you that cause that the scarres of the burnings shall appeere lesse, and that if they shew at all, that yet it shall be with good setting out of the legges. And that which is more, if you purpose that euer he should be for the race, slit his nostrils, when euery way they are growne to the full : for howsoeuer the deformitie thereof shewe ill fauoured and very vnpleasant to the sight, yet assuredly it is a great helpe to a horse to keepe him longer in breath, when he is in his race : and it is also an ease to such horses as are become broken winded, so that by this meanes they are brought to doe their masters seruice some longer time. If you would geld them and make them geldings, that so they may line the more quietly amongst mares and other horses, as also so for the fitting of them which desire peaceable horses, you may doe it, but not before they be a full yeere old, because that then their secret parts do openly shewe themselves, and for the better performance thereof, it were better to writh about and mortifie their cods altogether with pincers, than to geld them all at once, notwithstanding they be of full and sufficient age. For in gelding of them many doe die of extreame paine, because you take all away from them, but if they die not, yet they remaine weakened and infebled both in hart and strength : whereas if you pinch them onely with pincers, they are not onely free from all perill of losing their life, but also continue the more bold, there remaining vnto them some small part of the cordes and sinewes of the generative members.

Furthermore, cause him to be curried by a seruant pertaining and belonging to those businesses : and being wise, gentle, and loving, that so by such his gentlenes it may be prevented and foreseene that the young colt do not learne ill maners, seeing it is so difficult a thing to take from them but one ill qualitie, after that they be hardened therein. And in this respect it behooreth all the seruants about the stable to handle them kindly and speake gently vnto their horses, thereby to make them know and loue them the better. And by such

meanes

meanes and carriage it is wrought that they suffer themselves to be governed, that they suffer meate to be giuen them, and any man to leade them to drinke, that they suffer themselves to be handled, touched, curried ; to haue their clothes put vpon their backs, either the linnen one to keepe the flies away, or else the woollen one to keepe them warme, and that they suffer him to make the same fast with a surcingle, for the better keeping of them on vnto the morning, when they are to be new curried againe. There must all litter be taken from vnder them, the cleane and whole thrust vnder the manger, the foule and filthie together with the dung being carried out to the appointed dunghill, neuer forgetting to keepe the stable very cleane, nor yet to haue it furnished with all manner of necessities, and euerie thing in his place. When as the horses are in currying it is meete that they should be tied, and made fast vnto some high barre set vp right, that so they might haue their heads holden on high, and then after that to currie all their body, to rub them with a cloth, to bathe with spoonges well in very coole water, their head, eies, lippes, eares, iawes, nostrils, mane, and taile, and afterwarde to combe them very diligently, and when this is done to rub all their bodies ouer, but especially their legges and pasternes, with wispes of strawe, well bounde and trussed together, for otherwise they will grow full of the farcy, through the slouthfulnes of the seruants and the master himselfe : aboue all things they must be looked vnto, whether they lacke any thing about their feete or no, seeing that oftentimes the want but of one naile, is the cause that a horse casteth his shooe in the midway, to the great preiudice of the poore beatt, which sometimes thereby is in danger of losing his whole foote, especially when he trauelleth in any rough and stonie ground : for a horse that hath lost his shooe, and goeth vnshod, hurreth himselfe in a minute of an howre, and so spoileth his hoofe, as that it is oftentimes seene to be quite lost, or at least to become vnfit for seruice. The horses dressed and ordered as they should be, and hauing eaten a little hay, must be led to water, from whence when they are returned, they shall haue oates giuen them well sifted and fanned, and they shall be marked whether they eate well or not, that if neede be they may be looked in the mouth, to see whether there be any thing to keepe them from eating or no, and accordingly to take them in cure or not : for the common prouerbe is, That horses go vpon their feete, but it is their meate that doth vphold them, and cause them to endure trauell : It is meete also to giue them sometimes some rare and dainty thing which may please them, and may be more than ordinarie : for it is all one as when one doth make them so gentle, tractable, and tame, as that afterward they will suffer themselves to be governed easily : to vse them kindly also, and not to beate them, to

N

torment

A prouerbe.

To slit the nostrils of colts.

torment them, or cast them into feare with high speeches and threatening wordes, or else by any other meanes so long as they be in the stable: but rather to handle them with all meekenesse, aswell in word as in touching or handling in what manner soever it be.

To fit the colt for the saddle, the good rider must first put vpon his head a halter with a rouler of woode, not attempting to doe any other thing at that time, and so to leaue him for two or thre howres vpon the reines being of cordes, and after such time to take all away for that day: the next day somewhat late to put it on againe, and so to leaue it for some certaine time: afterward taking him by his reines, he must leade him a little out of his place, drawing him along some twentie or thirtie paces from thence, sometime walking him, and other sometime staying him still vpon the sodaine, according as hee shall see it good, that is, according to the stubbornes and frowardnes or the easines and gentlenes of the colt. So soon as he is come into the stable, he shall haue this halter taken from off him, putting him in his accustomed headstall, and giue him rather some hay to eate, then to lead him to water, and after that to giue him his ordinary of oates. The third day he shall not only put on his foresaid halter at the accustomed howre, but also a saddle, without stirrups, pettrell or crupper, girding him gently, and in all kinde maner, fastning and buckling the same very lightly, he shall yet do nothing but lead him out of the stable by his halter, handling him alwaies louingly, and leading him with all gentlenesse whither he will willingly go: and after that he is come into the fallowes and plowed grounds, he shall get into them, where hauing taken with him some long small whisking wand, he shall first make him to stand still, then afterward he shall make his colt go a little pace, and from that little, somewhat faster and faster, nowe and then giuing him a gentle touch or remembrance with his saide small rod, which he shall then shewe vnto him: after making him stande still againe, he shall holde him vp with courteous and friendly wordes, and rubbing him with his hand, shall carry him backe againe vnto his stable, and there presently take off his said furniture, and put him in his ordinary uall or headstall: the fourth day he shall make him readie as he did the day before, and hauing spoken him faire, he shall set a little boy vpon him, and if he see that hee beginne not to smite and snort and to take on any whit at all, he shall leade him by the reines out of the stable, and leade him a prettie way off, making much of him with his hande, and touching his heade, necke, and breast: and shall lead him to some blocke made to get vp by (and this so long as he is ridden without stirrups) and there causing the boy to come off, he himselfe shall get vpon him very lightly, and holding the raines even in his hand, shall cause one to giue him some small whisking rod, and with it he shall touch or stroake his necke, and slackning the raines a little,

To breake
or first backe
the colt.

tle, shall cause him to goe forward softly: if he play any leaping tricks he shall stay him with the bridle still speaking louingly vnto him: and seeing that he groweth quiet, he shall make him go softly, and set him on by a little faster and faster, vntill he make him pace and trot: hauing done this in good sort for some prettie while, he shall bring him againe to his stable, where hauing fastened him to the manger, he shall couer him that he take no cold: and about an hower alter he shall take off his saddle and bridle at once, rubbing him with fresh straw, but especially the places wet with sweate, and then couering him with his cloath: and after hauing rubd his legs and seete, he shall let him drinke and giue him to eate and shake vp his litter about him. The fifth day hauing saddled, bridled, and girded him as he had beene accustomed, he shall lead him to the place of getting vp, and there shall get vpon him, leade him through all manner of waies, somctimes trotting, sometimes softly, vntill he begin to waxe hot, and this order shall be obserued euerie daie, yet still increasing his exercise, making him go & trot so long as vntill he be wearied: this being the best way to make him lift his legs, & to carrie himselfe handfomly in the rest of his parts, not failing thereupon to bring him backe verie softly vnto the stable, where he shall walke him vntill such time as he leaue sweating, & the he shall see him vp in his place: he shall hold on this course with the horse vntill he see him thoroughly won, & the he shall cause to be shooed on his hindermost feet only, to the end he may cary him through rough & stony waies without hurting of his hoof: & he shall not vse any thing else to ride him with, save only his whipper & halter for to make him go, trot, gallop, run, flie, turne, leap, to rise behinde and before: also he shall traine him to scoure ouer small hils, the tops of hils, and great high hils, and againe to come downe the same verie softly: and sometimes riding him to the places where mills, forges, & such ot her hâmer works are, as also where there is beating of linnês, to the end that afterward he may not be afraid at any such noise: he shall bring him also to the place where are carts, waines, tumbrels, cars, coaches, charrets, wagons, flockes of sheepe, herds of swine, kine and goats; making him likewise to see lambs and calves or other bealts & cattell hauing their throats cut. He shall marke all these things day by day, til he perceiue him readie, and see him certainly with his owne eyes, that he doth not vse to snuffe and take on at the smells of the foresaide things, and then he shall furnish him with all manner of things, and getting vpon him, shall guide him into many places, making him to goe by steps, to trot, to leap ditches, to swim riuers and other waters: and notwithstanding this, he shall not faile to giue him such a kinde of pace & going as shall seem most agreeable vnto him: for a genet would be trained vnto one maner of pace, & a courser to another: & so a horse for the war, a cur-tall, or any other such horse, most neere vnto his naturall disposition.

Signes of a good
colt, as also of a
good horse.

That colt, horse or stalion may be iudged to be good, that is great, thicke boned, of a good shape, hauing a small head, and so dry as that there is nothing of it but skin and bones: small eares, sharpe and straight; but great eies, standing out, blacke and cleane: verie wide nostrils, puft vp and great: small iawes, thinne and drie: his throat equally diuided on both sides: a necke somewhat long and made compasse wise, being thinne neere vnto the head: a short back, broad and somewhat shrinking downe like a vally: his maine curled, thicke, and long, and hanging downe vpon the right side: a broad breast, open, bossed out, and verie fleshie: his shoulders great and straight: his ribs round: his chine double: his bellie round trussed: his cods alike great and small: his raines large and somewhat guiding downe: his taile long, and tufted with haire, thicke and curled: his legs matches, thicke of bone, but thinne, drie, and bare of flesh, high and straight: his knee round and small, and not wrested inward: a round buttocke: thicke thighs, long, fleshie, sinewie and strong: a blacke hoofe, hard, high, holowed, round, good and open, and rising vp as it should toward the patterns, and the crowne or top of it verie small aboue: which is chearefull, quicke, gentle, hauing no ill qualitie nor diseases: for they which are of such a nature are verie easie and tractable, and patiently indure any labour: also he must not be mad or franticke, fearefull, running backward, hauing the sciatica, a slacke eater, not scouring much, not vsed to lie downe in waters or riuers. And yet though he haue lost an eie, or haue bene hurt in any part of his bodie in any combate or fight, he is not to be accounted the worse for that, provided that in the rest of his bodie he be found: againe that horse is to be esteemed for a good stalion which hath followed the wars, because he will beget noble and couragious colts; and such as shall be fierce in all aduentures, and difficult & long enterprises: besides that he be of colour, bay, broune, red, dapple gray, watchet, or mouse colour, which is a certaine note of an active and couragious horse. And to speake in a word of the goodnes and fairenes of a horse: he must haue the eies and ioyns of an ox; the strength of a mule, the foote of the same; the hooues and thighs of an asse; the throat and necke of a wolfe; the eare and taile of a foxe; the breast and haire of a woman; the boldnes of a lyon; the sharpe and quicke sight of a serpent; the pace of a cat; lightnes and nimblenes of a hare; a high pace; a deliberate trot; a pleasant gallop; a swift running; a rebounding leape and present, and be quicke in hand.

The carter likewise must haue knowledge of the age of his horses, to the end he may so set them on worke as their strength will best beare. The age of horses is knowne by their feete, hooues, and specially by their teeth. The horse for the most part hath eight and twentie teeth. It is true that *Aristotle* would haue the horse to haue forty.

tie: He beginneth to haue teeth the first three moneths, and by the ende of the first yeere he hath fixe aboue and as many below: at thirty moneths he changeth two aboue and two below, and at forty two moneths he hath fowre new ones on both sides, which touch those which he had last comming. When he is fowre yeeres old, then the teeth called dogs-teeth do fall out and others come in their place. Before the sixth yeere the great iaw-bone-teeth that are on the vpper side do fall out, and in the sixth yeere those that were first fallen do growe againe. In the seueneth yeere all the whole number is fulfilled, and they are all hollow: and after this time no man can certainly know how old a horse is, but that about the twelfth yeere there is to be seene in them an extraordinary blacknesse: adde further, that by how much the horse groweth older, so his teeth grow longer, except some certaine ones which are shorter by reason of his eating of his meate, and these shew themselves the more, as they draw neerer and neerer the forepart of the iaw. The tenth yeere the temples begin to fall and grow hollow, and sometimes the eiebrowes do waxe gray haired, the horse doth make shew of sadnesse and a mine of melancholy in his forehead; he stoupeth in his necke; he is heauy of body; he hath eies of a deadly colour; his haire gray, that especially of bay, blacke, and roane coloured; as that also of the chestnut colour, and other colours standing vpon darke; the gray flea-bitten groweth white, and the white flea-bitten becometh dapple-gray and somewhat darke. There are many wrinkles and plaits in the vpper part of his broome or brushing taile, and they are commonly counted to be as many yeeres old, as there is wrinkles found in that place. Furthermore, an old horse skin drawn vp with our fingers abideth so a long time, but a yong horses falleth downe againe by and by.

It is likewise the charge of a carter, to haue especiall care of the health of his horses, whose continuance and terme of life as saith *Aristotle*, must be bewixt fixeene and twentie at the least; wherefore when he seeth them in health, and yet notwithstanding leane, he shall giue them parched wheat, or of panned barley the double measure. He shall rub them very well euery day all ouer their bodies: assuring himselfe that it doth more profite than being often handed and rubbed, than to giue them a great deale of meate. Likewise some say that the hand feedeth a horse more than his meate. If they cannot stale which is knowne by the swelling of the bladder, and about the yard, he shall make them drinke portage made of a pinte of wine, stamped garlick, and ten whires of egges: or else the iuice of red colewoorts mixed with white wine. In the meane time he must take away from them their oates and barley altogether, and to feed with nothing but their owne and accustomed fodder and grasse meate, soe as if they will recouer through the time of the yeere. It will be good also

The strooken
eie.

The strooken eie is cured by applying vnto it a cataplasme made of bread crums steeped in coole water, or bread toasted and steeped in white wine, if this do no good you must open the head veine.

The bleared
eie.

The bleared eie is cured by an eie salve made with frankincense, mirrhe, starch and fine honie: as also by a frontlet made of frankincense and masticke finely powdred and braied with the whites of egges, applied to the browes and suffred there to lie vntill the eies cease to shed teares, and after to raise the frontale with annointing the edges thereof with oile and warme water beaten together.

The skarre of
the eies.

The skarres of the eies are healed with rubbing them with your owne fasting spitte and salt, or with the powder of the cuttle bone mingled with burnt salt, or the feede of wilde parsnep pouned, and pressed out of a linnen cloth vpon your eie skarres.

Paine of the
eies.

All paines of the eies are cured by annointing them with the iuice of plantaine with honie.

The harshe or
swelling of the
kernell of the
bare.

The enceur doth bring present death vnto horses: wherefore you must so soone as you see the brest kernell to be swolne, plucke it away without any staying: and if in thus pulling of it away any veine should burst, you must tie it at both ends with a silke thread: looke how much the kernell shall grow greater, so much greater an impostumation it would make, and not so only, but therewithall cause death.

The auines.

The horse hauing druncke much, or watted very quickly after his heate and trauaile, and vpon it growing colde, and not being walked, doth beget the Auines, which do but little differ from the disease called the kings euill, because as well in beasts as in man the kings euill cometh of too much cooling of water, the throate hauing bene heated, whereupon the horse loseth his appetite to eate and his rest likewise, and his eares become colde: you must presently provide to helpe him, in taking away the Auines after this manner: Bend downe the eare betwixt his necke and his chyne, make incision with a knife for the purpose along vpon the hard fleshyne, which one would saie to be nothing but a very white sinew: plucke away the white, carnositie or fleshy substance: lay to the place as well within as without, a linnen cloth dipt in the white of an egge, coner the horse by and by with a good couering, and walke him so long as vntill that his eares become warme, giuing him a drinke made with water, salt, and meale, but first causing him to eate a little good haie: let him rest three daies in the stable, and eate and drinke there: or else make him hot fomentations, and those of such things as are proper in that case, to be applied vnto the part, for to remooue the humour, afterwarde applye a cataplasme made of barley meale and three ounces of rosin, all boiled in due sort in good strong red wine: and when the matter shall be gathered and ready for suppuration, giue it a gash with a knife, to let the

suppurated

suppurated & ripe matter out, afterwarde put in the hollow place tents wet in water, oile, and salt, with bolsters laide vpon them and dipt in the same. This disease craueth a speedie remedie, for and if you staie till the auines be gotten vp higher, it is past hope of curing.

The squinancie, otherwise called the disease of the throate, and swelling of the tooong, requireth first of all that the horse should be let bloud vpon the veine vnder the tooong, or of the palate of the mouth: after that a fomentation for the whole mouth, and for the tooong with warme water: then after that a liniment of the gall of an oxe, or of salt & tartar beaten together with strong vineger. And as concerning a drinke, you must take of old oile two pound, of olde wine a pottle amongst all this you shall mixe nine fat figges, with nine leekes heades: temper them all well together, and afterwarde make a decoction, in the end whereof, but before it be strained, you shall adde of salt and nitre well pouned, so much as you shall see necessarie: of all well strained you shall make a drinke, which you shall cause him to take with a horne twice a day, that is morning and euening a quarter of a pinte at a time. For his meate cause him to take greene barley, or fetches, or the meale of barley, amongst which you shall mingle nitre.

The squinancie
or inflammation
of the throate.

The strangles of a horse or glandules which happen vnder his throate, and fall downe from the braine much cooled, are cured by pricking him vnder the throate in the morning, afterwarde couer his head with a linnen cloth, and rub all his throate oftentimes with fresh butter, but especially the place of his disease.

The barbes hindring the horse from eating by reason of hauing the tooong swolne, are healed by making him eate pease, beanes, or the stalkes of pease or beanes, because that the bruising and breaking of them causeth this swelling to go away: and if the barbes doe growe there againe, you must cut them out with a very sharpe iron, being likewise very hot, for thus are they taken out of the hollow of the roofof the mouth, and for the rest not taken away by burning, you must cut them away with a paire of sheares euen to the quicke.

For the excrescence of flesh growing vnder the horses bodie, you must shauie the place and make incision with some knife fit for the purpose, and then afterwards annoint it morning and euening with the ointment called Dialthea.

The soupe, or
excrescence vnder
the bellie.

Flies are kept away from horses sores with pitch and oile, or grease mingled and powred vpon them, and then by strawing fetch flower vpon them againe.

To chase away
flies.

The disease of the gums and teeth hapneth oftentimes vnto colts when they are growing their teeth, temper of fullers earth (the best you can come by is that of Reines) in very strong vineger, and therewith rub their iawes on the outside, but more a great deale in the place

The paines of
the gummes and
teeth.

place where the paine or swelled gums be.

The short winded horse.

The short winded horse, or he which cannot easily draw his breth, & which hath his flanks beating incessantly, & which notwithstanding that he be pricked, haled, and whipped, will not stirre, but pant very much and blow exceedingly; yea and which in eating of his meate cannot abstaine coughing: this same horse will hardly ever be cured. It is true that this disease being new, and caused of dust, dustie windes, foistie hay; or of having eaten some kinde of dung in his prander, the remedie for it may be, to draw blood vpon him with a greene withie, and to power hot vpon his breast and backe the said blood mingled with wine and oile olive: and having done this for the space of five daies, then the next five daies following to make him take downe lee at his nostrils, wherein there is mixt a portion of oile: to giue him this drinke after: mustard seede well fried, quicke brimstone, graines of paradise, of each alike much, make them in powder, and make thereof a decoction in honie and water, or else in some composition that is good and thicke, whereof you shall giue him euery morning the bignes of a big wallnut with sage and with thicke red wine; but such as is good and noble: or else make him a drinke with cloues, ginger, cummine, fennell-seed, and the rootes Galanga, as much of the one as of the other; all these being powdred, mingle therewith some eggs and a little saffron, make the horse to take it downe with wine, holding his head high, to the end he may swallow it the more easily, and not suffering him to holde it downe, at the least for a good halfe hower, to the end that the drinke may passe through his bowels: after this drinke you shall giue him fresh grasle, or the leaues of roses or willow tree to temper the heate of the said drinke: but the horse must not haue eaten any thing for the space of one halfe day before the taking of this, neither yet must he eat any thing for the like space after the taking of it. Let him walke and leade him gently by the headstall, or else getting vpon him, let him pace him very softly, that so he may not cast it vp againe: and thus much for the cure of the short winded horse, if the disease be not growne too olde. Which notwithstanding that it should be, yet you may releue it for thertime, if you scare him a little vpon both the sides of the flanks, to the end that this heate may cause to cease this great panting, which doth paine him in his flanks: and if withall you lit his nostrils, that so he may attract and draw in the aire and his breath, and as easily let it goe: besides these waies I would haue you also to giue him to eat, some grapes oftentimes, and to drinke some sweete wine. A pother singular remedie there is, which consisteth in giuing him a drinke made with agaricke and fenugreece tempered with red wine: or else to cause him to swallow the blood of a little dog, which yet is not above ten daies old: or to take the rootes of gentian, of wilde cucumers and bitter almonds, and to powne

powne them with hony and water, and to make a drinke thereof: or else to giue oftentimes to eat of siluergrasse.

The cough hath many causes, notwithstanding that which cometh from the cheft, as from the lungs and parts adioyning, or else from some other of the inward parts, which are noble and principall, and haue accordingly some notable office in the bodie; hath not a more soueraigne remedie, then the litting of the beasts nostrils, and if after this the beast doe not amend; then to cause him to take downe a good pinte of the drinke following with a horne. Take fenugreece and linseed, of ech a quarter of a pecke, gum tragacanth, olibanum, and myrrhe, of ech an ounce, sugar, the oaremeale of great wild pare, of each an ounce, all these being well powned, and let run thorow a bag, you shall cause it to be infused all a whole night in hot water, and the day following you shall giue it to the beast, as hath been said; and this shall be continued, adding thereto a bowle of oile of roses, even to the end of the cure. Some cause fine egges to be layd to steepe one whole night in strong vineger, and the next morning when they see that the shell is become very tender and soft, they giue them to the horse to take downe. Furthermore, you must neuer draw blood from the horse in what place soeuer that it be, but it shall be good to giue it vnto him, and to continue the gum tragacanth with sweet oile.

The cough in a horse.

The ague of a horse is cured, by being let blood vpon the veine, which is found in the midst of the thigh, to the quantitie of fixe ounces, or about the place which is somewhat aboue the fundament: but if in neither of those two places, or where they cannot be found, you must take the necke-veine toward the winde-pipe: if you perceiue that there is need of a drinke, you shall straine a handfull of purslaine, and mingle the iuice with gum tragacanth, fine frankincense, and a few prouence roses, you shall make him take it all with honied water, in some pretie small quantity. It is known amongst other marks that he hath an ague, if he haue the stopping of his vrine, and his eares become colde, withering and hanging downe.

In the faintnesse of the heart, it is good to keepe the horse very hot, and to giue him this drinke: myrrhe two ounces, gum tragacanth foure ounces, saffron foure drams, melilot in powder an ounce, mercurie a pound, and fine frankincense so much as shall be sufficient and proportionable: all these mixt together and made into powder, shall be referued for your vse, and that shall be in giuing two good spoonefuls thereof with one pinte of water, two spoonefuls of honie, and two bowles of oile of roses. This drinke will serue for many dayes, even til the horse doe finde himselfe better. And further know that this drinke is good for those that haue their backe or loines broken, and members backe very stiffe.

The faintnesse of the heart.

The broken backe.

For the horse that is ouerheated, you shall cause him to swallow with

The horse ouerheated.

with the horse in Winter three ounces of oile, with one pinte of red wine, and in Summer two ounces of oile only, with the like quantitie of wine that is aboue named.

Paine in the bellie.

In the paine of the bellie, which some call the birth, you shall take the seeds of wilde rue or of the garden rue, you shall powne it well, & with hot wine you shall make him a drinke: vnto this drinke you may adde cummin and fennel seed in like quantity, and after keepe him hot in some close and well covered place: before you giue him this drinke you must get vpon his backe, and walke him a long time, and that rather in high places, than in low and plaine fields: when you are coming homeward, if the season be cold you shal cloath him with a good woollen cloth, rubbing his flanks with oile, vntill such time as he be become colde, and do breake winde. It would be good also to conuey into his fundament some hollow ioint of a reede or rose tree sufficient thicke, and halie a foot long, anointed with common oile, and let this same hollow reed be in such fort fastened vnto his taile, as that it may not by any meanes come forth, and this done, then to get vpon the horse, and to walke him. But howsoeuer things go, you must let him haue meat of hot qualitie, and to drinke water boiled with cummin and fennel seed in equall quantity, mingling with it wheat-meale, and keeping it very warme in a very close place.

Difficulty of vrine.

For the difficultie of vrine, it is an approoued thing to take siue or nine of the flies called *Cantharides*, to lap them in a linnen cloth, and applie them to the thigh, and howsoeuer it fareth with him, yet to keepe them there for some time: this will procure vrine: but in any case giue him them not in powder, clyster or drinke. It is good also to rub his cods, with the decoction of creeses, pellitorie and rootes of leekes.

For the sniuell.

For the sniuell, take orpion and brimstone, cast them vpon burning coales, and let the fume goe vp into the horses nostrils, that so the humours congealed aboue in his braine may be resolued and cast forth.

The flying worme.

For the flying worme, take from him some blood vpon the veins of the temples, apply a hot searing iron very deepe vnder the throat, and in the hole put tents & plegers vpon them, moistned in the white of an egge, and after let him stand three daies in the stable.

The Iauar.

For the Iauar take pepper, as also the leaues of colewoorts, olde swines-grease, and make an emplaister to be laid vpon the place.

The figge.

For the fig, you must pare the hooft so farre forward, as that you may make reasonable roome and space, betwixt the sole of the foote and the fig, then put a sponge there and tie it very harde, that so the rest of the fig may be eaten away euen to the cleft.

The wenne.

For the wen, open it when you shall perceiue it to be full of matter, afterward make a plaister of geese-turdes, wine, salt, and vinegar, and lay

lay vnto the fore: beware there be not in the bottome of it some strange and vnwoonted thing.

For the galling of the backe that is new done, take two great onions and make a decoction thereof in boiling water, afterwarde you shall apply it to the fore place as hot as the horse can abide it, all the swelling will be gone away in one night. Otherwise, take salt in powder, and wet it in strong vineger, putting thereto the yolke of an egge, with all this together you shall rub the place, and you shall see the prooffe: or else wash the place with wine or very strong vineger, lay aloft vpon it lime made in powder and mixt with honie, continue this remedie so long as till the flesh be come a gaine, and the bone couered with it, then to cause haire to grow vpon it, you must poun the shels of small nuts burned, and being mingled with oile, annoint the places wanting haire, and it will be ouergrown in a short time.

For a galled backe.

For a horse swaied in the backe, or complaining of hauing beene overladen, applie vnto the reines of his backe an emplaister made of stone pitch, with the powder of bole armoniacke, dragons blood, olibanum, masticke, galls, of each equall waight: let the plaister be laid somewhat hot vpon the offended part, which you shall not take away vntill it easily forsake the place when you touch it: for then the horse is healed.

A horse swaied in the backe.

For the swellings caused on the horse backe by the saddle, open it first with a knife, afterward lay plegers vpon it wet in the whites of egges three daies together: and the place if it be swolne and hard, it will be healed with coleworts, pellitorie, wormewoode, and beares-breech, bruised together and stamped and boiled together with sweete seame: apply it vnto the place offended and hurt.

The backe swollen.

For the disease called graps, which are moulcs and scabs on the heeles, peelee away the scabs, and then wash the place with the decoction of mallowes, brimstone, and mutton sewer: put the droffe or thicke substance of this vpon the place, and binde it fast and close thereto, afterward take it away and annoint the place with an ointment made of vineger, mutton sewer, the gum of the firre tree, and new waxe of all alike, and boile them altogether.

The scabs of the heeles.

It is a singular good remedie for the jaundise which followeth: take of panicke corne, and smallage, of each a pound, boile them all with lupines and good hony, and of the whole strained, make him take a pint, eight daies together.

The jaundise.

If he be colticus, he may be helped by drinke or clyster; the drinke shall be such, giue him ordinarily of the powder of wilde rue with the seede thereof steeped in good red wine: or else take the roote of yellowe flower de luce with annise seeds and opopanax: and of all these beaten together very small, you shall make three doles or draughts, with three ounces of good red wine, and as much oile oliue, and those

on

on three seuerall daies. In the clyster you shall put the iuice of pale coloured flowre deluce in three pound of the decoction of mallows and perrie, and into the whole you shall put of fall nitrum, and the dung of pigeons, of each an ounce, of oile de baies and rue, of each three ounces. After the clyster giuen, he must be walked a great while, and very softly. Some farriers or horseleaches haue in this disease made triall of hares dung, with nine spoonfulls of hony, and five graines of pepper, to make a drinke to take with the broth of cich peale, or red colewoorts.

*The swelling of
the horses
flankes.*

The horse oftentimes hauing eaten too much barley or other pro- uander that is hurtfull, is troubled with the swelling of his flankes, and the rest of his body: to take the same away, you must make a decoction of mallows, pellitorie, beares-breech, mercurie, and other soluble herbes, putting thereto bran, salt, hony, and oile: and hauing warmed this decoction, he shall haue a clyster giuen him with a clyster-pipe, hauing the shank therof proportionable great & long: this being well accomplished, annoint his belly with oile, and after cause it to be rubd with a round staffe by two men, beginning before, and so going backward, stopping vp his fundament: after this get vpon him and walke him very softly, and a long time, vntill that he haue voided, not onely this clyster, but withall some part of the dung, which he had in his bodie, and he will be well by and by after.

*For a horse that
is bursten.*

For bursting or rupture, some are of opinion that there is nothing so souereigne as to take seauen ounces of the ashes of the wood of vine branches, or otelme, with three ounces of oile oliue, scallions braied, seuen in number, hony three ounces, fresh butter and goats sewer, of each an ounce, the iuice of plantaine three ounces, with olde white wine, or the broth of cich peale: this will serue for thrile, to be taken three seuerall daies together.

*The stinging of
flies.*

To keepe your great horses that they may not be molested and troubled in great heate, with the stinging of flies: you must rub their haire with the iuice of the leaues of gourdes.

The farcie.

For the farcie of the legs, you must shau the place, and after annoint it with the oile of iuniper for the space of fower daies evening & morning: and let not the horse go forth to water all the whiles that his haire is not growne againe: or else let him haue a strake with an iron, longwaies, and overthwart: otherwise, for the farcie of a horse how harde to cure so euer it be, you must take the rootes of common cotton thistle (which is the broad and white leaued thistle) and make him eate them in shiues with his oates, it will heale him without all faile, in lesse then fiftene daies, or three weekes, if it be continually giuen him to eate: and the remedie is very easie, seeing the horse will willingly eate it.

Clefts.

For clefts which happen betwixt the ioint of the legge and the hoofe,

hoofe, shau away the haire, wash the place with wine, annoint it with an ointment made of foote, verdegreale, and hony pouned and boiled together, mingling therewith in the ende some lime: if the chaps be very deepe in, leare them.

For the scab.

For the scab you must let him bloud in conuenient places, according to that place where the disease is: for a conuenient purge, it will be good to vse of the powder of the root of wild cowcumber mingled with sal nitrum and giuen in a horne with white wine: the medicine oftentimes giuen doth purge him of euill humours: for an outward remedy, take quicke brimstone, fat pitch, claie of Iudæa, called Asphaltum, mingle all together and dissolue it in new butter salted, and with this ointment you shall rub him all ouer his body in the greatest heat of the sunne, and by many persons, and a long time. If you loue not rather to take of vineger a quarter of a pinte, of perrofinne fowre ounces, pitch or gum of the cedar-tree fowre ounces, and mixe them all well together in an ointment, with mans vrine and warme water, putting thereto of sweet seame and olde oile, of each three ounces, make a liniment or cerote, if it like you not, better to wash him all ouer, or else to foment him with vrine and warme water, and after to apply your liniment vpon the places so washed. The herbe called rose-baie, or oleander, boiled in oile (I meane the leaues onely) is an exquisite remedie for this disease, putting thereto fat pitch, vineger, and waxe: and remember alwaies in rubbing and annointings to rub the beast against the haire. It is also a soueraigne remedie to curie him first in the scabbed place vntill it bleede, and after to wash it with lee made with one part of lyme, two of beane-meale, and three of the ashes of ash-tree, all these not boiled but steeped onely in the lee. After the washing you must annoint the place, with an ointment made of quick siluer, hellebor, brimstone, alum, colts-foot, and swinesgrease.

When the horse complaineth himselfe, and his flankes be swolne, *The horse as also the rest of his body by hauing eaten some bad hay or prouander, swollen.* you shall make him this drinke: take the thinne skins that are in the stomackes of three hens, and drie them well in an ouen, afterward powder them with halfe an ounce of pepper, and fowre spoonfulls of hony, and an ounce of the powder of fine frankencense, make him take this medicine with a pinte of warme wine, and to the end that it may loosen his belly, giue him at the fundament by a clyster sufficient great and long, a clyster of the decoction of mallows, mercurie, pellitorie and other loosening herbes, putting thereto bran, salt, hony, and oile.

Against the colicke: take asarum bacchar, the leaues and roots *The colicke of parley and fennell, of each one ounce, blacke pepper two ounces, in a horse.* horehound an ounce, soothernwood halfe an ounce, fine hony a pot-

cle, boile it well and scum it altogether, and thereof make trochiskes of the bignesse of filberts, and with a quarter of a pinte of good wine, you shall make the horse to take it in manner of a drinke: and the day that the colicke doth paine him, you shall bruise three or fower spoonfuls of fennell seed, and cause him to drinke it downe roundly with wine, and then couer him well to cause him to sweat.

For the swelling of the cods or stones, make as it were a pap of strong vineger, fullers clay and salt, to annoint the cods withall twise or thrise a day.

For a fistula: make the hole wider, seare it, cast it into a salue made of vnquencht lime, so long as till the core or dead flesh within do fall out.

For the canker: wash it with strong vineger, afterward sprinkle vpon it the fine powder of the root daffodils, rats-bane, and vnquencht lime, put together into a pot and burnt to ashes.

For the Iauar in the houghes or hams: seare the places along and ouerthwart with a hot iron, afterward apply thereto a cataplasme made of very new oxe dung fried vpon the fire with oile.

If the horse be cloied you must take out the naile, and pare him to the quicke and till bloud come, then making very cleane the pared place to drop into it melted brimstone, or to fill it vp with an ointment made of turpentine, waxe, oile, hony and salt, all being made very hot, and a little cotton also dipped in the same ointment. Or else (which is an approved thing) to put vpon the hurt place on the inside of the hooft of the horse, the leaues of white female mullein bruised betwixt two stones. And in case the maladie be a day or two olde, then you must hold the horse foote in warme water well salted, and lay and bind aloft vpon the foot a plaister of bran, swines greafe, and salt water: or with small salt and strong vineger, or the powder of gals, or mirtles, or of the mastick tree, and then to seare him aboue, and to fill vp all the hollow of the foote with porkes greafe: and hauing thus dressed it so much and so oft as shall be needfull: let it be made vp, filling notwithstanding the hooft on the inside with pitch, and annointing it oftentimes with swines greafe as is abovesaid. And to preserve the hooft in his soundnesse and strength, apply vnto it aloft a cataplasme made of boyled mallowes stampd and mixt with hony and bran: put in the hollow of the hooft the sewer of a sheep, and aboue the hooft his own dung.

For the horse which halteth because of some stroake giuen him by some other horse vpon his sinewes: take of the sewer of a male-goate a pound, molibdena halfe a pound, rosin a pound, and copperas halfe a pound, make an ointment. The sinew stroken or wounded, or hauing receiued any other kinde of wrench in the knee or ioint, by the horse his setting of his foote in some bad and inconuenient place, is healed

healed by taking an ounce of fenugrecke, as much of linseed, fower ounces of swines greafe, all boyled together so long as till it be thicke and much diminished.

If the horse interfering do wound himselfe vpon his hinder feet, *The enserfe-* you must cut away the haire verie short and bare from the place that *is hurt, and rub it with common salt, tying vpon it some prettie plate of thinn lead, afterward taking that away to wash it with wine.*

For the spauin in the hammes: you must raising the thigh vp on *The spauine.* high, tie the veine called fontanella, and give it a wound with a flemme to let it bleed, and after to apply the actual cauterie, or hot iron vpon the spauin and to burne it long while and ouerthwart, and to heale vp the seared place, as in the iauar.

The chaps are healed, if you burne them at either ende with a *Chaps & clifts.* round hot iron: for this burne will keepe the chaps from going further, and then afterward rub them with washed lard in diuers waters, or with oyle of bayes mixt with masticke, frankincense, vineger, and the yelke of an egge.

The grapes would (when the haire is once taken away) be *The grapes or* washed with the decoction of mallowes, of brimstone, and mutton *scabbes.* sewer, afterward applying the droisie partes vnto the place, which being taken away there shal an ointment be made of new waxe, turpentine, and gum arabecke equally mingled.

For the hornie swelling in the circle of the houghes or hams: you *For the horny* must shau the disease and put vpon it the droisie partes of the deco- *swelling.* ction of hollihocke roots stamped: and after that a plaister of mustard seede, the rootes of mallowes, and oxe dung, all boyled together with vineger.

Cut the head and the taile from a snake, and deuide the rest of *For the disease* the bodie into gobbets, roast them on a spit, gather the fat which *called paumen,* droppeth, and apply it to the wound. *or maulle galls.*

The disease of the hooft or the corne: stamp colewoorts that are *The disease of* greene with old swines greafe, lay it vnto the disease, and get vpon the *the hooft, or the* horse, and ride him indifferently to the end that the medicine may *corne of the* pearce into it. *foote.*

For the garrot: plucke away the flesh that is dead with a sharpe *The garrot.* instrument, and wash the place with warme wine, afterward apply plegats thereto moistned in the white of an egge.

The disease of the necke: pearce the flesh in fiew places on both *The disease of* sides the necke, with an iron sharpe like a naule, put a teton through *the necke* euerie hole, and let them abide there fiftene daies.

For the palamie: take away the flesh from the pallat of his mouth *The palamie or* with a verie fine instrument, and that in such quantitie as that the hu- *blowde chaps in* mour may easily come forth, afterward cleanse and rub his pallat *the palate.* with honie of roses, iuice of chiboles, scallions and burned wheat.

The courbe, or
a long swelling
beneath the el-
bow of the
hough.

The swelling of
the knee.

Broken and
chapped knees.

Chafings.

Old tumours.

Wormes and
boiles.

The current.

Flux of blood.

The resty horse.

The courbe: cut the skin alongst the haire, according to the big-
nes of the courbe, apply thereto a linnen cloth, wet in warme wine,
straw vpon it the powder of verdegrease, and thus continue vnto the
end of the cure.

For the kneeswollen: take a pinte of strong vineger wherein
you shall temper a little salt, of burnt copper halfe a pound, and of si-
nople so much as shall be needfull and necessarie.

For the knees that are broken & chapt: take common oyle, linsced,
ashes of rie-straw, & all being put together make an ointment therof,
to annoint the fore place euening and morning vntill it be whole.

For the chafings which happen vnto the necke or backe of a
horse carrying saddle packes or saddle: lay vpon the place the leaues
of wilde blacke vine.

In old and hard tumours make this cerote: galbanum two oun-
ces, rosin, and waxe, of each one pound, gum ammoniacke, and blacke
pitch, of each halfe a pound, and of oyle so much as shall be needfull
to incorporate and make vp all the rest in good forme.

Against the bots or wormes: make him drinke water wherein rye
hath boyled, or mingle amongst his bran some brimstone: or make
ashes of the woode of the oliue tree, or powder of dried wormwood
together with the cornes of raw lupines, and centaurie, alike much of
all, two ounces of the seede of turnups, harts-horne one ounce, and
with white wine, it will serue to take at three times: the day after the
three aboue named, you shall make him a clyster of the decoction of
wormewood and rue, putting thereto in the strayned liquor two oxe
galles, and an ounce of aloes.

Against the fluxe of the belly, which some vse to call the current,
there is made a drinke of great seruice & vse of the powder of gales,
with red wine & the flowre of starch tempered together: or els if the flux
come of taking cold, giue him sops dipt in sweet red wine & rose-wa-
ter: & rub his raines & belly with red wine, oyle of roses & a little salt.

For the fluxe of blood passing by vrine, you must let him
blood of the veine of the breast: afterward make a decoction of
wheat with sweete seame, and the powder of the rindes of drie pome-
granates, straine them all to make a drinke for to giue him euerie
morning, not putting him to any trauell at all. Likewise you shall
apply a cataplasme vnto his backe and raines, made with knotgrasse,
bole armoniacke, and the blood of the beast, mingled together with
strong vineger, or thicke red wine, which may also serue for them that
haue their raines relaxed or haue bene pricked with a lancet.

A restie horse for to make him goe forward, must haue a coarde
tied vnto his cods, and it must be so long as that reaching betwixt his
forelegs, it doe come vp so high, as that the rider may holde it in his
handes, and so may pull it hard when as the horse should offer to goe
backward:

backward: but if it be in a gelding, you must burne his buttockes
with a good long stick taken hot out of the fire, and burnt at the end,
for it will make him goe: and likewise if you vse the same course in
his rearings, it will correct him and make him leaue them.

If the horse at any time with eating of his hay doe eate any vene-
mous beest, as scorpion, spider, or the venomous flie, called Buprestis;
he must be couered till he sweate, and then in all hast let him blood
in the rooffe of his mouth, which so soone as it is run forth, shall be gi-
uen him againe to drinke warme, and in such quantitie as it came
forth; for his meate giue him leekes and wheate boyled together.
Looke more aboue in the chapter of the neateherd or oxkeeper.

For the stinging of vipers, a liue cocke slit through the middest
and applied warme vnto the wound is much woorth: and presently
after this a powder of the roote of yellow daffodill with strong wine
and salt made all in a drinke for him: or else the roote, leaues and
fruit of wilde vine made in ashes and drunke with good wine: or else
take presently that kinde of buglosse called *Echium*, and drawe out of
it a good pint of iuice, hauing first watered it with white wine or wa-
ter of *Carduus benedictus*. If you perceiue that the leafe will not yeeld
you iuice inough of it selfe, make the horse first to drinke that which
you haue, and after applie the substance of the herbe vpon and about
the stung place and couer it.

The shrew by her biting of the horse maketh him oftentimes to
die, as we haue oftentimes seene both in horse and oxen: this is a beast
as big as a mouse, of the colour of a wefill, with a long snout & a short
taile: she fastneth vpon and infecteth most chiefly the cods, and ma-
keth fower small wounds: for to heale this venomous biting, you must
cause him presently to take downe through the nose bay leaues stam-
ped or powdred, with water: and to applie vnto the place that is bit-
ten, cummin and garlick stamped together: and in case there by any
vicer, you must foment the place with brine, or with the decoction of
the mirtle-tree, and to scatter and sprinkle thereupon the powder of
burned barlie: or of a pomegranat rinde. Looke more in the chapter
of the oxkeeper.

The biting of a mad dog hath for a singular remedie, if it be vsed
before it be nine daies, the flowers of Medicke fodder burned and
mixed with old swines grease, and applied vnto the wound, or else to
stampe it with olde white wine, and cause him to drinke it. Also the
roote of the egplantine tree made in powder and put vpon the wound,
or giuen him to drinke with good olde wine. Likewise the berries of
elder tree, or the iuice of the leaues thereof, or of ashe tree.

Hens dung swallowed by hap, bringeth frets and wrings in the
bellie: for which take of old smillage and drie two ounces, and cause
him to drinke them, with wine and honie: afterward walke him vntill
his

his bellie rumble, and that he began to dung.

The leane horse.

The leane horse may be made fat, if you giue him to eate fawels or long pease boiled in water and mixt amongst his prouender: but and if he should be so weake as that he could not swallow them downe: you must strengthen and get him into courage againe, making him sup egge yelkes with sugar in very good quantitie: warme water mixt with salt, and meale of millet, and giuen to the horse doth greatly fat him. Also panicke, rice and millet boiled and mixt with beane meale and salt are excellent good, and it would be giuen him fower times a day, but not much at a time, least the horse should cast it vp againe.

The raging leane of mares.

It commeth to passe sometimes that mares are troubled with a kinde of rage, that is to say, when they see their owne pictures in the water they are taken with loue: and hereupon they forget to eate and drinke, and drie vp their heat or signe of desiring the horse. The signes of this madnes are manifested by their running through the pastures, as if they were spured, oftentimes looking round about them, as if they sought and desired some thing. They are cured of this madnes by being brought vnto the water; for when they shall see by their shadowes therein how ill fauoured they be, they will forget the first shape which they had beheld before.

The horse lecherie of P. Vegetius corrected by the author.

A further discourse and more ample treatise of the diseases and curing of horses is to be looked for in the workes of *P. Vegetius* concerning the curing of the diseases of horses, and which I haue translated, or rather paraphratically runned ouer in French out of Latine: Looke also into the chapter of the ox-keeper aboue handled.

The nine and twentieth Chapter.

Of the asse.

Howsoeuer it be that the asse is but a base and contemptible thing, notwithstanding he is very necessarie in euerie countrey houle, because he traueleth and doth his necessarie worke, better then if he were greater and more corpulent, as to turne the mill, to grinde the corne, to beare the corne to the mill, and diuers other implements and commodities, as butter, cheefe, and cream, to be sold at the market, and to bring the same or any other thing backe again home vpon his back: to toile the earth that is light & not strong & stiffe: to draw carts that are not too heauie laden, besides the commodity of the milke of the she asse, which is a soueraigne remedie as well for them that be in a consumption, that be weake, impositions, rheumaticke, and such other like diseases; as also for to make meate, to white, make tender and smooth the faces of women, as we read that *Poppea* the wife of *Nero* did, vsing bathes, to keepe her hew and colour most faire and her flesh most smooth and white. To set passe

The milke of an asse good for them in consumption, and for to make faire the countenances of women.

and to say nothing of the flesh of the asse, which whiles it is yet yong is very delicate, and full of pleasant taste and saour in eating, and for that cause hath sometimes bene of great request in Rome, as also in our time in great estimation, by a great noble and worthie man in France: who caused a flocke of asses to be kept and most carefully looked vnto: and in like manner to say nothing of the hide, whereof there are made very good sieues to riddle the corne, as also tabers to daunce by, and drums for the wars. Wherefore the good householder must appoint him also one to order and gouerne him, who notwithstanding shall not be much busied in taking charge of and looking to him, seeing he is very easie and light to keepe: he is contented with a little meate, and that of any sort euen such as one will giue him; for some feede him onely with leaues, thornes and thistles: some doe fat him with chaffe and straw, which are commonly found almost in all countreies: it is true that he must not be let feede vpon or haue giuen to eate any hemlocke; for it casteth him into such a sound sleepe, as that he seemeth to be not so much like a blocke, but rather starke dead. If you giue him now and then some bran, bread or millet, it pleaseth him as well as a great banker: he looketh not worse, when he is ill handled and curried of him, who hath the charge of him: he doth easily indure strokes and hunger, and is not easily tainted of any disease: notwithstanding the asse-keeper shall haue care that the shee asse may be couered in due time, that is to say, from mid march vntill Iune, to the end that foaling about the end of the yeere, it may happen to be in the spring of new graffe, and the age of the asse to be connered must be from three yeeres to ten: at which time you must giue leaue to the she asse to run, in regarde of the good store of fruit she hath brought forth: but on the contrarie not to suffer the male to continue out of labour, seeing that much respite, will bring him to an habit of slothfulness. He shall suffer the yong asse to sucke it dam, vntill it be two yeeres old: or else you shall let it sucke a mare, because it is somewhat better: he shall not set the yong asse to labour before it be three yeeres old, which is the time wherein you must accostome it to beare burthens, to draw in the plough, and to serue to ride vpon. The asse that is not aboue ten yeeres olde, nor yoonger then three, which is great, well squared in his members, hauing sufficient grosse eies, wide nostrils, long necke, broad brest, high shoulders, great back, a large chine or crest, great cods, a flat crupper, a short taile, his haire drawing toward the colour of blacke, sleek, and list, hauing a black marke in the forehead, or all along the bodie, shall be well accounted of. But on the contrarie there is no account to be made of such as haue an ashie coloured haire, or somewhat gray, as the most in this countrey are, and least of all of such as are of a small stature: To be short, he shall be carefull to heale them when they be sicke, (although as hath bene

Rest maketh an asse alwaies after vsing for labour.

The marker of a good asse.

The diseases of the asse.

said, this beast is not very subiect to diseases) and that by vsing such remedies as he doth vnto horses.

The asse-lyde.

The housholder being a good husband, shall keepe the hide of his asse, to tan and dresse to make shooes as well for himselfe as for his familie, for as much as shooes made of an asses skin and vpon the backe part, whereon the asse doth carrie his burthens, are so durable, as that one shall scarce see any end of them, though you weare them amongst stones, grauell, thornes, or other such like places, notwithstanding with their long lasting they grow so hard, as that they cannot be worne any more.

The asse horse.

The hoofe of an asse burnt and made in powder doth heale the falling sicknes, and that of the wilde asse hanged about the necke, or set in a ring, in such sort as that it may touch the flesh, is singular against the saide disease, as also against the swimming of the head, which commeth through a weakenes of the braine. Some thinke that the wilde asse is that beast which is called *Ellend*, and much seene in *Polonia*, *Lithania*, and *Suecia*, and that because that the *Ellend* hath eares like vnto an asses: the French men which haue trauailed into *Polonia*, saie that the *Ellend* doth resemble the asse in nothing but in her eares, as otherwise in al points almost being like vnto the hart: hauing a clouen foote, but that he is a great deale bigger, and in hornes like vnto a fallow-deere.

The asse doth know of the raine before it come.

Although the asse be mocked of the most because of his long eares, yet notwithstanding those eares how great foeuer they be, doe serue him for to shewe his vertue, and to make to appeere his vnderstanding and certaine knowledge which he hath of the change of the weather, seeing that if it will turne to raine, he then laieth them so flat vpon his necke, that one would say they were glued to it.

The thirtieth Chapter.

Of the Mule keeper.

A Good housholder must not be vnfurnished of things necessarie for his house, whether they serue for food & sustenance, or for ease. Wherefore although in respect of some manner of worke he may be content to want mules, hauing the benefite of horse to carrie him to the market and other places whither his busines shall call him: yet notwithstanding the mule is necessarie for his easement, whether it be that he would rather ride vpon mules then vpon horses, because of their easier pacing: or that by reason of age, or want of health of body, he cannot endure the trauaile of a horse, but is constrained to prouide a horselitter to carrie him in: I will further say that in some places, as in *Auernia*, that for the scarcitie and small number of horse and oxen, the mules are esteemed of great value, and are

The mules of Auernia.

used to toile the earth, to trauaile and do other necessarie things tending to the commoditie and maintenance of the house, to saie nothing that mules are proper beasts, strong and able to carrie gear and heauie burthens, as trunks, sacks of corne, and meale, and such other burthens which horses could not beare.

The ordering and charge of mules is like vnto that of horse, as well in respect of their meate, pasture, feeding, and furniture: as in the curing of their diseases, whereunto they are subiect, and therefore wee will knit vp in fewer words what may be said of them, both for the causes rehearsed, as also for that I willingly leaue the whole knowledge of their feeding and handling to those of *Auernia*, amongst whom they are in such high request. Notwithstanding to speake summarily, the mule-keeper must not onely be carefull of the well feeding of his mules, but also of making of the most profit of them. The profit that may be raised of them, consisteth in the very same commodities, that may be raised of the asse, and that is principally of goodly herdes and flockes. Hence he shall choofe a good and goodly beautifull male-mule, asse, or horse, and likewise a female, mare or she asse, for the saddle: for if both of them happen not to fit the turne and be well conditioned, yet that which doth, cannot be but valiant and courageous: and although that male and female mules be ingendred either of the male asse and the mare, or of the horse and female asse, yet those are the best which come of the asse and the meare: for those which come of the horse and the asse, though their name be according to their sire, yet they resemble in conditions their dammes altogether. Wherefore it is best, to the ende you may haue goodlie and beautifull she mules, to make a stallion of an asse, which is faire and beautifull, of a good race, and that hath beene well tried. You must choofe one that is three yeeres old and vpward, great and corpulent, of a strong necke, strong and large ribbes, of an open and musculous or fleshie breast, fleshie thighes, well trussed legs, of a blacke colour or fleabitten with red, tending to a bright, or of a graie siluer colour, or of a darke murray colour: for commonly asses are of a mouse colour, but they which are of this haire are not so liuely and stirring as the other, and if there come forth either male or female mule, wearing this livery, they are not so good and sutable. The mare must be lesse then ten yeeres old, great and faire, and of good limmes, to the ende she may take and keepe the nature of the asse disagreeing with her body, and being of another kinde then she her selfe: and that she bestow vpon her fruite not only the gifts of the body, but also of spirit & liuelines: the yoong staieth in the dams body twelue moneths, wherefore the mare would be couered from mid-March, vnto mid-Iune, to the ende shee may foale when grasse is in full force, thereby to be sure to get good store of milke. She hauing brought forth her yoong

The diuers manner of the ingendring of male and female mules.

The markes of a good asse to couer the mules.

one, it must be vsed after the manner of young colts: excepted onely, that after it hath sucked fixe moneths; the damme can giue it sucke no longer, by reason of the ache of her teates, but it must be made to sucke some mare, that so it may grow more lustie, or you must let it go with the damme, that it may learne to eate, so that still it be prouided of milke to sucke.

Signes of a good horse-mule.

Of a good mare-mule.

The horse-mule well chosen, must be of a grosse and round body, hauing small feete, and thinne legs and drie, a full and large crupper, a broad and soft brest, a long and compassed necke, a drie and small head. On the contrarie, the mare mule must haue her legs somewhat grosse and round, a straite and solide body, and a crupper hanging towards the taile. The mare-mules are stronger, mightier, nimbler, and longer liuers then the horse-mules: but the horse-mules are more tractable and more easie to guide and learne, then the mare-mules be. Both of them are subiect to lunacie, but to take this fault away, you must make them drinke some wine oftentimes: if they be froward and vnwilling to be sadled, you may tie vp one of their fore-legs even vnto their thighes, to the end that in the meane time they may not fall backward. If they be harde to shooe on the right foote behinde, you must tie vp the left before.

The diseases of the horse and mare-mule.

*Ague.
Difficultie of breath.
Scabs in the pasternes.
Leauens.
Cough.
Colicke.
Wearines and overheatin^g.*

The mare-mule is subiect to the same diseases that the horse, as hath bene said: notwithstanding there is something peculiar in them for which the remedies do follow: when she hath an ague you must giue her raw colewoorts; when she bloweth and sigheth much, and hath a short winde, you must let her bloud, and afterward giue him to drinke, three quarters of a pinte of wine, with halfe an ounce of oyle, and as much frankincense, and two pintes of the iuice of horehounde. If she haue the moulles and scabs about her pasternes, called the grapes, you must put vpon them barley meale, and open the impostume if any thing be in it. Their leaenenes and languishing is taken away, by giuing them oftentimes drinckes made with halfe an ounce of brimston beaten, a raw egge, and a dram of myrrhe with wine. The same remedie is good for the paine of the bellie and the cough. If he be wearie and ouer-heated, you must cast grease and wine into his throate.

Let all women that desire to haue children, beware that they neuer take the sent of the vrine of a horse or mare-mule: for the smell of their vrine doth make women barren, because that they themselves are naturally barren.

The smoke of the hoofe of a mare-mule.

The fume of the hoofe of a mare-mule put vpon hot coales & set on fire, is so odious vnto rats and mice that are in the house, that they by and by feeling the smell, runne away with great swiftness: of which you may make triall.

The end of the first Booke.

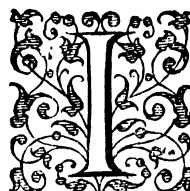
THE

THE SECOND BOOKE OF THE COUNTRIE HOUSE.

Of Gardens.

The first Chapter.

Of the situation, inclosure, ground, and fashions of bedges requisite for gardens, whether they be for profit or for pleasure.



It is requisite that we should now occupie our selues in describing the manner of husbanding and tilling of the earth, hauing run through al that belongeth to the building and inclosing of a farme, the office of the chiefe Lord, and of the Farmer & his people, and generally whatsoever concerneth the raising of profit by keeping of cattell. We will begin therefore (following the order before propounded) to describe gardens. And first with the kitchen garden, which hath bene deuised and appointed to ioine to the one side of the garden of pleasure, and yet separated from it by the intercourse of a great alley of the bredth of three fathoms, hauing either a well or conduit from some fountaine in the midst thereof (if you cannot conueniently haue a particular well in the midst of every garden) and besides with an hedge of quickset verie thicke, in which there may be made three doores, one to the house, another to the place of the well or fountaine; and the third opening vpon the orchardes inclosure. This hedge shall be planted likewise with hasell trees, goose-berry bushes white and red, pepper trees, currant trees, eglantines, brambles, woodbinde, the wilde vines, both the hollies, eldar trees, and intermingled now and then by the way with white thornes, wilde apple trees, and apples of paradise, seruise trees, medlar trees, and oliue trees: for it must be more thicke and a greater defence then any other, to prevent danger of cattell getting loose, which might a great deale more indamage the good and profit of their maister, then they could any way pleasure him.

The situation of the said gardens must be (as we haue said before) *The garden* neere vnto the house, placed vpon the north rather then vpon the south quarter, to the end that the chiefe Lord and owner of the farme, may out of the windowes of his lodging enioy the pleasure and beautie of his gardens: in some plaine plot of ground, which is as it were a little hanging, and thereby at the foote thereof receiuing the streame of

of some pleasant running water, either from some spring & fountaine, or from some well, or else from the falling of the raine: but far remoo-ued from the threshing floore and barne, to the end that the herbes may not be hurt, by the dust, durt, small straw or chaffe, which might be conuaid along from the threshing floore vnto the garden by the winde, when the corne is in threshing: for such chaffe hauing taken hold vpon the leaues, doth pearse them and fret them through, and being thus pearsed they burne and parch away presently. Likewise for the benefit of their labour, it must be iustly lined out and cast into a square very equally and vniformally, but yet somewhat sloping for the conuiance of the fall of raine water, and of the moisture of the dung-hill, which continually will be thereby running downward along the allies, by meanes of the raine, and so will mend the idle and vntoiled ground: and by the side of either of those two gardens within the wall and inclosure of the house, there shall bee kept two other gardens (if possibly it may be) secured and separated by other hedges, and a great path betwixt them, containing in bredth no lesse then three fathoms or eightene foot, euery one finely paved with good pit stones or burned tiles, or made with steeres, or filled with sand, that is to say, by the side of the kitchen garden, a particular garden for hempe, line, saffron, parsneps and other things of profit and good husbandrie, and this requireth a proper and special kind of ordering: and by the side of the garden of pleasure, another garden with pulse, as peason, beanes, fetches, rice, panicke, millet, and such other thinges, for they serue greatly for the keeping of your familie.

The paths in
the gardens.

The inclosure.

The inclosures of the gardens must be such as the commoditie and necessitie of the place doth require, that is to say, of walles if the reuenues of the house will beare it, or of a strong and thicke quickset hedge, if there want either pit stone or reuenues to build the wall withall. Notwithstanding it is least cost (to speake the truth) and more profit to inclose and compasse them in with a quickset hedge then with a wall: for the quickset hedge doth endure a longer time, and asketh not so great charges, neither to trim it nor to repaire it, as the wall doth: such a one is that which is made of brambles and thornes, as white thorne, or with the plants of elder tree, or other plants with tufted flowers mingled and set amongst the brambles, the same being cut by the taile and made plaine and euen when the time of the yeere serueth, as we see here in many places of France. Some there be that compasse and inclose their gardens with ditches and banks, but small to their profit, seeing the moisture of their gardens, which should serue them, is thereby conuaid away and taken from them, and this holdeth in all other cases, but where the ground is of the nature of marshes. The common inclosing vied by countrie men, is of thornes, osiers and reedes, but such hedges doe require almost euery yeere

new

now repaire, reliefe and making, in putting new stakes therein, whereas if it had an abiding and liuing roote, it would free the gardeners of a great deale of trouble, cost and trauell.

The ground of the gardens must be good, of his owne nature free *Grounds.* from stones, durt and hurtfull herbes, well broken and dunged a yeere before it be digged, to be sowne, and after it hath bene digged and dunged againe or marled, you must let it rest and drinke in his dung and marle. And as concerning the nature and goodnes of it, the clayie, stiffe or sandy ground is nothing worth, but it must be fat in handling, blacke in colour, and which crumbleth easily in the breaking, or stirring of it with your fingers, or which hath his greene turfes or clods breaking easily vnder the pickaxe, and becommeth small with labouring, as the small sand, and generally all grounds that are good for wheate, are good for gardens. It is requisite also to the end it may bring forth greene herbes in abundance, that it be a reasonable moist ground, for neither the ground that is much drie, nor that which is much subiect to water, is good for gardens. Notwithstanding if the groundes belonging to the farme happen not to haue this commoditie of idle and vnmployed ground to make gardens, you must remedie that sore as well as possible you may. The clayie, stiffe, and sandy places must be amended by dung and marle, and would be cast three foote deepe. The watry place shall be made better, if there be mixt with it some sandie or grauelly ground, and therewith cast it rounde about with ditches, thereby to draine and draw out the water annoyning the garden. And thus the good husband shall doe his indeuour to amend and make in some sort his ground more fruitfull. Let the dung which he laieth vpon it be either of sheepe or of swine, or of horle, or pigeons, or asses, according as the nature of the groundes shall require: and the elder it is, the better also, in as much as in time it looseth his filthie stinke and whatsoever other euill qualitie, and getteth a new kinde of rotnennes which is more soft and more easie to be conuerted into the substance of the earth, whereby good earth is made better, and the naughtie amended. This is the cause why such as haue written of husbandrie in Latine haue called dung, *Lutamen*, & French men, *Litiere*, because it maketh the ground merrie, supposed when it is once mingled and incorporated with the same. For dung that is pure and of it selfe must not be laid vnto the rootes of trees, but first (where there is need) of the shortest earth, and afterward of dung.

The hedge of quickset parting the kitchen garden, and that *Hedges.* other for delight would be planted and furnished with the plants before spoken of, in the moneth of Nouember and in the beginning of October, planting there also at the ende of euery eight feete, some elms, wilde plumb-trees, and cherrie-trees, by the support whereof as of faithfull props and staies, it wil winde & binde it selfe more firmly.

This

This hedge shall be verie well digged and helped with dung for a foot depth, cut neere vnto the roote some two yeeres after, and pruned euery yeere to keepe it round and euen, as also to make it growe thicke, and you must suffer to grow in hight and thicknes such trees as shall be planted therein to serue for stakes and as poles for your arbours, and the moe elmes you can put in this your hedge, and the rest which shall part your garden of hufwifrie and pulse, the better it will be; either for the making of fagots euery yeere, and that so they may them selues spread more in thicknes, as also for timber wood for your ploughes, and other implements: as also that they may ouergrow such arbours as you shal plant at their feet, and wherewith they doe in that place mutually and naturally beare and suffer.

If furthermore you would know the ordering of such great and small trees, as whereof the hedge is to consist, you shall finde it in the third and sixth booke.

The second Chapter.

Of the arbours of the kitchen garden.

EVEN as the garden of pleasure is to be set about with arbours, couered with Iesamin, Maries scale, muske roses, mirtle trees, baie trees, and other rare things: euen so shall the kitchen garden be set with turrets of lattise fashion, couered ouer with *Burdeanx* vines, or with the best sets of vines that are to be got in the countrie, for to make veriuice on for prouision and commoditie of the household.

The fashion of the arbour shall be in manner of a shadowie place, (for arbours are costly to maintaine) to the end you may drawe certaine beds vnderneath, or some floore of herbes, which craue no great cherishing and refreshing, leauing notwithstanding an alley of three foote bredth, both on the one side and on the other, for the dispatching of such worke as is to be bestowed vpon the arbour. And you must plant the best and greatest sets of vines vpon the south side, not cutting them so long as the wood may grow thicker: for it is nothing but a good foote and a thicke that maketh a faire and a beautiful fruite. The lattise worke may not be too thicke set or wrought: and it must rise and growe higher for the space of five whole yeeres, and be renewed and newe tied, euery yeere about the ende of the moneth of Ianuarie with the twigs of your willowes, and oziers, or of the broome of your warren: although if you make your poles of iuniper wood, you shall not neede to trouble your hand with them for tenne or twelue yeeres, especially if you strengthen your poles with pyles of oake halfe burnt. Tienot the poles of your lattise worke strait, nor the stocks against the trees of your hedge which shall serue for

The fashion of an arbour.

The bynding of the arbour.

for stakes, for so in time the band would eate it selfe into the rinde, as they should grow thicker, and do them great harme. And I would not haue you to forget to dung and vn couer the rootes of your stockes in winter, and to marke the yoong woode for to make sets to sell, or to store your selfe withall euery day more and more: gather not their grapes very ripe or very greene, nor yet when it raine:h. Finally, the ordering of the arbour is like the ordering of the vine, and would be but a superfluous thing to stand any longer vpon in this place. Wherefore you must haue recourse to the place, setting downe the manner of the ordering of the vine, as it shall be hereafter declared.

The third Chapter.

Of the digging and casting of the kitchen garden.

AS concerning the dressing of the kitchen or household garden, in as much as there are two seasons in the yeere for to sow herbes, so there are two times for to bring into order and dresse gardens, that is to say, Autumne, and the spring: there must such consideration be had as that the first workmanship and tilth be bestowed about the beginning of Nouember vpon that ground, which we intend to sow in the spring, and to digge in the moneth of Maie such other grounds as we intend to sow in Autumne, to the intent that by the cold of winter, or by the heate of sommer, the clods may be apt to turne to dust becoming short and brittle, and all vnprofitable weeds may be killed. But in the meane time before this first tilth and workmanship, it will be good that the ground for one whole or halfe yeere be manured with old manure and made good and far: for the best liking earth that is in time becommeth leane, and wasted by long and continuall occupation. Wherefore it behooueth that the vnim-ploied or fallow ground, which you shall appoint for your gardens, be first well cleaned from stones, and afterward cast vp and digged into new and fiesh earth, and the bad weedes rooted out, euen by the end of the rootes, whereof the good hufwife shall make good daffies: and afterward amended with some small quantitie of cowers dung: and horte dung well mixt together, and well rotted, and hauing laid a long time; or else of asses dung, which is the best of all for gardens, because the ass doth chaw his meat with leisure and breaketh his meat thoroughly, and so by that meanes doth make his dung better digested; and better ground then other beasts doe, and which also for that cause doth beget almost no weedes. In steed of dung the chaffe and troden straw of corne hauing rotted in the high waies for the space of a yeere may serue, which being by nature verie hot doth so greatly ease the earth, as that the herbes, trees, citrons, limbes, prahges, cucumbers

The worke of the arbour and of the vine is alike.

All manner of ground by being long sowne doth grow leane.

bers, citruls, and all other plants planted in that ground or sown doe come vp very faire, and beare fruite very quickly and in great abundance. For the second tilth it shall be wrought and laboured as a man would worke mortar from the one end to the other, and in thus labouring it, you shall mix the dung or marle very well with the earth. For the third tilth it shall be clotted, laid close, and raked into a flat forme, and with the backe of the rake in going ouer it you shall marke out your beds and floores, and the pathes running along betwixt them, and those so long and so broad as you can make them, according to the contents and largenesse of the place. And you must obserue that you make your floores of such widenesse as that you may stride and reach your armes from one side to another according to that their said breadth, to the end that such as are to weede them or to rake them, may from out of the saide little pathes be able to reach into the miditt of the bed, and not to tread with their feet vpon that which is or shall besowen. Wherefore if your said little pathes be two foote wide, it will be inough: for to make them any broader is but waite and losse of ground.

The fourth Chapter.

Of the disposing or appointing of the floores of the kitchen garden.

YOU shall dispose of your beds in such sort as that they may be in the middest of your garden, giuing and allowing vnto your turneps the largest roome, and next to them the coleworts, and vnto them you shall ioine the space for great turneps of both sorts, and that of so much ground as would make two of the former: after these floores, you shall make a path of three foot breadth, after which you shall prepare other floores by themselves, for spinach, beetes, arrach, rocket, parsley, and forrell. Againe you shall make an other pathe of other three feete: and on the further side you shall quarter out a bed for leekes and cines, and ioint thereunto two other for onions and chiboles, and for garlick, scallions, and catrets. By the side of these floores you shall make out a pathe of three feete and a halfe, and after it you shall make many floores for slips to be set vpon, as well for the maintaining of a plat for sweet flowers, as also for your borders: and yet further for your winter potherbes. And it will be good to this end to prepare a bed for sage, & an other for hyssop; one for thyme, and an other for marlerom, and an other for lauender, and an other for rosemarie, and an other for totherowood, and an other for small cypres: againe, one for sauorie, for hyssop, coltmarie, basil, spike, baulme, penniroyall and one of cammomill for to make seats and a labyrinth.

It shall be good also for necessity sake for to conserue the good

Little turneps
or mauls.
Coleworts.
Great turneps
of both sorts.
Spinach.
Leekes.
and cines.
Onions.
Chiboles.
Carrets.

Sage and hyssop.

A labyrinth.

good huswife to know manie remedies for diseases, and you must not doubt but that I my selfe haue learned many remedies from the experiments and obseruation of those sorts of women to shape out below or in the further end of the kitchin garden neer to the inclosed ground for fruits, certaine beds for Physicke herbes, as for valerian, milfoyle, asparagus, mugwoort, asarum bacchar, houillecke, patience, mercurie, pellitorie, nicotiana, and other such like, whereof we will make some short mention hereafter.

The fifth Chapter.

Of the situation of the beds of the kitchen garden.

IN such place as the sunne shineth vpon at noone, you shall prouide your beds somewhat raised, and well mingled with earth and horse dung, and you shall let them rest sometime before they be sowne. In one of which floores you shall sow in the increafe of the moone of *Lettuce-seeds*, March, your seede of lettuce and purslaine (for they will be growne as soone being sowed in March as in Aprill) for to set them againe in their floores, when they be sprung vp halfe a finger. In this same bed you may put the seede of pimprenell, harts horne, prickmadame, and forrell of England, and other sortes for salades: all thicke and hande ouer head one among another, to separate and set at large by themselves when they be growne. Looke very well to your seeds, that they be not too old, that they be winnowed and cleane, that they be moist and oilie but not mouldie; and by the edges of this bed, the breadth of two hands, you shall sowe artichokes. You shall also make a bed for *Fine herbes*, fine herbes, which in winter serue for the pot being kept dry, & for slips for the garden of flowers, as are garden balme, basil, coltmarie, thyme, hyssop, sauorie, marierome and sage. Againe it will be good to make *Seeds that will hardly grow*, one to sowe the seedes and kernels of citrons, oranges, limons, pomegranats, mirtle trees, bay trees, and date trees in; and seeing they are hard to grow in this countrey, because it yeeldeth no aire either from the sea or fit for them, it must be well and aduisedly considered that in planting or sowing of them, you set the smaller end vpward, and that they be not tumbled on the side: and when the citrons and such like seedes shall be growne vp and sprung, you must transplant and remove them into some caske, or such like thing that may be removed hither and thither, to the end to keepe them from very much heate and excessiue colde, and to couer and vse them daintily according to the times, and as shall be said hereafter. In another bed which shall be a very long one, and toward the quickset hedge and the arbours, you shall sowe cucumbers, citruls, long and round gourdes. In *Cucumbers and citruls*, a plot long and narrow like the former (because they must be oft watered

To chuse seedes.

Fine herbes.

Seeds that will hardly grow.

Cucumbers

and citruls.

tried and water powred at their rootes) you may sowe melons of diuers sortes.

And for feare of flying fowle and birdes, cast thornes very thicke vpon your beds; and, if they be sowed in the increase of the moone in Februarie, for to haue them the sooner to grow, yea though it be in March, yet spread vpon the thornes strawe, and that such as is bright, and let it be thicke, that so it may the better defend them from the danger of the frostes, which if you perceiue to be great, as it falleth out some yeeres, spread ouer them in stead of strawe old or whole mats, and yet in such manner, as that they may not lie pressing of the earth, thereby to oppresse and keepe downe that which would spring and growe vp. And what you would haue to continue still vpon their first beds, as the cucumber, melon and other fruites, make some small separation betwixt them and the other, and water them oft with water warmed in the sunne, and drawne a long time before, hauing stood in the trough or caske placed nere vnto the well: notwithstanding all herbes and fruites reaped from out of this garden are much better by removing: in doing whereof they are also not onely more freely bestowed, but become of a better taste and verdure.

The sixth Chapter.

Of the time of sowing the kitchen garden.

The power of the increase of the moone.

ALl seedes which are for the store of the kitchen garden, must be sowne and remoued in the increase of the moone, as namely from the first day vnto the sixth: for those that are sowed in the decrease, they either come vp slowly, or else they bee nothing worth: besides that, although you sow in the increase of the moone, it some time falleth out, that notwithstanding your seede be fat, full, make a white flower, and be nothing corrupted or hurt, yet some euill constellation (which the gardeners doe call the course of the heauens) doe hinder them that they profit nor, nor yet thrive any thing at all. Although that *Palladius* the husbandman say, that the earth which hath the fauour and benefit of a sweete and milde aire, and is watered with some running streame; is in all pointes and respects free & not tied or bound to any lawes of sowing: but he cannot deny that whatsoever groweth, whether it be plant or seede, hath two ends, that is to say, the root which hath altogether to do with the earth; and the branches or vppermost part thereof, which hath altogether to doe with the aire and the heauens; and that the obseruations drawne from superior bodies, as from the proceeding & disposition of the moone, doe shew and proue the ouerthwarts & crosse incombrances wrought against the creatures of the earth both in their putting forth of the earth and drawing to stalkes, as also in the gouernment of them afterward.

In

In moist places and such as are serued with some small currant of water, it is best to sow in the spring: for then the mildnes and gentlenes of the yeere following, doth intertaine in verie good sort the growing feedes; and the drinnesse of the sommer cannot hurt them, because of the water prest and at hand. But when as the situation of the place hath no naturall supplie of running water, or else such as is very hardly come by in respect of the bringing thither: there is no other refuge but the reseruing of the winter raine, wherefore in such places it is more sure to sowe in autumnne; and yet one may well sowe there in the spring, so that you cast your earth three foote deepe.

If a man be disposed to sow feedes in sommer, it must be in the increase of the moone of Iuly and August: and in autumnne in the increase of the moone of September and October: as also for the spring, in Februarie and in March. In places naturally cold, or which receiue no great heate from the sunne beames, the sowing in the spring time must be toward the latter end thereof; and that in autumnne, must be hastened and earlie performed. On the contrary, the sowing of feedes in the Spring time in a hot place must be earlie performed: and the sowing or seed-time of Autumnne must be somewhat deferred. Seeds doe grow the better when they be sowed vpon warme dayes, or dayes that are neither hot nor colde; than and if they be sowed vpon hot, cold, or drie dayes. The seed that is to be sowed must not be about a yeere old, otherwise if they be very old, drie, wrinkled, leane, soft, false or vntimely gathered, they will neuer grow nor thrive. Wherefore by how much the newer the seedes of cucumbers, melons, leekes and gourdies be; so much the sooner they grow: on the contrary, by how much the elder the seedes of parlie, beets, organie, cresses, and coriander be; so much the more hastily doe they put out of the earth, supposed alwaies that age hath not corrupted them. Colewoorts and spinach of all sorts, white succorie, garlick, leekes and onions are sowed in Autumnne, and liue all Winter. Colewoorts, rocket, cresses, coriander, cheruill, nauets, turneps, radishes, parsneps, carrets, parlie, fennell, and other herbes, whose roots are good in pottage, are sowed in Autumnne and in the Spring, notwithstanding they grow better being sowed in Iulie in hot countries, and in August in countries indifferent hot, and in September in cold countries. Lettuse, sorrell, purtlaine, cucumbers, gourds, fauorie, harts-horne, trickmadame, beets and other tender herbes, as also artichocks are sowed in the Spring, and for the most part also those of March and Aprill grow more earlie than those of Februarie, according to the diuersitie of the time.

About all, the seeds which are to be sowed, must be well conditioned, full, heavy, corpulent, grosse, hauing a good colour, yeelding a white flower when they be broken, not dusty: for dust falling fro them when they be broken, sheweth that they are corrupted and nothing worth.

P

The

To sow feedes in the spring.

To sow feedes in sommer. At what time feedes must be sowed in cold and hot places.

The age of feedes.

The seuenth Chapter.

Within what space feedes are wont to grow, after they be sowne.

NOrwithstanding that the nature of the ground, the mildnesse of the aire, fauourable furtherance of the heauens, and the age of the feede, doe cause feedes to haften the more or to be the slower in springing out of the bolome of their mother and nurse the earth: (for as much as that which is sowne in faire weather and an open aire, in a hot place, and open vpon the sunne, and of new seed doth shewe it selfe sooner, than that which is sowne in a contrary time and place) yet every feede hath a certaine time to manifest it selfe in, whereto we must haue due regard, to the end that there may be prefixed times to sow, & looke for the growth of every seed; spinach, basill, nauets, and rocket, grow within three daies after they be sowne, lettuce the fourth day, cucumbers and citruls the fifth, purcelaine a little later, annise the fourth, cresses and mustardseed the fifth, beetes in sommer on the sixth, and in winter on the tenth, arach the eighth, colewoorts the tenth, leekes the nineteenth, or after the twentieth, coriander about the fife and twentieth, or else more late if the feede be new, organie and saurie after the thirtieth: parslie in the fortieth for the most part, and oftentimes in the fiftieth. It is true that in this place the age of the seed and state of the aire when the gardner doth sow them is of great moment, for (as I haue said) the lecke, cowcumber and citrull, grow sooner if the feede be new: and on the contrary, parslie, spinach, organie, saurie, coriander, and cresses, when their feede is solde: likewise the feede of cowcumbers steapt in milke or in warme water putteth the sooner out of the earth: after the same sort you may make reckoning of artichokes, and many other herbes, as you shall know heereafter in their particular treatises.

The eighth Chapter.

Of watering, weeding, siveeping, and cutting of pot-herbes.

SO soone as the ground is full of feedes in all places, you must be carefull to water it, if by happe the place be drie of his owne nature, that so the feede may not be hindred of his sprouting by the too much drinesse, or that the herbe already sprung may not die. The best water to water the pot-herbs withall is raine water, if it fall in the night, or in such a time as that it may not heat the herbes: for it washeth and clenseth them from the dust and vermine that eateth them, especially if the raine come driuing with a northren winde: for want of

of this, the riuer or brooke water is best next, being a little warme: in place of this, well water drawne in the morning and put in a barrell, or in some other thing of receit, that so it may take the heat of the sunne beames, may serue. For cold and salt water is enimie to all sorts of herbes, although that *Theophrastus* say that salt water is more conuenient then any other to water certain plants. The time to water them, is the euening and morning, not the midday, for feare that the water heated by the heate of the sunne might burne them at the roote. *What time is good to water.*

After that the herbes haue begun to put forth, you must weed the bad from the good, whose nourishment they would consume and ouershadrow them withall: this must be done with a forked trowel whiles they be very small, and with the hand (which gardeners call by the name of making cleane) when the potherbes are growne strong and great. Some do also weede them thus, as well for the weight of the earth, and heauie falling of the water vpon them, as also because of the trampling of folkes feete, whereby the earth becommeth harde. Wherefore if the earth be soft, you neede not to rake it but verie sleightly. And you must know that weeding is necessarie for gardens at all times.

Cutting of herbes is also profitable for them, at what time as they be somewhat growne, thereby to make them to keepe their greenenesse the longer, and to make them the more beautifull and tufted, to keepe them from seeding, as also to giue them somewhat a more pleasant smell then they had in their first stalke. By this meanes lettuces and colewoorts are made better, and of a more pleasant taste, if their first leaues be pluckt from them: in like manner turneps, and nauets grow more beautifull and tufted if their leaues be cut. But all herbes must not be cut at all times, for such as haue a hollow stalke, as onions, and others, if they be cut when it raineth, the blade or stalke of the onion is filled full of water and rotteth: and this is the cause why herbes of such nature are not to be cut but in a faire and dry time. *Clipping or cutting of herbes.*

The ninth Chapter.

Of setting and remoouing of potherbes.

TO giue the greater scope and libertie to herbes, and to make them greater, men vie to remoone them: and this is done either by remoouing of them from one bed to another, or from one floore to another, when they haue fower or fife leaues out of the ground, and this may be done at any time, but specially see that the season be inclining to moistnes and raine: and they must be set in ground that is well furnished with fat, without any amending of it with dung. If the time fall not out rainie, you must water them after they be new set in good and due time, not staying too long, and from

some of them you must cut off the ends of their rootes, and set them thinne, that so they may be wet and haue their earth lightned when need requireth, and that thereby they may grow better and fairer.

Slips for the garden of sweete and fragrant herbes, are gathered at all times, and they would be of yoong sprigs of a yeere old, taking part of the old wood, and writhing that to put it into the earth: or else cleauing it below, and putting in the cleft an oate, and round about it some other graines of oates rather then dung, for herbes that are remoued do not require dung at their roots, but rather they haue need that the lowest parts of their rootes should be a little steeped in water, as I will shew heereafter.

The tenth Chapter.

Of gathering and keeping the seedes, rootes, and flowers of potherbes.

Rootes for the most part are gathered when the leaues are fallen off: and in like sort are the flowers gathered, as borage, buglosse, all-good, and marigolds when they are thoroughly open: notwithstanding the flowers of roses and capers, must bee gathered to be kept, while they be shut: likewise the leaues and whole herbes are gathered when they are growne to the full: fruits, as melons, cucumbers, citruls, and gourds, when they turne yellow and are growne to their perfection. If they be purposed to be made serue for seede, then they must be let alone longer, and afterward kept in convenient place vntill it be time to sow them, and they must be gathered in a bright weather, and in the decrease of the moone. Seedes are gathered when the herbe is all laide and drie. And it must generally be obserued in all manner of gathering, as wel of herbes, flowers, rootes, as of fruits and feedes, that it be done in a faire and cleare weather, and in the decrease of the moone.

Such herbes as are to be kept, must first be made very cleane, and dried in the shadow, which is the best meanes to keepe them the strongest in their vertues and qualities: or else in the sunne, and after to put them vp in bags of leather, not of wouen stuffe, nor in wooden boxes, that so they may not loose their vertue, as we see it put in practice by fine herbes which are kept to be vsed in winter. Wherefore me thinks that the apothecaries faile much in their dooings, which hang their Physicke herbes in the rooofe of their house, for by this meanes they do not onely spend their force, but become laden with dust, cobwebs, the dung of flies, and a thousand other filthie things.

Flowers must not be dried in the sunne, nor in the shadowe that is made by the South sun, nor yet in any high roome, because of their tendernes, and delicatenes, which would cause their force to vanish away,

away, either in the burning heat of the Sunne, or in the more moderate heat of the very aire. If it be not the Prouence rose, which that it may be kept long, requireth to be dried in an high place, open to the South sunne, where the beames of the sunne do enter, but touch not the roses. The best way to drie flowers will be in a temperate place, and to turne them oft, to the end that they may not corrupt; hauing also this continuall care, that they may neither lose their colour nor their smell. And when they are dried they must be put into an earthen vessell.

Seedes must be kept in bagges or vessells of earth which haue narrow mouthes: or in boxes, or else in bottles of the rindes of gourds well stopp and set in very dry places, and where there is no water shed; for seedes do mightily spoile with moiture. The seedes of chibols, onions, and leeks, as also of poppie, are kept in their rindes or heads.

For to keepe roots you must obserue two wayes: for either they are to be kept new, and as they are yet greene, as nauets, turneps, carets, and such like: or else they are to be kept dry. For to keepe them new, you must lay them vpon sand or grauell very thin, in some place vnder the earth, and a little covered, or else to burie them vnder the earth in the garden, as we see it done in turneps and nauets, to keepe them the greatest part of Winter. To keepe roots drie, after they be gathered, you must wash them diligently with cleere water, and after take from them all the small fibres or hairie threds that hang about them, and then to drie them either in the shadow of the Sunne-rising, if they be but small and thin, as are the roots of fennell, succorie, parley, sperage, and such like: or in the South-sunne, if they be grosse and thicke, as those of daffodils, gentian, sowbread, water-lilly, brionie, and such like. After that they are dried and thus prepared, you must hang them in some high and vpper roome, open vpon the Sunne when it is in the South, or els vpon the North quarter; and in which notwithstanding neither the smoake, nor dust, nor Sunne-beames may any thing hurt them, notwithstanding that the counsell of Hippocrates, the Prince of Physitians, is, that herbes, flowers, and roots, as well greene as drie, should not be put to keepe in any place where the winde should come, but rather shut vp in vessells or some other such like meanes of keeping of them, to the end that they should not lose their force, which indeed they might most easily lose being kept open and subiect to the winde.

The eleuenth Chapter.

Potherbs, and particularly of Colewoorts.

THE first that we are to speake of is Colewoorts, both because they are most common, and also most abundant of all other sorts of herbes: all kinds of colewoorts do loue a cleane ground,

far and well tilled, not consisting of clay or sand. And although they grow indifferently in any aire, but especially in a temperate: yet they become greater and more massie, sound and safe from vermin in cold places, as are those in *Germanie*, than in hot places, and for that cause they delight a great deale more in the toppes of hilles then in plaine grounds; and yet in those plaine grounds more in the raised parts of borders then in the flat and middle parts thereof, and they be more pleasant, more wholesome for the stomacke, and better in Autumne, Spring-time, and during great frosts, than they be in Summer. They craue much dung, and that especially which is of asses, as being the best of all other for them: and to be raked in and covered ouer with good earth: not to be watered in any case: notwithstanding that watering doeth make them looke faire and flourishing, but then not so sweete to the taste nor so wholesome for the stomacke. When they haue got fixe leaues vpon their stalkes, you must remooue them, but let it be in a milde and calme time whether Winter or Summer. And to speake particularly the common colewoorts, called long or greene colewoorts, must be sown in mid August or September, if you desire to haue the leaues in Lent and in Winter. Some plant them in October, and remooue them in December, to haue the leaues in Winter, and the seed in Iune and Iuly, and that to make them the more tuffed, though there may be as much accomplished that way at other times of the yeere: but not so commodiously.

And looke well to it, that your seed be not too olde, for if it be three yeeres olde, it will bring fourth radishes. And that is the cause why some say: Sowe colewoorts, and there will grow vp radishes or nauets: notwithstanding it continueth fixe yeeres in his nature, if it be well kept.

Cabage-colewort, which are called white or apple colewoorts, are sown vpon beds, and remooued to stand a foot one from another, well covered at the roote with a free and enriched earth, when they begin to rise vp into a great stemme; and loue the cold aire: for in a hot aire they can not liue: and you must couer them with straw to make them cabage the better, and become the whiter. The curled and Romane colewoorts being more tender by nature, are sown in March, and are planted farre within the yeere, and couet to be oft watered.

When you see the leaues of colewoorts waxe bleake and pale, or yellow, it is a signe that it needeth water: and you must often times take from them their yellow leaues, as also those which are eaten thow or rotten, or dried; for this would make them die.

If you would haue colewoorts of a good taste and pleasant, take away their first leaues; for those which come after will haue a better taste and more pleasant sauour than the first.

Red

Red colewoorts grow naturally of the abundance of dung, or for that they are watered with the lees of wine: or by being planted in a place where they are heated continually with the heat and burning of the sunne.

Do not at any time gather, or at the least vse the toppes and edges of the curled Romane colewort, neither yet of any other, but the rest of the leafe downe toward the stalkes.

All sorts of colewoorts may be planted at all times, provided it be not too hot or too colde: and when you plant them, breake their roote, for feare it be not doubled againe or turned vpside down in the earth, and that you put it not so farre in, as that there be nothing of the toppe left aboue.

Some men vse to water colewoorts with salt water to make them the more tender: and some do cast and sowe saltpeter amongst them vpon the vpper face of the earth: or else small ashes sifted to keepe them from locusts, palmar wormes, caterpillars, and other vermine. Aboue all things the colewort may not be planted neere vnto the vine, nor the vine neere vnto the colewort: for there is such great enmity betwixt these two plants, that being both of them planted in one ground, after they become to some growth, they turne and grow one from another, neither will they prosper and beare fruit so well. And admit it to be true, which is reported: namely, that if a man doe mingle wine, be it neuer so litle, in the pot where colewoorts are boiling, that then the colewoorts will leaue boiling by and by and not boile any more, but loose their colour. Likewise such as are disposed to drinke much wine and not to be drunke with it, must eat some raw colewoorts aforehand, as the *Almaignes* are wont to doe, when they meane to quasse you off a whole pot together, and to ouercome such as with whom they strue in drinking. The colewoorts also may not be planted neere vnto organy, rue, and fowbread: for being set or sown neere vnto these herbes it thriue not at all, and againe it infecteth his neighbours with some of his ill qualities.

The carefull gardener must neuer abide to haue in his garden so much as one rotten cole, nor yet water his herbes with the water wherein colewoorts haue bene steeped or boiled: for both the one and the other doth cause his neighbour herbes to haue an ill taste and sauour.

A good huswife will haue colewoorts in her garden at all times, for the reliefe of her family: for besides food, she may comfort her people with them in the time of sicknesse. As thus: The first decoction especially of red colewoorts with butter or oile without salt, doth loosen the bellie, ripen the cough, and maketh the voice better: and if vnto this broth you put some sugar, it will be singular for such as are short winded: the iuice also of colewoorts is good for these diseases if

you put sugar to it: the seede of colewoortes in broath or in powder, is good against the wormes of little children: colewoorts boiled in two or three waters doe stay the laske: colewoorts boiled and sprinkled with long pepper and eaten with the broth, causeth great store of milke in nurses: the iuice of colewoorts drunke, doth expell and kill the poison of toad-stooles: the pith of the colewoort boyled with fat and scummed hony, is singular for such as are short breathed to vie in maner of a lotion. To be short, the colewoort is good for all things, wherof the Romans when time was, made such account, as that hauing expelled all other Physicke out of Rome for the space of an hundred and fifty yeares, they vsed no other Physicke but colewoorts in all manner of diseases. The lee made with the ashes of colewoorts is good to wash the head. The breasts fomented with the decoction of colewoorts increaseth the milke of nurses. The ashes of colewoorts mixt with the white of an egge doth heale burnings. Cataplasmes made of boiled colewoorts and mingled with the lees of vineger, two yolkes of raw eggs, and a little cleere vineger of roses, all well beaten and mingled together, is a singular medicine presently to take away the paines comming of rheume.

To scoure
vessels.

There is nothing better to make cleane a pot all ouergrowne with fowlines (wherein flesh hath bene accustomed to be boiled and water to be heated, as chafer, iron pot, brasle pot, or such like, and which cannot by any other meanes be sufficiently scoured) than to boile colewoorts in it.

The twelfth Chapter.

Of Lettuse.

THe lettuse is sowne thicke as the colewoort, in a moitt ground, well dunged, fat, light, and easie to turne ouer, it must be specially in March: for it cannot well endure much heat, or much cold. Notwithstanding if you will sow it in September, yea at all times make choise of sunnie and warme places, and such as are well stored of dung well rotted, notwithstanding that it will waxe hard with winter, and may continue some time being planted againe. It must be watered once in euery two or three daies if the weather be not dropping & moitt. And in the sowing of it you must water it for feare that the heate of the dung should cast out the seede: it putteth forth of the earth the fiftith day after it is sowne. Being growne about the bed, the height of fower or fife leaues, you must gather it with your hand (but neuer with any rake) and set it againe in a far ground, and a good distance one from another, and couer the rootes and shankes, with cowes, goates, or sheepes dung, for so they will be of a better taste, and water them at the foote, but it must not be when it is either very hot or very cold.

Some

Some do nourish fowre sorts of lettuses heere with vs in France, not differing one from another in vertue, but in tast somewhat more or lesse pleasant, that is to say, the curled; the headed, cabbaged or white; the common, and the little small lettuse: Men vse not to plant the small or common lettuse, but the great one, which will be curled, and that which will cabage, otherwise called the Romane lettuse, which hath a white seede, and a greater than the other, and is of a sweeter relish, especially if his first stalke be cut away which it putteth forth after it hath bene planted the second time, for the first stalke hauing in it very much milke, doth easly become bitter by the heate of the sunne. If you desire that it should haue great leaues, when as it beginneth to put forth a stalke, cut off the same in the halfe, then put vpon it a clod of earth, or some small tike. If you couet to haue it faire and white, bind together the tops of it two daies before you take it from the first bed and set it in another place, and sprinkle it ouer with sand.

The curled and
cabbaged let-
tuse.

The Romane
lettuse.

white lettuse.

Cabbaged lettuse

The cabbaged lettuse being leaued and curled, and not growing higher than a hand for the most part, is made by being troden downe. After that it is planted the second time, put vnto the roote some cowes dung that is very new, afterward tread it downe againe, and water it, and when it beginneth to gather strength and grow, cleane the branch which it putteth forth, and couer it with a new earthen pot in such sort, as that the top thereof by it may be beaten and kept downe; and by this meanes it will become tufted, cabbaged and white: or else if you would haue beautifull and faire lettuses, two daies before you take them vp by the rootes, you must tie together the tops of them, and then couer them with earth vp to the very said tops so tied: for so they will become white and faire. In like maner sand cast vpon them maketh them to become white. If you feare that it will not grow hard enough by reason of some fault in the place, or in the time, or seed, take it vp and set it in some other place.

white and
faire lettuses.

To cause lettuses to haue a sweet smell more than ordinary, sow them with the kernels of citrons, or else steepe the feedes in damaske or other sweet water, three whole daies together.

To mingle lettuse with other salade herbs, as rocket, sorrell, & such like, & that in such sort, as that they may all grow vp together from one & the same root, put all your sorts of feedes into a sheeps trotle, made good & hollow for the purpose; afterward set it very deep, as namely about the depth of eighteen inches in the ground, & water it oft, & by little and little, and haue great care and regard vnto it when it putteth forth of the earth. Others do crumble & break three or fowre trotles of a goate or sheepe, and put the feedes in the midst thereof, and then couer them with a linnen cloth fast bound in maner of a knot, and do plant them as it were in the vppermost part of the earth, very dili- gently

mixt together.

gently regarding and looking to them when they come vp: Some plucke away the leaues of the lettuse, which are next vnto the rootes, and in steede of the leaues so pluckt away, they put one graine or seed of rocket, cressies, or sorrell, and other such like, by which meanes there grow many and diuers sorts of branches.

The lettuse is not without good Physicke helps, for it cooleth the hart, looseth the bellie, causeth abundance of good blood. The iuice thereof mixt with oile of roses, asswageth the paine of the head, and causeth the sicke of agues to sleep being rubbed vpon the browes and temples: it serueth for a gargisme with the iuice of pomegranates, for the inflammation of the throat: being rubbed vpon the couds it stayeth the night pollutions or gonorrhæa, especially if thereunto be added a little camphire: the seede thereof beaten with the seed of white poppie in forme of a milke or extract doth effect the same, and also cureth the scalding and burning of the vrine: the seed thereof steeped in water, wherein hath been quenched Steele, with some small quantity of iuorie powdered, is very soueraigne against the white flowres of women. The leaues of lettuse boiled and moistned in broth, or salades of them in like manner after supper, doth prouoke sleepe: the seede thereof powdered, and mixt with the milke of a woman, that hath brought forth a daughter, and the white of an eg, serueth to make a frontale for the very same purpose. The decoction of the leaues of lettuse boiled in barley water and drunke, causeth great quantity of milke in nurses, if afterwards the dugs be well rubbed with the hand: such as haue a short breath, spit blood, or haue weake lungs, as also such as desire children, must not eat lettuses.

The thirteenth Chapter.

Of Endiue, Sowthistle, and Succorie.

Endiue hauing narrow leaues (otherwise called Scariole, or sowre, or wild lettuse, and of the Latines *Imybus* or *Seris*) is more seruiceable in physicke than any other waies, and is not planted in gardens, because it is alwaies bitter, notwithstanding that it be of the sorts of lettuse, or rather of succorie. It is true, that in often planting and transplanting of it, and in remoouing it from one place to another, and by binding and couering of it with sand during the winter time, the nature thereof may be changed and become tender and white, and without any great paines to the gardener may be kept all winter: which thing our gardeners haue practised, seeing by experience that wilde succorie becommeth faire and flourishing after it hath bene ouerflown with water, and couered with sande or earth.

Sowthistle, called in Latine *Sonchus*, or *Cicerbita*, was of old time in

in request for salades, but now there is no such account made thereof, saue onely that it is vsed for to feed conies and hares: in like sort it is not planted in gardens, because it groweth plentifully amongst the vines: notwithstanding the Italians doe vse the roots of it in salades in Winter, finding them sweete and of a pleasant taste: his stalke is full of milke, sometimes drawing neere vnto a yellow: this milke taken in drinke, is singular for them which haue a short breath, and are stoped in their lungs: it asswageth the paines of the eares, if you droppe certaine drops thereof into them, especially if you cause it to boile with some oile in the ringle of a pomegranate: it healeth thorowly the strangurie and paines in making water, if it be drunke to the quantitie of a portle. The leaues of sowthistle chewed, do take away the stinking of the mouth.

Succorie is of the nature of endiue, hauing large leaues, and without husbanding and good handling doth alwaies continue bitter. It loneth a moist place, and well laboured ground. When it hath put forth foure leaues, you must translate it to a well dunged soile. And to the end it may haue faire, large, and well-spread leaues, after it be ginneth once to come to any growth, in the midst of his leaues you must put some prettie little tile; for by this meanes it will spread forth his leaues, and will haue them a great deale thicker standing and rusted. By this good husbanding it loseth his bitterness, and then there is vse to be had of it in salades in Winter, and it is called white succorie; and to this end it is wont to be planted againe in the end of August: after that in the beginning of September, to the end that the leaues thereof may be the greater, it must be taken vp without the breaking of any thing, and with a smal blade of a straw haue the leaues tied together very easily and gently, without wringing or brusing of them: afterward it must be layed in a well manured soile, the leaues downeward into the ground, and the root vpward toward the top of the earth, and about it there must be made something to couer it in manner of a house, vnder which there must straw be cast to keepe it from frost and bad windes: the like is done with endiue, and it is found white when it is pulled vp againe; and it is very delicate in eating. Some for the same end, when succorie hath put forth his leaues, tie them all together with a very small threed, and after couer them with a pot of earth, to the end that it may continually draw by his roor nourishment out of the earth, and by this meanes it becommeth white and tender, and loseth a great part of his bitterness.

Euery man knoweth that the decoction of succorie drunke in manner of an apozeme, is good for them which haue the iaudise or heat of the liuer. The iuice of succorie drunke euery second day fasting, stayeth the spetting of blood. Succorie stamped and put vnder the left dug doth heale the heart-ache. Some say that the decoction of wilde

wilde succorie often drunke, maketh the visages and countenances of women more cleere and pleasant.

The foureteenth Chapter.

Of Artichokes.

THe artichoke plant is a diuers thing from endiue and succorie: for as for artichokes to plant them in Autumne, which is about the moneth of October, they are so fruitfull and forward to thriue, as that you neede not to take any more but the great leaues with their branches, of such as bring forth the fairest and greatest fruit, and in like manner of the thicke stalkes in the middest, seruing for no manner of vse after that the heads of them be gathered: and to plant them againe. Also some haue otherwise vsed to cast downe the said stalks, and bury them a foot deepe in good manured ground, the leaues at the top bound at the end with a litle straw, and the stalke layed downe and well couered, and they keepe them thus, watering them now and then, if the time be not moist enough of it selfe, for to make shootes and yong sets of in Winter or at other times: and some there be that prick the heads in a well manured earth, and being well planted doe couer them in Winter with the chaffe or dust of line or hempe to keepe them from the frost, and that in the yeere following they may bring forth new fruit.

Moreover, the artichoke is sown in the increafe of the moone of March, vpon beds well dunged and fatted, but you must not looke to haue any whole and perfect fruit of them, vntill the next yeere after. And, if you would haue the seed to thriue, make litle small pits vpon your bed a good foot one from another, and halfe a foot deepe, and as much broad, and these fill with old dung that is very small, & blacke earth that is very fine, mixt together, and aboue the same place pricke or thrust in the seede of your artichoke two inches within the earth, the small end vward, and putting five or sixe seedes in one pit together, and making many pits neere together in a round compasse, that so they may make a faire knot and plant: and that you may couer it againe easily without much stamping or treading for it. And alsoone as the artichoke hath leaues big enough, it must be watered; and this watering continued in such places as are very dry, that so it may bring forth a tender and great fruit. Aboue all things care must be had that the small ende be not cleane contrarie put downeward, for then it would bring forth writhen, weake, small, and hard artichokes. You must also make choise of the fairest and greatest seede that may bee found, and that the small pits be made a good fathom the one from the other, that so one plant may not hinder another. It is true that it is better to plant the slips and branches than the seede, because there

commeth

commeth fruit the sooner of the one then of the other, and because that in so planting of them, you may be occupied and well imployed euery moneth, and so reape your fruite in diuers seasons of the yeere, according as the earth is fat or leane, hot or colde, moist or drie, or as the ground is hardly agreeing with and vnfit for this plant. And in any case plant of those that beare the fairest fruite, according as there are diuers sorts in respect of their thicknes, length, roundnes, diuers colours and taste, some also being prickly, and some without pricks.

If you would that the artichoke should grow without pricks, you must rub it against a stone, and breake the end of the seede which is sharpe: or else put the seede after the manner of a graft in the roote of a lettuce which hath no rinde, and cut in small peeces, in such sort as that euery peece may be grafted with a seede and so planted. You shall haue artichokes of good taste, if you let the seede steepe three daies before you plant it, in the iuice of roses or lillies, or oile of bay, or of lauander, or some other sweete and fragrant iuice, and then afterward drie it, and so plant or set it. Although that as concerning the former oiles, there be some which are of a contrarie opinion, and doe thinke that the oile doth spoile the seede. You shall haue an artichoke of the smell of the bay tree, if you cleaue or make a hole in a bay berrie, and putting therein the seede of an artichoke, doe set it so. Artichokes will be sweete in taste, if before you set the seede you steepe them in milke, which must be renewed and changed twise or thrise before that it fower; or in honie: and then afterwarde to drie and set them.

Artichokes of a good smell.

Artichokes smelling like-bairr. Sweet artichokes.

Two sorts of beastes doe annoy the rootes of artichokes, mice and moules. The dung of swine or the ashes of the fig tree spred about the rootes of the artichoke, doe chase away mice: and the like will fall out if you wrap their rootes about with wooll. Some to driue away rats that destroy the rootes of artichokes vnder the earth, pricke downe halfe a foote deepe in the earth, certaine stickes of elder tree, euery one some fower inches from the other; the smell of which elder is so odious vnto those beastes, that they haue no desire to come neere it, either vnder or aboue the ground, so long as it is greene, and therefore when these first stickes shall be drie you must renew them. Other some put thornes that are very sharpe and pricking, or the pillings of chesnuts vnder the earth, round about the plants of the artichokes, and that one neere vnto another, to the end that the rats, coming neere vnto the thornes, may presently be driuen backe againe: others cause beanes to be boiled in some poisoned water, and doe put them in the holes of this wicked cattell, for they taking the sent thereof, they run thither presently. As concerning moules we will speake of the manner of killing them heereafter.

The roote of artichoke sodden in wine and drunke, is soveraigne against

The vertues of the artichoke.

against the difficultie of making water, for the stinking and strong smell of the arme-pits, and of the vrine also, for the hot and scalding fretting of ones vrine, whether it come of the pockes, or of some other cause, and so also for the dropsie: the pulpe boiled in flesh broth and eaten with salt, pepper, and galanga, made in powder helpeth the weaknes of the generative partes. The Italians eate them in the morning raw with bread and salt, whiles they be yet yongue and tender.

The fifteenth Chapter.

Of sorrell and burnet.

Sorrell and burnet notwithstanding that they grow vntill in great abundance, yet they may be sown in fine ground and well manured, in the spring time especially the sorrell: for as for burnet, it groweth likewise and as well in drie grounds, nothing tilled or stirred: both of them being planted in gardens, must from the beginning be well watered: and he that desireth to gather the seed, must take them vp and plant them againe, suffering them to grow to their perfection, and then to dry and wither. They feare not cold or froit, neither yet abundance of water: but they looke (especially the sorrell) that they may become the fairer, to be cut three or fower times a yeere.

All the sortes of sorrell, as well those of the field as those of the garden, haue this vertue, that being boiled with flesh how old and hard soeuer it be, yet they make it tender and loose the bodie.

The leaues of sorrell roasted in hot ashes, haue a singular force to resolute or to cause to apostumate the swellings of the eies. A cataplasme made of the leaues of sorrell with twile as much olde swines greafe, all beaten and mingled together, and afterward put in the leafe of a colewort vnder the hot althes, is soueraigne against all colde apostumes. The seed of sorrell powdred and drunke with water or wine, doth ailwage the paine of the bloodie fluxe. Sorrell steept in vineger and eaten in the morning fasting, is a preseruatiue against the plague, as also the syrope or iuleb made with the iuice thereof. The leaues of sorrell well stamped, and applied vnto the wreat, doth tame the fiercenes of the ague.

Burnet of the garden being an herbe that some vse to put in their salades, whereof wee haue heere spoken, and which is also the same which the Latini call *Sanguisorba*, taken in drinke is good to restraine the monthly termes of women, and all other fluxe of the belly, but especially such as are of blood: it is good also to drie vp wounds and vlcers if it be applied vnto them in forme of a cataplasme. Some doe much esteeme it in the plague time: and some say that the often vse of burnet, especially the iuice thereof is a soueraigne preseruatiue against

gainst dangerous diseases, because it hath a propertie very much strengthening the liuer, the heart, and the spirits. The leaues of burnet put into the wine, make it more pleasant, more strong, and somewhat aromaticall, and of the tast of millions: they are very good to be put in fallades made with oile, salt, and vineger, according as we see them vsed every day.

The sixteenth Chapter.

Of Harts-horne, Trickmadame, and Pearcestone.

Harts-horne and trickmadame haue no neede of any great setting or planting: for both of them will come in any ground that one would haue them, whether it be husbanded or not. True it is, that if you would haue harts-horne flourish and faire liking, you must cut it oft, lead it along vpon some rouser, or cause it to goe vpon foot by it selfe: for it delighteth to be so intreated, and viterly refusing to grow otherwise than against the ground. Trickmadame doth nothing feare the cold, and doth grow principally vpon the olde walles of vines, in a stonie and grauelly earth. These are put in Summer-fallades, though neither of them haue either taste or smell fit for the same. The harts-horne is good to stay the fluxe of the bellie.

Trickmadame stamped with lettuce, and applied vnto the pulses, doth delay the heat of an ague. The distilled water thereof being often times drunken, doth thoroughly heale burning and tertian agues.

Pearcestone is sown in a drie and sandie soile, and craueth to be much watered euen from the beginning: he that desireth the seede must let the herbe grow to her perfection, and afterward to drie the seed as corne is dried.

It may be preserued in salt and vineger after the manner of purlaine, and then it is soueraigne for the difficultie of vrine, for the jaundise, and to breake the stone, to prouoke womens termes, and to stirre vp ones appetite, if it be vsed in the beginning of meat. For want of such as is pickled in vineger, you may make the decoction of the leaues, rootes, and seedes in wine, for to vse in the same disease.

The seuenteenth Chapter.

Of Marigolds.

Marigolds haue not need of any great ordering, for they grow in vntilled fields and in any ground that a man will, neither doe they craue to be sown euery yeere: for being once sown,

sowen, they afterward grow of themselves, and beare flowers in the Calends of euerie moneth of the yeere, as well in sommer as in winter, for which cause the Italians cal them the flowre of all the moneths: To be short, the place where they haue once bene sowen can hardly be rid of them. If they be neuer so little husbanded, and cut manie times, they will beare most faire flowers and verie great; but yet euer more in autumnne than in the spring.

*Tufted and well
shrining mari-
golds.
The vertues of
marigolds.*

The iuice of the flowres of marigolds drunke fasting, haue great force to prouoke the tearmes of women: the fume or smoake of them taken through a funnell into the secret parts doth the like, and causeth the afterbirth to come forth, and casteth yong maides out of the Greene sicknes. The conferue of the same flowers haue the same vertue. The women of *Italy* as well to prouoke the termes, as to stay them, do frie the iuice and tender crops of this herbe with the yelkes of eggs and doe eate them. The verie same iuice mingled with a little wine or warme vineger, is a soueraigne remedie to aswage the extreme paines of the head and teeth, if one vse it in manner of a lotion. This iuice drunke to the quantitie of an ounce, with the weight of a French crowne of the powder of earthwormes rightly prepared, doth helpe greatly against the iaundise. Some say that to eate off of marigold leaues doth make a good countenance: the distilled water of marigold leaues being dropt into the eyes, or linnen clothes wet therein and applied vnto them, doth heale the rednes of the eyes. The powder of the leaues thereof dried, and put in the hollow of the tooth doth cure the aking of the same. The iuice of the flowres of marigolds drunke to the quantitie of two ounces in the beginning of a pestilentiall ague, doth heale the plague, so that the sicke after he hath drunke this iuice, do presently lye downe, and be made sweate, being throughly couered in his bed: it doth cure also the iaundise and beating of the hart. The conferue of the flowers of marigolds doth the like. To drinke halfe an hower before the comming of the fit of a quartaine ague about three ounces of white wine, wherein haue bene steeped seuen seedes of marigolds, and to goe ouer this drinke for diuers mornings together, is a soueraigne medicine against a quartaine ague.

The eighteenth Chapter.

Of beetes and blites, white and red.

Beetes, as well the white as the blacke and red, which is called Bette & Iotte of the inhabitants of *Tourraine*, or *Romane* of the *Picardes*, are sowen not onely in lent, but at all times, especially after December vntill March, and in August, to the ende that there may alwaies be in arcadines both olde and yong, and for to gather seede

seed which may endure good three yeeres. And for this cause you must take them vp and plant them againe, when they haue put forth fine leaues, and put vnto the rootes a little new dung, and afterward lighten and raise their earth, and free them quite from weedes: they are apt and easie enough to grow, and though they be cut, yet they will spring againe if they be planted in a farand well manured ground. They haue this speciall and, as it were, admirable qualitie in them, namely, that they neuer come to their full perfection, vntill the third yeere after they be sowen: in respect whereof, I could aduise the gardener not to gather any seeds of the beets to sowe, but such as the beets shall bring forth the third yeere: for of such seed there grow very faire and goodly beets.

*A speciall pro-
prie of the
beets.*

If you would make choise of faire beets, chuse rather the white then either the blacke or red, as being the fairest and tenderest: but to haue such as shall be verie great and white, you must couer the roote with the new dung of oxen, and cleaue in sunder their sprout, as is done with leekes, and to lay vpon them a large and broad stone or a bricke. If you would haue your beets red, water them with the lees of red wine: or else plant them in such a place, as wherein they may haue great heat from the sunne.

Beetes eaten in pottage doe loose the bellie: the iuice of beetes drawn vp into the nose, doth purge the braine: the same iuice rubbed vpon the head, causeth lice and nits to die. The roots of beets roasted in the ashes and eaten, do take away the ill smell that commeth of eating garlecke. The root of beets stamped and cast in wine, doth turne the same within three houres after into vineger.

*For to make vi-
negar quicklie.*

Blites are sowen in March, and are not long in comming out of the earth. If they be sowen in a well tilled ground, they will also grow the next yeere following without any new sowing, in such manner as that the ground will hardly be rid of them: they craue no weeding or sweeping.

Blites doe loose the bellie: their decoction wherein hath boiled the roots and leaues, killeth lice & nits: their leaues roasted amongst ashes or boiled, doe heale burnings: the first boiling of blites with the gall of an oxe, and the oile of tartar, doth take away all spots out of garments without doing any harme: but presently after you must wash the place with warme water,

*The vertues of
Blites.*

The nineteenth Chapter.

Of arrach and spinack.

Arrach (in Latine called *Atriplex*) as well the white & red, as the Greene, doe naturally grow in grounds manured with horse-dung, and in such place as where there hath beetes grown at other

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other times. They become red in the same sort that beets do in a fat and well dunged ground. But they are sown in February, March, and April: and they would be sown thinn and not thicke, and oftentimes watered. Some sowe them in December to gather them in winter. They will not be removed, but rather wed, watered, dunged with good dung, often cut and pruned, and that with an iron ^{toke}, that so they may not spend themselves in turning all their substance into leaues. But specially after the time that their seede is scattered vpon the earth, it must presently be couered with earth, and they must be sown as cleare and cleane as may be, that so they may grow & come faire and goodly ones. In le'se than fifteen daies they be ready to eate. The Italians vse to make a kinde of tart of arraches: They chop small the leaues and stamp them with cheese, fresh butter, & the yelks of eggs: afterward they put them in paste and bake them in the oven.

Spinage.

Spinage (so called because his seed is prickly) is of two sorts, the male and the female: the female beareth no seed. Both of them are sown in August, September, and October, for to be vsed in Lent time, and in December, Ianuarie, and Februarie, for sommer: they beare out the roughnesse of all seasons very well and sufficiently, whether it be frost, cold, or snow: they grow also in any ground, so that it be well dressed and somewhat moist; they require (to the ende they may prosper well and spring quickly) to be watered euery euening, and to be couered either with straw or stubble. they stand not in need to be wed, but if they be cut off they grow the fairer. And he that would haue them to continue long and flourish, must at one time cut off the one halfe of the stalke, and at another time, the other halfe. Likewise he that would haue them to continue sometime without being sowne euery yeere, must at the first when he soweth them, see that the seed be a good, full and well fed seed; for then for some yeeres following they will grow without being sown againe, although the seed of the second yeere will be somewhat weake: for to keepe them from the frost, you must couer them with walnut tree leaues, and that before milts or fogs do fall in any manner of sort.

The inhabitants of Paris know well inough how profitable spinage is for to make meate of in Lent, which vse to make diuers sorts of dishes thereof for their bankets; as sometime they frie them with veriuice and butter: sometimes they preferue them at a small fire with butter in pots of earth: sometimes they make wreathes of them, as also diuers other fashions. The vse of spinage is good for them, which haue some impediment in breathing or speaking, or which are much troubled with the cough, especially if such a one in the morning do sup the broth of spinage boiled with fresh butter, or oile of sweet almonds, they loosen the bellie: their iuice is good against the stinging of scorpions and spiders, whether you drinke it, or lay it to outwardly.

The

The vertue of spinage.

The twentieth Chapter.

Of borage and buglosse.

Borage and Buglosse being herbes much differing in leaues and flowers, are alike notwithstanding in their rootes, seedes, and vertues, seruing to put in the portage whiles their leaues are tender, and the flowers are vsed in salades. They are sown in August, September for Winter vse; and in April for Summer: they may be remooued at any time; and as for the seed it must be gathered halfe ripe, that so it may not leape out of his coat.

Buglosse, but especially the flower, doth minister pleasantnesse vnto men that vse it oftentimes, because it cheareth vp the heart, purgeth the bloud, and comforteth the vital spirits. The broth wherein buglosse shall haue bene boiled, doth loose the belly. The root that beareth three stalkes stamped with the seed and boiled in wine, doth serue to be taken against tertian agues. The wine wherein the leaues of buglosse shall haue been steeped, taketh away all sadnesse. The iuice of buglosse, leekes, and parslie mixt with wine or oile of sweet almonds, is a souveraigne medecine to cause the after-birth of women to fall away. The iuice of borage and buglosse drunken, is a preseruative against poison, if a man haue drunke it; as also against the biting of venomous beasts. Buglosse having three leaues being stamped with his seed and root and drunke, doth helpe to put away the shakings of a tertian ague: and that which hath foure, against the shivering coldes of quartaines. The water distilled is singular against the dotages hapning in feauers, as also against the inflammation of the eies.

The vertue of Buglosse.

The one and twentieth Chapter.

Of Leekes both great and small.

Leekes, as well those that are long headed, as those that are round, do not require so rich and fat a ground as the herbes going before, and they may be sown at all times, if it were not for the gathering of the seed, for which cause they must be sown in December, Ianuary, and February, and there it will be ripe after March, and mid-August, and that if from the time that they are sown, you goe and tread vpon the beds, and water them not but foure daies after.

They are woont to be remooued when they growe of seede, and that either into ridges euery one being set foure inches from another, and then there is nothing taken from them but the endes and toppes of the leaues, or into a hole made with a stick, and then the rootes must be made cleane and cropped off, as also many of the leanes mingling sand with the earth: or you shall plant them to make them

great,

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great, if you lay a bricke vpon the head of them after you haue planted them. This must be in Aprill, May, or all Iune, to haue for Summer vie : and in August, September, and October for the Winter vie : in any case you must weed, water, and dung them many times, especially the round headed ones. Furthermore, to make them very thicke, put the seed of a cucumber, and of nauets in a reed, or in boxe boared thorow, and graft this reed into the head of the leeke, when you plant it the second time : or else if you will haue great and grosse leeks, you must put so much of their seed as you can holde in three fingers, in an old linnen cloth that is foule, and put it into the earth, covering it with dung, and watering it by and by : for all this little heape of seed thus put together, will make one great and thicke leeke.

The virtues of
leeks.

Poison.
Bleeding at
the nose.
Difficultie of
making water.
For deliuerance
in child birth.
Spitting of
blood.

Nero vied every morning the leaues of leeks with oile, to haue a good voice : although that leeks be noisome to the stomacke, as being very windie, except they be boiled in a second water. If you eat cummin before you eat leeks, your breath will not smell afterward of leeks. The leaues of leeks boiled, and applied vnto the swolne hemorrhoides, doth very much good both against the swelling and paine of them : the leaues of leeks stamped with honie, and applied in form of a cataplasme vnto the stings of spiders, or vpon the biting of venomous beasts, are soueraigne remedies for the same. The iuice of leeks mixt with vineger and rubbed vpon the browes, staieeth bleeding at the nose. The seed of leeks stamped and drunke with white or sweet wine, doth heale the difficultie of making water. The iuice of leeks drunke with white wine, helpeth to bring women a bed which trauell in child-birth. The seed of leeks stampd with myrrhe and the iuice of plantaine, is good to stay the spitting of blood, and bleeding at the nose. The seed of leeks cast in a vessell of wine, doth keepe the wine from sowing, and if it should be sowre alreadie, it renueth it, and returneth it to his former goodnesse. The iuice of leeks, or leeks themselues boild in oile, take away the paine and wormes in the eares : leeks roasted vnder embers, and eaten, is singular good against the poison of toad-stooles, and to preserue from drunkenness, or else to driue it away, being alreadie possessed. If you boile leeks with earth-wormes in oile vnto the consumption of the third part, and afterward straine out this oile, it will be singular good for the vlcers and noise in the eares.

Small leek.

Small leeks must be sown in the Spring, at such time as other herbes are sown, they make a faire shew, because of their thinne and little leaues : and because also they keepe greene all the yeere long : they may seeme to be the same with chibols and cyues, which are wont to be vied in salades, to helpe to temper the coolnesse of other herbes vied in salades : because the chibols and cyues haue no head, but only a long stalke like vnto leeks.

The

The two and twentieth Chapter.

Of Purslaine.

Purslaine loueth to be sowne in Februarie, March, Aprill, Maie, and Iune, but not at any other time, for it cannot abide the cold. It commeth in great abundance vpon beds mixt well with olde dung, or in a ground that is very fat of it selfe, especially if it be sown amongst colewoorts, onions, and leeks, and after it hath once taken with the ground, it will not faile any yeere afterward, though you take no paines with the sowing of it : notwithstanding it craueth to be oft watered, that it rise not vp right like the stocke of a tree : it must be placed in the shadowes of trees, and amongst clods full of herbes but not thicke, for then it could not well spread it selfe abroad.

Purslaine eaten doth cure the roughnes and astonishment of the teeth, staieeth spitting of blood, and quencheth the heate of the reines, notwithstanding that this herbe is hard to digest, and nourisheth but a little : being applied vnto the browes it appeaseth the headach, and being laid vpon the nauell it killeth the wormes in children. The decoction of the leaues thereof, or the seede, or the water distilled, is a soueraigne remedie against the bloodie fluxe and the wormes in children. A leafe of purslaine put vpon the toong asswageth thirst. A cataplasme made of purslaine and barlie meale, applied vnto the liuer and flanke, worketh a maruellous effect against burning agues. A liniment made with honie, and the powder of the roote of purslaine dried, healeth the chaps of the lips and hands.

The virtues of
purslaine.
Bloodie fluxe.
Wormes.
Drought.
Burning agues.
Chaps in the
lips.

The three and twentieth Chapter.

Of onions, chibols, and chives.

Onions (so called of the French, because they haue but onely one white roote, like to a pearle) (which the Latins call *Vnio*) for the most part, whether they be white, red, or round, would be sown in Ianuarie, Februarie and March, in a fat ground, wel dunged, blacke, well turned as also well cleansed from stones and enriched : or else in a red earth which is short and murle, for in it they grow excellently. They would be remooued in Aprill all along, well weeded, and often laboured to cause them to grow great and thicke, and they must be kept from colde and freeing windes. In them we must obserue a nature contrarie vnto that of other herbes and plants, being of greater force and vertue in the increase of the moone, then in the decrease, quite contrarie to that of onions, which in the wane of the Moone is more effectuell, and in the growth of the Moone more drie and weake. Such as are intended to be kept for seede, when they

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begin

begin to put forth their stalke and to rise aloft, must have small stickes or poles to set by them and keepe them vpright, that the winde doe not bow or breake them downe. They must be gathered in the olde of the moone in faire and drie weather, when the leaues begin to drie, and the seed to growe blacke, for then you must pull vp the whole stalkes, and drie them in the sunne: and it is said that if they be sowne and planted when the moone is vnder the earth, they taste the stronger, but are smaller and lesse: furthermore they must be ordered as leekes. But it must be obserued, that they loue and delight in a red earth, and to be sowne in faire weather, in the decrease of the moone, to be taken vp againe, and by and by watered: and for to make them grow great, they must haue their top taken away when they are planted, and their heads vncouered, and their earth must be digged twentie daies before they be remoued againe, that so it may drie, and not haue any moisture in it. And to keepe onions from rotting, you must cast them into warme water, and drie them in the sunne, and after that they are drie, to lay them vpon barly strawe, so as they may not touch one another. Who so would make choise of onions must know, that the round and white ones are a great deale better than those of a russetish or reddish colour, and not to be so hot and sharpe as the other: the best in France are those which growe at *Fertionion* a small village neere vnto *Esfamps*, for it hath his name vpon that occasion.

The onion though it be the countrie mans meate, is better to vse than to taste; for he that eateth euerie day tender onions with honie to his breakefast, shall liue the more healthfull, so that they be not too new: for the drie are more healthfull than the Greene: the boyled, than the raw: the preserued, than the drie; wherefore the drie must be chosen to vse in fallers, fried meates, gally-mawfries, baked meates, fauces, beane portage, and other vses.

The iuice of onions causeth haire to grow againe, clenseth filthy eares and such as run with matter, taketh away white spots as well out of the face, as from the rest of the body: it cureth the dropisie with the iuice of fennell, if it be but beginning: it purgeth the braine through the nostrils: mingled with hens grease it drieth vp the kibes; applied with a linnen cloth vnto burnings it easeth and taketh away the paine; being mixt with strong vinegar it staeth bleeding at the nose, if it be dropt and put into the nose with a feather.

An onion rotted vpon hot coales, and eaten with sugar, oile, and a little vinegar, doth cure the cough, and is good for them that are stopt or stufed in their lungs, and such as are short breathed: take away the hart of an onion, fill it with cummin seede powdred, stop the hole, and roste the onion thus prepared vnder hot ashes, when it is rosted straine it out, this iuice is singular good for the noises and deafenesse of the eares, being dropt into them: the thicke rinde of the onion, burned

burned or rosted vnder hot ashes, asswageth old headach and megrims, if you put a little morsell moistened or besprinkled with oile of roles and baies, within the eare of that side of the head that aketh. An onion stampd with fresh butter, easeth the paines of the hemorrhoides: stampd with honie and salt, it is a soueraigne remedie for the biting of a mad dog, and other such like beastes: mingled with hens grease, it taketh away the red and blew spots of the face: boyled in wine or in water, and afterward stampd and fried in common oile, and applied in forme of a cataplasme vnto the nauell; it asswageth the throwes of women newly brought in bed: rosted vpon hot coles and mixed with leauen and oile of lillies, it ripeneth impostumes: take away the hart of the onion, fill the hollow place with treacle or mithridate dissolved and bet with the iuice of citrons, stop vp the hole againe with the cap or vpper crust which you cut off, roste all together vnder the hot ashes, and that so long as vntill all be well incorporated and drencht in, afterward straine the onion so rosted, and giue that which shall be strained, to drinke to him that is infected with the plague, and cause him by and by to lie downe, and to be well couered, to the ende that hee may sweate: this medicine hath not his march against the plague, provided that the sweate breake forth by and by.

As for chibols and cliues, they come more neere vnto the nature of onions (as by the smell one may well perceiue) then vnto the nature of leekes, which they nothing resemble, saue onely in the blade or stalke, and in that they haue no head: they must be sowne in the spring, as other herbes, in the same ground with the onion: they are very pleasant in fallers, to temper the coldnes of other cold herbes.

The fower and twentieth Chapter.

Of garlicks.

Garlicke (as is well knowne vnto the inhabitants of *Gascogne*, *Garlicke*, *Aquaine*, *Limosin*, and those about *Bordeaux*) would be planted at the same time that onions are, and in the new of the moone, that so they may be great: and it must not be set in whole heads, but in those little cloues and parts which may be diuided and taken off from the head: they shall be set all along vpon beds diuided by ridges, like vnto ridged grounds of the countrie of *Beaux*, to the ende that the water may not destroy them in winter. For this herbe desireth a dry ground and but a little moist, very white, and not much dunged or very fat. When they shall haue put forth three leaues, you must weede them as oft as you can, for so they will become fairer, and their seede will be the greater. Who so is desirous to haue it great headed, must take away the tops of it, or else tread it downe with his

feete before it put forth his stalke, for by this meanes the iuice will returne into the head. It groweth likewise of seede, but more slowly, for it hath no better a head for the first yeere then a leeke, the second yeere it beginneth to bee better headed and more like it selfe, but is nor perfect and absolute vntill the third yeere. If you sowe it in the wane of the moone, and take them vp in like manner when the moone is vnder the earth, you shall haue garlicke that will not smell so strong: but contrariwise if you sowe in the newe or growth of the moone. Likewise it will haue a sweete sauour, if when you sowe it, you set in the midst thereof the kernels of oliues: as likewise if in planting it, you set by the side thereof a clove ioined very close thereunto, it will retaine the smell and taste thereof. In like manner it will be of a better taste, if you steepe it in good sweete wine a day before that you sow it: & if you steepe it in milke two daies before you sow it, it will become greater and better. The fit and conuenient time to gather and take it vp, is in the wane of the moone, and in drie and faire weather when the stalke will no longer stand vp right. It is kept well vpon straw lying bare, or hung vp in the smoake of the chimney, or being steept a little in salt water. And to keepe it long, you must let it ripe wel, and when it is gathered to lay it in the sun that it may drie thoroughly, and afterward to lay it vp in a place that is not moist: and whereas notwithstanding the Sunne commeth not, for so it would continue but a while. It is true that if you meane to sow and set it afterward, that then you must not hang it vp in the smoake nor steepe it in salt water, for such kinde of keeping doth make it barren and not fit to grow any more.

Garlicke eaten, bringeth a very vnpleasant smell vnto the mouth, and for the taking away of the same, you must eate a raw beane by and by after, or the ribbe of a beete roasted in ashes, or some smallage or greene parley: or which is better, if you loue garlicke, and hate the stinking breath that it yeeldeth, then vse vineger wherein it hath beene steeped: or else cause the dishes and vessels whereon your meat is to be serued to be rubbed therewith: for by this meanes you shall haue the taste of it in your mouth, and yet your breath shall not smell any thing ill.

Garlicke eaten fasting is the countrie-mans treacle in the time of the plague, and other dangerous diseases, as also against all manner of venome and poison. It is true that it causeth thirrit and heate throughout the bodie, and headach when it is oft vsed: but all these inconueniences will be easily corrected, if you eate some smallage or parley presently after. Very many men, but especially the people of Aquitaine in the beginning of the spring time, namely the first day of May, doe eate euery morning garlicke with fresh butter: by this meanes they hope to continue sound and strong all the yeere.

Garlicke applied in forme of a cataplasme vnto the stings of serpents,

serpents, or biring of a madde dogge, is a soueraigne medicine against the biting of a mad dogge. A liniment made of garlicke, salt, and vineger, killeth nits and lice.

The decoction of garlicke not brused, giuen in clysters, or applied vnto the bellie in manner of a fomentation, asswageth the paine of the colicke, and expelleth winde.

Against an old cough comming of a colde cause, it is very good to rub the soles of the feete, the backe bone, and wrests of the handes with an ointment or liniment made of three garlicke heades, well pounded and beaten in swines seame. Against the paine of the teeth comming of a colde cause, there is nothing better then to hold in the mouth vineger, or the decoction of garlicke, or to applye vnto the aking tooth three cloues of garlicke stamp in vineger. For the killing of wormes in children, it is good to giue them to eate garlicke with fresh butter, or else to make a cataplasme thereof to laie vpon the stomacke. They which can scarce or hardly make their water, or are subiect to the stone, receiue great comfort by eating of garlicke. To keepe birdes from hurting of yoong fruite, you must hang at the boughes of those trees some quantitie of garlicke.

The fife and twentieth Chapter.

Of scallions.

Scallions are like vnto garlicke in taste and smell, but in stalke and fashion, the leaues resemble onions, saue onely that out of their head they grow many hulls or huskes, which bring forth many round little leaues: they thrue and grow better when they be set then when they besowen, for when they bee sowen there is no great hope of their comming to any fairenes before the second yeere. They may bee planted from the first day of Nouember vnto the moneth of February, to haue the fruite thereof the next spring, and they are planted as garlicke: but in the meane time you must gather them before the March violets do flower, for if one vse them not before that they bee flowered, they will fall away and become but sillie ones. They are knowne to be ripe, if their leaues begin to drie awaie below. For to cause them to haue great and thicke heads, you must put bricks round about their roots, as hath beene said of leekes.

As concerning the vse of scallions, there is no great helpe or profite to be hoped for or expected, except of such as are giuen more to their pleasure, then to their health: for the scallion serueth for no other thing but to prouoke and stirre folke to the act of carnall copulation, and to haue a good appetite: they haue the same vertues that garlicke, saue onely that they be somewhat troublesome to the stomacke, because of their more sharpe and subtile taste.

The

The fixe and twentieth Chapter.

Of parslie.

Parslie.

Parslie craueth no great labour, but loueth a stonie and sandie ground, for which cause it is called parslie; againe it craueth not any store of manure: wherefore it will be good to sowe it vnder arbours: it desireth aboute all things to be well warred, and if it so fall out as that it be sowed or planted neere vnto any fountaine or riuer, it groweth very faire, and in great quantitie. And if any be desirous that it should haue large leaues, he must put into a faire linnen cloth, so much seede as he can hold in his three fingers, and so cast it amongst the stones in the ground: or else he must put in a goates trottle a quantitie of parslie seede, and so set or sow it: and he that will haue it curled, must bruiſe the seed with a pestle of willow, to the end that the huske may breake and fall off, and afterward wrap it in a linnen cloth, and so put it in the ground. Otherwise, without thus much to doe, it may be made to curl howsoeuer it be sowed, if you draw a rowler vpon it so soone as it becometh to grow: It is a good time to sow it from mid-Maie vnto the sunne be risen to his highest point in the heauens, for it somewhat craueth the heate. The seede thereof that is but a yeere old is nothing woorth, for looke how much elder the seed is, by so much it is the better, and endureth a long time vnſowed; in such sort as that it will not be needfull to sow or plant it of five yeeres, although when it is sowed it groweth not vnder the space of threescore daies. Notwithstanding to cause it to grow and put more speedily out of the earth, it behooueth that the seede be steeped in vineger some certaine time, and after sowed in a well toiled ground, and filled or mixt with one halfe of the ashes of beane stalkes: and after it is sowed it must be oft watered, and slightly with a little aqua viue, and by and by after the watering, to laie aloft a peece of cloath, that the heat thereof may not be spent and breath away, and by this meanes it will grow vp within a few howers, and then you must take off the cloath couering it and water it oft, and by this meanes it will haue a high stalke and great leaues.

A cataplasme made of the leaues of parsley with the crums of white bread, doth heale a tetter or ringworme, doth resolueth the swellings of the breasts, and maketh women that are brought in bed to looſe their milke. The iuice of parsley drawn out with vineger, and mixt with a little salt, helpeth women that are in trauell to be deliuered. The often vse of parsley taketh away the stinking of the breath, especially from such as haue drunk much wine or eaten garlick: and therefore such as vse to keepe company much, and haue an ill breath, must not goe vnprovided of good store of fresh parsley to chaw or hold

The vertues of parsley.

Deliuere of women in their trauell. Astringing breath.

hold in their mouthes. The decoction of the rootes or leaues of parsley, helpeth downe womens termes, prouoketh vrine, casteth out grauell contained in the vinarie vessels, taketh away the paine of the colicke and of the reines, applied in manner of a fomentation vpon the pained parts: it serueth also for the obstructions of the liuer, but better for such as are flegmaticke, than for the cholericke, or those that are of sanguine complexion. The leaues of parsley cast vpon the water of fish-pondes, do recreate and reioice the sicke and diseased fish.

To make water. The colicke. Paine of the reines.

The seuen and twentieth Chapter.

Of rocket and tarragon.

Rocket being an herbe very vsuall in sallades, and good to temper the coldnesse of lettuses, may be sowed as well in winter as in sommer, for it feareth not colde nor other iniury of the aire: neither doth it require any great labour: it loueth notwithstanding to be wed and manured in a grauelly ground. Rocket must not be eaten by it selfe by reason of the great heat that it maketh in them that eat it, and for that cause it hath commonly for his companion in sallades the leaues of lettuse, seeing that the one of these doth notably temper the other. It is good notwithstanding to prouoke vrine applied in forme of a cataplasme vpon the shere bone: and some say that three leaues of rocket gathered with the left hand and bruised in honied water and taken in drinke, are foueraigne against the jaundise and hardnesse of the spleene: rocket boiled and mixt with sugar doth take awaie the cough in little children.

The force of rocket.

Jaundise and hardnesse of the spleene.

Tarragon is made of linseed prickt in many places of the head of a red onion, the strongest and sharpest that may be found, and put into well manured earth: and after it hath shot vp the height of a foote or somewhat more, you must take the slips or branches and set them againe in the same earth, and water them often.

Tarragon hath the same force and vertue that rocket hath, and is not to be eaten alone, but with lettuses and such like herbes.

The eight and twentieth Chapter.

Of smallage, chervill, costmarie, and anent.

Smallage must be sowed in a well toiled ground, and neere some wall: for it loueth the shadow: and groweth well in all manner of ground. And after that it is once sowed, if it be not all pulled vp by the rootes, but that there be but one stalke left from yeere to yeere to seede, it will continue for euer, and it hath not any great need

Smallage.

need of being weeded. The good time to sowe it, is from the end of Februarie, vnto the first day of September: it hath the like vertue that parsley hath, not to eate, but for Physicke: it is good also for all blew strokes, and bloud that is setled by reason of any kinde of blow: the oile thereof is likewise good for many diseases, and especially for the rawnes that commeth in the throat, if the place that is sore be oft annointed therewith: it is true that smallage stirreth vp the falling sickness, if we may beleue *Plinie*: although that *Galen* in the curing of the falling sickness, doe prescribe the roots of smallage and Parsley: I haue tried by experience oftentimes, that the leaues of smallage chewed raw, do prouoke the tearmes of women.

Cheruille.
Cheruille called in Latine *Cerrefolium*, loueth to be sown in a ground that is well manured, and in the time of Februarie, March, and Aprill, and sometimes in August and September for to haue it in winter, and it would be oft watered. Cheruille doth stirre vp the stomacke, and is very good to prouoke vrine and purge the bloud.

The vertue of cheruille.
Costmarie and Anens.
Costmarie and Anens are very pleasant herbes to giue a sauer like spice in potage and salades: they woulde be sown in Maie and Aprill, and remooued in Nouember. Both of them haue the taste of pepper and cloues, and therefore cannot but be good to comfort the stomacke. Some to prouoke appetite, make a Greene sauce of sorrell for to eate with meate. Physicians do greatly esteeme of the decoction of costmarie against the swimming disease, astonishments, falling sickness, obstructions of the lungs, dropies, and iaudise: as also for the colicke, stone, difficultie to make water, staying of the tearmes for quicke deliuerie in childbirth, and to bring downe the afterbirth.

The nine and twentieth Chapter.

Of Asparagus.

Asparagus doth grow bigge in a fat and spongie ground that is free from stones, well dressed, plaine and smooth, demanding no helpe of watering, except a little in Autumne. Some sowe them in the spring at the new of the Moone: but it is better to set the rootes, which spread and increase better and sooner then the seedes: whether they be sown of seedes or set of rootes, it must be done in furrowes three inches deepe, and a fadome ouer on euery side, standing one from another a good long foote: put into euery furrow two or three seedes, euery one off from another some nine inches, about fortie daies after the seedes doe gather together, and ioine one with another becomming one: after you haue set them thus low, you must calt vpon them the third part of the earth that you haue taken out of the furrowes, which must be sifted before you put it there, with an iron sieue, that so the sunne may pierce the deeper, and draw the aspa-

ragus

ragus vnto it: after this, you must weed them oft, and helpethem in October with some well rotted manure of horse, sheepe, or birds, or which is better, with the filth and ordure of sincks and priuies, and the dust which falleth out of wooll when it is beaten, and againe, vpon this the seedes and drosse of the vinepresse and grapes: you must renue their ground often times in February, and cast new dung vpon it: you must doe the like also the second yeere in Februarie or March, and likewise euery yeere in October. It is true that they must be remooued the second or third yeere, and neuer to cut them vntill the third yeere, and then in the moneth of May. In stead of remoouing them it were better to vncouer their roots, and to take away those that are superfluous for to set in some other place, and then to purge them of withered and rotten or corrupted branches, (inasmuch as asparagus would neuer be remooued out of their place, except it be when they growe too thicke together.) For doing so two or three yeeres one after another, it will fall out that all the intangled and folded one within another will be taken away, and then you may prune and trim those which you leaue standing, which you must couer from foot to foot, or from root to root, with well seasoned manure, being rotted and mixt with as much sifted mould, sifting moreouer the same which was aboue before, and putting it into his old place from whence it was taken, and in such manner as it was found there. Howsoeuer it be the yere after they be planted, there may well be taken from them some one of their stalkes, and the other let stand to seed. The stalke so taken away must be cut away, not pluckt away, for feare of doing hurt to the root: for to haue asparagus to growe faire and abundantly, you must couer the earth of the trenches with beasts hornes; or else sowe in the furrowes where you shall set them, the powder of the hornes of weathers, or wilde rammes, or some others, and afterward you shall water them. And this is the cause that maketh them growe naturally in the medowes. Others there are which say (though it be a woonderfull thing) that there must nothing be done to the hornes, but onely bored thorow, and to hide them in good ground, and that of them will breede and growe asparagus. And to cause asparagus to sprout and bring forth often, you must rake and weed and digge about them often, opening their roots, after that you haue gathered the fruit, and straw vpon them the powder of beastes hornes: for the plant being thus handled, will beare his fruit otherwise.

Asparagus is a delicate fruit, and wholesome for euery bodie, and especially when it is thicke, tender, sweet, and not verie much boiled, it giueth a good stomacke vnto the sicke: if it be vsed before meat, it prouoketh vrine, it openeth the obstructions of the reines and the liuer. The root thereof applied to the tooth-ache, asswageth the paine, being dry and thrust into the teeth it rooteth them out: put into

The way to haue good store of asparagus.

Asparagus may growe of a sheeps horn.

The vertues of asparagus.

into a decoction and drunke often times, it breaketh the stone, it maketh a good colour in the face, and a sweet smell in all the body, excepted only that it maketh the urine strong, and stinking.

The thirtieth Chapter.

Of garden and water-creffes.

Garden-creffes, so called because they growe at all times, & are of great nourishment, as also water-creffes, doe loue moist places, and the little brookes rising from springs and other little riuers: wherefore they aske no other labour in gardens, but to be planted neere to lettuses, that they may grow well, and to be watered euery day, hauing water alwaies at their foot.

Both of them are very good in salades of lettuse, and haue great force against the stone and difficultie of urine: and furthermore creffes of the garden made in a cataplasme, doth resolute carbuncles, the sciatica, cat-haires, and all other sorts of impostumes, especially if it be mixt with leauen, it killeth the wormes. The iuice thereof drunke with the iuice of mints and wine, doth the like. The iuice of water-creffes dropt into the eare, doth heale the paine of the teeth, comming of a colde cause. The seede of creffes chewed and held in the mouth, is good against the palsey of the tongue. In the palseies of other parts there must be applied vnto the said parts bags full of the seede of the sayd creffes, hauing boiled it first in wine: the same remedie is good for the colicke.

Water-creffes in a fomentation comfort a cold stomacke, prouoke the termes, mundifie and cleane the mother, and prepare it to conceiue: they dissolue the colicke of the mother, if you frie them with mugwoort vpon a hot fire-pan, sprinkling them with red wine, and applying them to the belly. They are very singular against the paines of the mother after childe-birth, if the flowers of cammomill and the leaues of mugwoort all chopt small and incorporated with foure yolks of egges, you frie them all in a frying-pan with the oile of lillies, and applie it hot vnto the belly and nauell: the iuice thereof rubd about the cods, staieth the fluxe of the seed in the night time: a cataplasme made of the leaues of water-creffes, of the leaues and roots of turneps, and of the roots of parsley, all chopt small, and fried with pure wine and butter, and applied vnto the stomacke and the grine, causeth the urine that hath bene long kept, to passe away and auoid.

The one and thirtieth Chapter.

Of saffron.

As concerning saffron (as shall be sayd heereafter) it loueth an indifferent soile, not strong nor dungen, but yet well cared, lying

lying vpon the sunne, and well digged: and it commeth verie well in the place where onions haue growen. It loueth not water, and standeth in awe of the moule and mise: it groweth better the head being set, than the seed being sown: for indeed it is not vsed to be sown, but the heads of it only to be set, as the heads of lillies, leekes, or sea onions are: they are planted and set by ridges in Aprill and May: the heads are let ripen on heapes in the shadow of the sunne, some eight daies before they be set, and thus must be in such a place as is not moist: they are set in a well digged earth with their roots, and a good distance one from another, as namely about halfe a spanne, and three inches deepe: it groweth the better if it be a little footed vpon. It floweth euery yeere in autumnne, for one whole moneth together, and then letteth the flower fall: but it keepeth his leaues greene all winter long vnto the spring, and then it beginneth to wither, and maketh no shew at all in summer. It may continue good being set and planted for nine yeeres, and then if it bee removed into some other place, it will be able to do further good. It is true that it springeth forth many cloues and kernels which must be taken away euery three yeere, or else the root would be choaked and smothered. Some doe set it (as being the best time) from after mid-August vnto mid-September, and cast at the roores of it the drosse of grapes as it commeth from the presse, and leaue it in the earth two or three yeeres: and euery yeere in Aprill and May the dried part of the herb is tied vp and troden into the earth some two inches deep without hurting of the root: *Good Saffron.* and after you haue clenfed the grasse part and leaues thereof, and that the flower shall be ripe, as in August and toward autumnne, it shall be gathered in the morning, at sunne rise and referued in a close and drie place. Furthermore, the saffron is knowen to be good, if it be fat: if being holden in your hand it make a noise, and if being put into any liquor it dissolue; if being handled and held vp to the face, it procure a certaine kinde of biting or pricking vnto the eies; if it be of a golden colour; if it dy the hand with his colour, and haue somewhat a sharpe smell and pricking; and if it be not brittle and verie readie to breake.

Saffron taken in a verie small quantitie, is good for the weaknesse of the stomacke and fainting of the hart; it keepeth from being drunke, and healeth the bitings of serpents and spiders; if it be taken inwardly or applied outwardly in great quantitie, it procureth swimming and paine in the heade, and bringeth a foggie mist over the eies.

The two and thirtieth Chapter.

Of nauets greene and small.

Napes

NApes and nauets (called of the Latines *Napi*) are two diuers sorts of one kinde, but notwithstanding differing in taste, colour, and greatnesse: for the napes are greater and drawing toward a yellow colour lesse pleasing the taste: nauets are lesse, white, and a great deale more sauerie: both of them are sowne after one fashion in a well digged ground, and withall well enriched, and made very good, that so they may goe downe a good way and worke themselves deepe into the ground, or else in a ground which is intended to be made fertill, or vpon stubbles which haue beene newly plowed, or betwixt miller and pannicke: the seede is vsed to be mingled with earth broken into small powder, that so it may sowe the more cleerly not falling many together: it must not be about three yeeres old; for if it be elder it bringeth forth colewoorts. And if the seed haue beene steeped and moistned in milke or sweet wine, or honied water, two or three dayes before it be sowne, it will be verie much the better. And if they come vp too thicke, there is some part of them to be taken vp and set in other places. They must be well wed and digged, and the fairest and greatest kept to haue the seed of them: they are sowne in August. When you goe about to sowe them, you must looke that the earth haue beene newly watered with raine: for so they will growe better. And about all things it must be looked vnto, that they be not sowne in a shadowed ground, for the shade is altogether contrarie vnto them though the earth be good and fertill. They are gathered in Nouember, and kept in Winter vpon sand in roomes vnder the earth, for to eat in Winter and Lent time. I report my selfe vnto them of *Meafon* and *Van-Girard* neere to *Paris*, which gather great store of them every yeere to sell at *Paris*.

This fruit is windie, and begetteth wormes in yoong children by their sweetnesse: but they must be eaten with mustard. It is true that their seed doth resist venom, and there it is put into treacle: it likewise killeth the wormes being mingled with the iuice of oranges or limons: and it driueth forth the small pockes and meazles with the decoction of maiden-haire or of lentils. It prouoketh vrine mixt in equall quantitie with linseed and giuen to drinke in wine: it bringeth vp the crudities of the stomacke by vomit, being taken with honied vinegar and warme water. The Egyptians make a very good oile of it.

The three and thirtieth Chapter.

Of turneps.

Turneps (called in Latine *Rapa*) are of two sorts, the round and the long, and they differ not much from napes and nauets, save only in greatnesse and taste. For turneps are a great deale bigger,

ger, and of a more pleasant taste, then the napes: for the truth whereof, I report my selfe to the inhabitants of *Limosin* in *Aquitaine*, and the people of *Sauoy*, who hauing no store of corne, haue no more exalted a meat then turneps: and for the same cause they are so industrious in sowing and dressing of them, as being that commoditie and increase of the earth vnto them, which is as well, yea better beloued and more necessarie then any corne or graine. For they feede themselves and their cattell with the leaues, great and small stalkes, tops and roots of turneps: insomuch as that they complain of a famine when in their countrie their turneps are frozen in the ground, or haue received some ouerthrow by the iniurie of the heauens.

The manner of ordering and dressing of them to make them growe, is as it were like vnto that of the napes: it is true that they woulde bee sowne verie thicke, and not thinne, for else they will prouee but verie small and little, and it would be rather in September then at any other time, in a moist ground, well manured and diligently corrected of such faults as it may haue: because they reioice and prouee a great deale the fairer and of a better taste in cold, snowie and foggie weather then they doe in faire: which is the onely cause that in the countrie of *Sauoy*, and *Limosin* they doe grow more sweet, tender, faire, and great, because of the fogs, snowes, and cold seasons that they suffer much in those places. If they be sowne in the spring time, there must care be had, that their leaues be not eaten with wormes and such other vermin: and the better to free them from this plague, it will be good to mingle of the dust that is to be found vpon floors with the seede some day before it be sowne, or else of the soot of the furnace or chimney: or else to steepe it in the iuice of houllecke, and afterward to sprinkle it ouer well with water, that so it may receiue some moisture: and then to sowe it the day after it hath beene so steeped.

It is one of the woonders of nature, that of so small a seede these should grow so great a fruit, as should sometime waigh thirty or forty pound. There must speciall care be had that the seede be not about three yeeres old: for if it be it will bring forth colewoorts instead of turneps. To haue them faire and great, after they become once so great as a finger, they must be remooued a good distance one from another: afterward they must be covered with earth and troden downe verie hard: for by this course the iuice, which should haue beene spent in putting forth of leaues and stalke, will turne to the making of the roote great. They must be gathered in Nouember, and for to keepe them all the winter, they must be buried in holes, or covered with leaues, or seed of mustard.

The vse of turneps is not verie good for health, notwithstanding their decoction is verie excellent good for to wash the feet of such as haue

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haue

Turneps are the ordinare meat of them of *Limosin* and *Sauoy*.

Turnep seed is very small. Faire turneps.

The keeping of the turneps.

The gathering and keeping of napes.

The virtues of napes.

Turneps.

haue the goute withall. The cutlers and armorers doe constantly affirme that knives, daggers, & swords, quenched three or fower times, when they are in forging, in the iuice of turneps, mixt with equall quantitie of the water or iuice pressed out of earth wormes bruised, doth make their edge so hard, as that therewith you may cut yron as easly as any lead.

The fower and thirtieth Chapter.

Of Radishes.

Radishes are properly the same which is called in Latine *Raphanus*, in Italie *Rauanelis*, and at Pariss *Rauens*, they are vsed in manner of a salade with meate for to stirre vp the appetite. They grow better when they are planted, then when they are sowne, & there are two seasons for to set or sowe them in: that is to say, in February in the wane of the Moone, if we intend to haue the benefit of them in the spring: and in August or September, if we would vse them sooner, and this season without doubt is the better, because the radish in a cold and moist time groweth in the roote, and is more tender, but in a hot and drie time it groweth in stalkes and leaues. So soone as they are sowne they take roote, the leaues whereof you must tread and trample downe, that so the roote may grow the greater, which otherwise would runne vp all into leaues: likewise they must be gathered within two or three moneths (otherwise they will quickly goe to seede) and put them in the ground vnder fatid or grauell after you haue cut off their leaues. The maner of ording of them is to set them good and deepe in earth which is well husbanded, stirred vp euen from the bottom and dunged, and after they be prettie great ones, to couer them againe with earth, and to take off their leaues from them, for so they will become more sweete and pleasant. You must not plant or sowe them about vines or arbours: for they are great enemies vnto vines, as making them to runne out their iuice, when they are neighbours to it, by reason of their acrimonie and sharpenes. Some likewise say, that radishes doe keepe away drunkennes, because they greatly weaken the force of wine. To haue sweet radishes, their seede must be steeped in honied wine, or in the iuice of grapes boiled. They must be watered oftentimes with salt water, to haue them the more tender, and not so sharpe: for the salt water doth greatly diminish their bitterness: likewise we ordinarily see that they are eaten with salt and vineger. Their goodnes is knowne by their leaues, which by howe much they are the gentler in handling, by so much is the roote the tenderer and more pleasant to eate. The rinde doth likewise shewe the same: for the thinner it is, so much the more delightfome are the radishes.

Physicians

Physicians do hold that among other discommodities, the radish is an enemy vnto the teeth: and they make hard and stonie places in the mouthes of such as vse them: but this inconuenience may be amended, if presently after you eate some certaine slips of hyssope or thyme, or organie: or if they be eaten with oile: and againe, in stead of this one discommodity, they bring a thousand profits for the health of mankind. The rootes of radishes being newe, chopt small, and sprinkled with white wine that is neat and warmed in a frying-panne, and applied vnto the stomacke, causeth a man to pisse abundantly the water which hee could not auoid of a long time: the iuice of the same roote drunke to the quantitie of two ounces with malmesey, worketh the like effect: take an ounce of the rindes of radishes, as much of the leaues of mercurie, foure graines of saffron, one dram of sweete Cassia, and two drams of the iuice of squin, poune them all together in a mortar, and put them in a linnen cloth, which being put vp into the matrix is a singular remedie to helpe them that trauell of child-birth. The iuice of the roote of radishes, mixt with oile of sweet or bitter almonds, a little white wine, and a little coloquintida, all heated at the fire and strained, and afterward dropt into the eares, doth take away the windinesse and noise of the eares: being drunke with honied water it cureth the jaundise. The leaues boild in pottage in stead of colewoorts, do take away the obstructions of the liuer and spleene. Their seede bruised and strained with white wine, is soueraigne against all sorts of poisons and other dangerous diseases. The rootes eaten fasting doe preserue and keepe a man from venime and poison. Some hold it for a certaine trueth, that turneps steeped in stinking and ill-fauouring wine, doth take away altogether the ill taste thereof. They wipe away the spots of the face, heale the places of the bodie rased with the twigs of rods, and couer the places with haire which are bare and should not. But aboue all the rest, there is no more certaine a remedie for the grieve of the reines, the stone, grauell, or difficultie to make water, than to drinke euening and morning going into bed, or comming out of it, a small draught of white wine warme, wherein haue beene steeped the space of eight houres, the rindes of radishes, with the fourth part of the kernels of medlars made in powder. For the same matter there may be provided a wine to vse a long time, wherein hath beene infused a certaine time the powder of the rootes of radish dried. I cannot forget to set downe, that the often vsing of radishes bringeth vnto nurses great store of milke. And that water how stinking soeuer it be, wherein radishes haue beene boiled, will become better, and that they may not be eaten in the latter ende but at the beginning of meat, whatsoeuer it pleaseth *Dioscorides* to say, that so they may goe presently out of the stomacke, and nothing hinder the digestion of the rest of the meat.

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The

Radish.

Radishes contrary to wine.
Sweet radishes.

Good radishes.

Travell of child-birth.

Noise of the eares.

Their taste of wine.

Spots.

Grauell and the stone.

Store of milke in nurses.

The fūe and thirtieth Chapter.

*Of parsneps, mypes, carrets, and skirwoorts.**Parsneps.
Mypes.
Carrets.
Skirwoorts.*

Parsneps, mypes, carrets, and skirwoorts, are sown all after one fashion, in a ground well digged, freed from stones, clenſed and ſcoured from all weedes, and vnprofitable rootes, being alſo manured and tilled well before: they may not be ſown thicke, that ſo they may growe the longer and thicker. They muſt be watered as ſoone as they be ſown, and if the time prooue drie, once a weeke, ſo long as till they be well ſprung vp. They are ſet alſo after one and the ſame fashion: The time to ſowe or plant them, is in Autumne, and in the Spring: but Autumne is the better, that ſo you may haue them in Lenttime. He that deſireth to haue their roots great, faire, and thicke, muſt often plucke away their leaues: they muſt be gathered halfe a yeere after they be ſown, and then their leaues taken from them, and they kept vnder ſandie grauell eſpecially in Winter: for froſt cauſeth them to corrupt.

Parsneps may be kept a whole yeere or two in the earth, ſo as that one may know by the falling of the flowers, both the old and the new, and which are good in Winter and Lent, whether they be fried or otherwiſe.

The virtues.

All of them haue vertue to expell vrine, to aſſwage the paine of the colicke, and to prouoke womens termes: their leaues ſtamped and layed vpon wounds which happen in the legs, are very profitable for them.

The ſixe and thirtieth Chapter.

*Of muſtard and poppie.**The gooduſſe
of muſtard.*

Senuie or muſtard delighteth in a fat ground, and is ſown with mouldes, before and after Winter, and it muſt be often weeded and watered, but it would not be ſown too thicke: for it ſpreadeth very eaſily, inſomuch as it is hard to deſtroy it where it hath bene once ſown: the ſeed will keepe ſiue yeere, but the newer that it is, ſo much the better it is, either to ſowe or eate. It is diſcerned to be good, when being broken or crackt with the teeth, it appeareth greene within, but not white: for and if it be white, it is olde and not woorth any thing, either to ſowe or eate. That which is intended to be kept to eate, ſhall be good to be remooued when it is growing: for ſo it will yeeld a greater and fairer toppie: but that which is intended to vſe for ſeed, muſt not be removed or haue his place and habitation changed.

*The virtues of
muſtard.*

The ſeed of muſtard chewed, and holden vnder the tongue, is of great force againſt the palſey of the tongue, as alſo againſt all other manner of palſey, if vpon the grieued part there be applied a bagge full

full of the ſaide ſeede, hauing bene firſt boiled in wine. The powder thereof caſt into the noſtrils cauſeth neeſing, and purgeth the braine from ſuperfluities. The decoction of ſennie or muſtard doth aſſwage the tooth-ach comming of a cold cauſe, and being drunke breaketh the ſtone, and prouoketh the termes of women. It keepeth the haire cleane and from falling. The oile of muſtard is ſoueraigne againſt the ach of the hips, and weaknes of the ſinewes. Muſtard ſeed braied and put into ſweete wine, preſerueth the ſame in his ſweetenes, ſo that it ſhall not looſe it, the reaſon is, becauſe it keepeth it from taking of a heate: the ſame made in powder and mixt with vineger, doth heale the ſtingings of ſerpents and ſcorpions: being drunk, it ouercommeth the venome of muſhroomes that haue been eaten: mingled with the vrine of a yong childe, and rubd vpon the bellies of ſuch as haue the dropſie, it cauſeth them to auoid water: if you temper it with water, and rubbe your hand or any other part that hath neede to be made cleane therewith: you ſhall perceiue the benefite thereof. The white poppie, which is ſometimes vied in pottage and clenſed barlie, tartes, and other confections for to quench the thirſt, prouoke ſleepe, and coole the great heate of agues, neuer groweth of his olde roote, but will be ſown euerie yeere in September, in hot and drie countries: and in other places from Ianuarie vntill March, and it is ſown commonly with colewoortes. It proſpereth beſt when it is ſown in places, where the crops of vines haue bene burned. I haue ſeene at Vandeuere a ſmall village in Burgundie, yong children and other folke to eate the ſeede of white poppie, for lickorilhnes, without being any thing mooued to heauines of ſleepe, but made more ſtiring and liuelie, which hath made mee to thinke that the ſeede of poppie is not ſo much to be feared, as ſome would beare in hand.

The ſeuene and thirtieth Chapter.

Of cucumbers.

Cucumbers are ſown vpon a bed, in the moneth of March: and for feare of froſt they are covered with ſtrawe vntill mid-Maie, which is the time when they would be remooued vnto ſuch ground as is well manured and thicke laide with dung, fat and ſoft, to the end they may be ſuffred to creepe and ripen vpon the ground: or elſe vpon beds, filled with fat and well manured earth, being a foote high. For to ſowe them there muſt be planted fower or ſiue ſeedes, the one from the other ſome two foote, they muſt not be weeded at all, becauſe they thrive the better when they be ouergrowne with weedes. Notwithſtanding in Spaine they vſe to weede them as carefully as they can, as alſo lighten and raiſe their earth, and there growe verie faire cucumbers therewpon. It is good to water them oft, vntill they

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put

put forth their buds, and bring forth fruit, yea and after also, if the time fall out somewhat drie : for the cucumber of his owne nature doth loue moisture, inso much as if there be set a vessel full of water vnder a cucumber, it will be found the next day to be shrunk three fingers, and it must be prouided that the water go directly downe vnto the roote of the cucumber, without touching the fruite, because otherwise it would make it worse. It is true that when it beginneth to ripen, the raine, and euery other manner of watering is enemy vnto it, for thereby it becommeth but more withered, without any taste, and altogether discontenting. It feareth the thunder and lightning, and for that cause you must not plant them in any such time, neither yet hope for any great increase thereof, in such yeeres, as wherein such stormes and tempests fall out : for thereupon they wither and fall quite away to nothing. If a man desire to haue them faire ones, he must gather them in the full of the moone, for at this time they grow bigge, and at other times they fade and grow lesse. Furthermore, there may not come neere vnto their bed, any vessel full of oile, because the cucumber of all other things hateth oile, and cannot thriue if he which doth till them, haue handled oile.

The vse of cucumbers is altogether hurtfull, because the nourishment and iuice coming of them is easily corrupted in the veines, whereupon there growe in our bodies burning agues and such as are hard to cure : wherefore it is better to appoint them for meate for mules and asses, to which kind of beasts this fruit is very pleasant and profitable, than to ordaine them for mens foode and sustenance. It is true that their seede boiled with barley water doth prouoke vrine, assuage the heat of the reines, and diminish the heate and thirst that is in agues. A decoction made with the seede of cucumbers, winter cherries, mallows, and the seeds of white poppie, adding thereto the iuice of licorice, a little mummia, gum arabicke, and tragacanth, is a singular remedie for them which are in consumptions, which cough continually, and haue their vrine burning them. Some likewise say, that a cucumber placed longwise, neere vnto a childe which hath an ague, being of the same greatnesse that the child is, doth deliuer it altogether from the ague.

The eight and thirtieth Chapter.

Of Gourdes.

Gourdes do craue the like earth and ordering or tillage that cucumbers do, foreseene that they haue the sunne at command : it is true that they must be soweu with greater distances, and in such sort as that they may climbe stakes, heapes of stone, and arbours, thereby to giue some pleasure in the beholding of the fruite hanging,

hanging, rather than the lying vpon beds : for they delight not so much in creeping vpon the earth as the cucumber doth, but rather to climbe on high.

Before you set them, you must steepe their seeds one night in water, that so you may learne to make the better choise of them, and to know which are good. And in that respect it wil be good to take those which sinke downe to the bottome, and let alone those which shall swimme vpon the toppe of the water, as being vnprofitable and woorth nothing to sowe. The seeds shall be put into the earth two together, the sharpe end vpward, in holes wide and deepe, to the quantity of two foote, and three or fowre foot euery one from another, filled with old dung, that is very small : or else to make them spring out of the earth the sooner, with horse dung as it commeth all hot from the stable : for other matters they craue no great attendance, prouided that they be serued with water to their contentment : and yet those which are least watred, will haue the most pleasant sauour and taste : wherefore if they be sowne in a drie ground, you must set harde by them, pots of water with lifts of cloth or straw hanging at them, which will be continually dropping of water vpon them, which thing will be great aduantage to them during the great heate. It is certaine that the goodnesse and fairenesse of gourdes doth consist altogether in the good choise and well setting of the seed : for the seedes which are next to the necke of the gourde doe bring forth long ones, those which are in the midit, round ones : and those which are by the sides, short and thicke ones : in which consideration if you would haue grosse and thicke gourdes, which may serue to make vessels and bottles of, when they shall be drie, you must take the seed that is in the middest of the gourde, and set it with the head downeward : but when you desire to haue them to sell and to eate, you must take of the seed next vnto the necke, and set them after the right and common maner : for so the fruit will grow long, and more tender, and of a greater price. The gourdes intended to gather seede of for to sow, must not be gathered before winter, and when they are gathered, they must be put in the sunne to drie, or else hung vp in the smoake, or else hung (as the maner is in France) vnder some chamber floore, or else set them in rows vpon boardes, for otherwise the seedes would rot : or else to put them in heapes of corne, which will not only keepe them from rotting, but will also ripen them if they be gathered being yet vnripe : but those which are intended to be eaten, must be gathered at their due time when as they be ripe.

The vse of gourdes is not so dangerous as that of cucumbers : for that their waterishnesse be tempered with things meer and fit for the same, as with saffron, pepper, and other such aromaticall powders : and for the dish, those which are long and white are better, and to be preferred

ferred before either of the other two sorts. Physicians are of opinion that there is nothing better to assuage the heat of hot burning agues, to take away the thirst, and to loosen the bellie, then to vse oftentimes the strained iuice of gourdes stewed without liquor, in a new earthen pot, set in an ouen. There is nothing better for the drinnesse of the tooing, for sharpe and burning humours, and for leane agewish persons, then the vse of the pulpe of gourds, or the syrupe made of their iuice.

The nine and thirtieth Chapter.

Of melons and pompions.

*Melons and
Pompions.*

Melons and pompions doe not so easily growe in this countrie, because they delight in a countrie and aire that is hot: but by force of labour and cunning skill, they are drawne vnto it, by ordering their beddes and remoouing of them, where they may bee shielded from the cold: and receiue the benefite of the south sunne, and reflexe of the heate of the same from some wall: and againe it is a speciall furtherance and helping of them forward, to forecast that they may grow in such seasons as are very hot: for now and then somer fallerh out so variable, and mixt with colde or drought, or moisture, as that thereupon they be not ripe till Autumne, and towards the time of vintage. Wherefore it standeth you vpon to hasten them and helpe them forward with dung, and with the heate of their beds: though this course in the meane time stande not so well with the health of the parties that shall eate them, or with the goodnes and pleasant smel of the pompions: and thereupon it commeth that there are moe grounds planted with cresses then with melons amongst vs. Wherefore it were better to reserue for such vse a quarter of ground or thereabouts, in some place of your garden where the south sunne lieth, and is beaten backe by some wall, the same also keeping away the north winde, hauing no shadow either of trees, or of any other thing to keepe backe the sunne from it, but being withall a good, fat, and substantiall grounde, well weeded, well tilled, and the greene swarth well broken, and withall made very leuell and euen. And this your quarter would be againe diuided into fower small quarters. And to set your melon seedes which you intend to plant that yeere, but in one of the saide little quarters, letting the other three rest, and so successiue in succeeding yeeres to sowe the saide little quarters one after another: for then the melons will growe in their naturall goodnesse and perfection, it being their nature to craue a new retted, and well manured grounde. And if it be requisite to helpe such ground with some sweetenesse, you must burne vpon it in winter some straw or drie dung: or some elder tree amongst other wood, and

mixe

mixe the ashes with the earth, to the end that during the time of winter, it may grow in season: and if the saide ground haue need of more helpe, it must be dunged with sheepes dung, or else with goates dung well rotted, and this to be done a long time before you intend to sow your melon seede: for as for horse or cow dung, it must not be vsed, except it be when no other thing can be gotten: and when it is vsed, it must be spred and mixt with the earth, long before seede-time, as hath bene saide. Whereby we may iudge how vnfit the beds now a daies vsed, are for to yeeld good melons: and they that would haue them grow vpon beds, as lesse damnifying, must make their beds in the saide place of the garden, compassed about and hemd in with a mar, and vpon the bed must be cast a laier of the best and fattest earth that you can finde, or of earth the thicknes of three fingers, and in this earth to set your seedes: for the melon will not be so much spotted with the dung, when there is a mixture of the one and the other. You must take the seede of the melon, which hath a thicke and hard huske, and looking very greene within, which is of the first growen, and of those which grow neerest vnto the roote, which you shall haue reserued in your melon plot, vntill the full ripenes thereof, that so you might grow others of it: for the seed is better when it is new taken out of the melon, hauing bene all that while from the gathering time, kept in the bodie and substance thereof: and if you would haue it to grow very quickly, steepe it in warme water fixe or seuen howers, afterward about the tenth day of March, make your pits vpon your beds, some three or fower foote one from another, and two foote in depth and widenes, and if you may make your choise of dung, then fill them vp with sheepe or goates dung that is old, well rotted, and crumblie, and with very fine black earth together, and herewith to fill them vp within two fingers. Some put therein the dung of horses comming hot from the stable, to make them put forth the sooner, but the sauour and goodnes of the melon is greatly hindred thereby: and thereupon pricke fixe or ten seedes of your pompions, the sharpe end downward (although some put not in aboue fower or fixe) and couer them again gently without much beating or treading of the earth downe vpon them. Afterward for to auoid danger of frostes couer them with straw or mats borne vp with stickes prickt vp one way: or if you haue the benefit of great boordes, or tables of boordes, borne vp with stones or rubbish by the way, that so they may not presse vpon them, and that so you may take them vp when the sunne shineth hot, and lay them downe againe when the cold winde bloweth and when frostes come. And as soone as the melons shall haue put forth leaues big inough, you must water them with a shred of clo: hanging continually in a pot of water, without wetting of the melon any whit at all, and this watering must be continued in a verie drie ground, though you haue

remooued

remoued your melons, till the fruit become of the bignes of oranges: and if you vse beds, you shall remooue them after mid-May in this countrie, out of the danger of frosts, about five or sixe foot one from another, vpon a border well tilled and manured. And from that time forward, you shall weed out diligently all the weeds from about them, and shall lighten their earth at the trunke of the roote, without doing any hurt to it: and when the flowre shall peepe out, you must cut off the ends of the armes of the herbe, to the end that the flowre and the fruit may come forth in greater store and abundance. And for your better choise of the said seed, take that which is of the melons first put forth (as I haue already said) if so be that your melon plot do bring forth the fruit somewhat late, for otherwise it will be good to take them that come forth last: as also that which groweth betwixt the middle and head, or crowne of the melon, and out of it, not that which is on that side whereupon the melon lieth, the best seeded, and most rising from the earth, being heauie and full; and you may make triall of it in water, because that such seede will sinke downe to the bottome: and it must not be aboue one yeere old, for if it be, it soone groweth sicke, and casteth his fruit in vntimely sort.

Pompions and melons must be gathered in the morning before sunne rise, and they must be gathered when as they begin to cast their taile, and yeeld a pleasant smell at their endes, and then you must beware of and looke to cats that goe a catterwauling: and if you would carrie or send them farre, you must gather them a little before they be ripe, and with the hand onely without any edge toole, for they will come to their iust and perfect ripenesse by this course, which the cutting with an iron would keepe them from: there must notwithstanding care be had that those which are called winter pompions, be neuer suffered to ripen vpon their beds, but for to ripen them they must be gathered and hung vp vnder the floore of some higher roome, and when they are once turned yellow to eat them.

Furthermore, that I may say something of their goodnes, you must vnderstand that there are diuers sorts of pompions, for there are some female, and are called pompioners, and they are more long than the other, and haue not their wrinkles standing vp so high: the other be more thicke and greater bellied, and haue their wrinkles more high and stretched out from the taile vnto the eie. Some of them are called Turquins, as those which haue a very green colour and drawing somewhat toward a blacke: some other of them haue the shape of a quince, and they are properly called melons, and haue a more fast and solide flesh than the pompions haue, which likewise haue not so many wrinkles in their sides, nor so much moisture in their hollow parts, neither yet are they so thicke, but haue a whitish flesh, and a great deale more seede than the pompions. The other sort may be called citruls, as ha-

uing

uing the fashion and colour of a citron, and their leaues diuersly drawen with many small lines, like vnto the feathers or wings of birds. The other are winter pompions, and these are not so thicke or great as the common pompions: and yet furthermore the one hath a white meat, and the other a yellow, whereupon the first do craue more water than the latter, and the latter are better in a strange country. But the melons are best of all, as also the blacke coated pompion, and the muske million, which become so by hauing their seede steeped in water that is well sweetned with sugar or honie. The signe of a good melon is the bitternesse of the taile, the hardnesse of the crowne, the heauinesse and good smell of the whole.

As concerning their vse, they are somewhat more delicate and pleasant than cucumbers, so that they haue a fast meat, and their hollownesse drie: for otherwise they are fitter to make meate for cats that goe a catterwauling, or for mules and asses to make them fat, than for to feed men withall: notwithstanding this is a thing well and sufficiently prooued, that a slice of a melon or pompion put in a pot with flesh, causeth it to boile the sooner. Physitions likewise giue it out for a truth, that the seede as well of melons as of pompions, couered with sugar, or without sugar, is a soueraigne remedy to prouoke vrine, to assuage the heate of the reines, and to breke the stone.

The fortieth Chapter.

Of certaine speciall obseruations for and about cucumbers, citrons, gourdies, melons, and such like fruites.

IF the border whereon you set your melons be not so fat nor well dunged as that of the cucumber and gourd, and if it be not watered so soone as it is put forth and sprong, it becommeth the faster meate, and more sauory, and sooner ripe.

To cause pompions, cucumbers, and gourdies to grow without seede, you must steepe your seedes in the oile of Selsamum, otherwise called Turkie miller, three daies before you sow them.

To haue cucumbers of such forme and fashion as one would wish, they must be put whiles they be yet yong and small, together with their stalk, into vessels or bottels that haue some figure or shape drawn within them, and tie them about them, for in time they will fill vp the draughts and prints within the same: likewise to make them long, you must put their flowers into reedes, thoroughly emptied of their pith, for then the cucumber will grow all along: or else to set neere vnto them, some vessell full of water, as namely about halfe a foot off: for, as I haue said, cucumbers loue moisture so well, as that vpon the onely standing by of water, they will grow the more and become longer:

ger:

The gathering of melons.

The goodnesse of melons.

The vertues of melons.

Melons cause flesh to seeth.

Pompions, gourdies and cucumbers without seed.

ger: in like sort standeth the case with the gourd.

For the helping
forward of
their growth.

For their better and greater growth, you must sow them in cases or pots, or other great vessels full of sifted and well manured earth, which may be caried and rolled or drawne from one place to another into the sunne, that so it may haue both the presence of the sun-shine and abience of the colde windes and frostes, and when they begin to grow, breake off their ends.

To free them of vermine and lice, sowe organie round about them, or else pricke some boughes amongst their plants.

A cucumber
without water.

To make that a cucumber or melon shall haue no water, fill the pit that you haue digged to plant your seeds, halfe full of straw, or the shutes of vines cut verie small and put vpon the earth, and afterward your seed: and do not water them at all, or else verie little.

Pompions and
melons laxa-
tiue.

To make melons or cucumbers laxatiue, sprinkle them fise daies together, and fise times euerie day with water, wherein hath bene steeped and infused the roote of wilde cucumber for the space of three daies. Otherwise, vncover them so soone as they haue put forth any budde, and dung them at the foote with about two ounces of blacke hellchor steeped in water, and afterward couer them againe. Otherwise, steepe the seed before you sowe it three daies in the infusion of scammonie, or rubarbe, or agaricke, or some other purging medicine.

Sweete pom-
pions.

To make pompions sweet & sinell well, so soone as you haue taken out the core and wiped and dried the seede, put it amongst drie roses, or some graines of muske, and there keepe it vntill you must sowe it, and if it so like you, sowe them together: or else steepe the seed fower daies before you sowe it in damaske or sweete water: by such meanes you may giue them such taste and sinell as you please, if you steepe their seede before you sow it in any such liquor, as in honied water, in rose water, or in water sweetened with sugar or muske: notwithstanding watering of them doth take from them a great deale of that their sinell, as also of their fauour and taste.

Sugar-melons.

To make cucumbers or pompions sugred, you must steepe the seede in water that is well swee ned with sugar or honie, and to make them sweete in sheepes milke, or honied water, and so sowe them: and when they be growne, you must sprinkle them ouer with the dust of some dry earth, and water them a little.

Lasting pompi-
ons.

To make pompions to keepe long, and not to be spoild or rotted, you must sprinkle them with the iuice of houlleeke.

A woman in
her termes

makes pompi-
ons drie and die.

To keepe cu-
cumbers fresh
a long time.

A woman hauing her termes and walking by the borders of pompions, gourds, and cucumbers, causeth them to drie and die: but and if any of the fruit escape it will be bitter.

Cucumbers indure fresh a long time, if they be put in the sweete lees of wine, or else in brine, or if they hang in a vessell wherein there

is a little vineger.

Pompions will haue the smell of roses, if their seede be mingled with drie roses, and afterward sown together: and then also they are excellent good to quench the thirst in burning agues.

Pompions swee-
ting like roses.

The one and fortieth Chapter.

Of strawberries.

Strawberries haue no need of great toile or tilling, so that they be planted in some good ground not manured, notwithstanding, but well shaded howsoeuer: because they delight greatly in the shadow of other herbes, so also they are found growing amongst great tall trees, without any manner of husbanding or tillage. It is true that they growe well in the open Sunne, so that they be watered once or twice a weeke, especially when they begin to looke red: they must be remooued euery three yeeres, to make them beare faire berries, and their earth raised about them once euery yeere; and that about Christ tide, and to weed them by hand when as weeds do ouer-grow them: in the ground whither you remooue them, you must first put horse-dung well rotted, or cowes dung, a scuttle full to euerie border that is three foot broad: dresse this ground in a drie time, and let it lie afterward, and in a moist time, but not rainie, you shall set the strawberries halfe a foot euerie way, thrusting the earth close to the roote with a dibble. In these you may obserue a certaine kinde of wonderfull harmlesse and innocency: which although they creepe vpon the earth, and be continually troden vpon by adders, lizards, snakes, and other venomous bealts, are notwithstanding neuer infected with them, neither get they any venomous fauour, which sheweth that they haue no affinitie with venime or poison.

Strawberries.

Amongst other pleasures or commodities that they affoord, the iuice or wine that is strained from strawberries, is good to take away the red pimples, and itching knobs, which growe in the face by the heat of the liuer, as also to take away the rednesse of the eyes, and to wipe out the spots and knobs of the leprosie. Likewise the decoction of the rootes and leaues of strawberries made with wine, is singular good for the iaudise, if it be drunke for some time in the morning, as also to prouoke the termes in women; and this neuerthelesse doth stay the white termes and bloudie fluxe: also vsed in forme of a gar-garisme it comforteth the gummies and teeth, and driueth backe rheumes.

Of Physicke herbes.

The two and fortieth Chapter.

Of mallowes.

Borders for
physicke herbes.

WEe haue heeretofore dedicated and appointed certaine borders downe belowe in the kitchin garden, neere vnto the wall of the orchard for Physicke herbes, whereof we desire and wish that the hufwife may haue the knowledge, thereby to helpe the necessities of her people. And in this respect it shall not be thought strange, if we touch in a word the dressing and tilling of some few, such as are most vsuall and famaliar amongst women, leauing the more ample and exact description of them vnto such as make profession thereof: for the drift of my purpose is, to instruct the farmer and his wife, or her that is the hufwife and dairie woman, so much as is needfull for the maintenance of their house and familie. But we will begin with mallowes, as those that are most in vse.

Mallowes.

Mallowes notwithstanding that they growe every where, yet if you be disposed to sowe them, you may doe it most commodiously in Autumne, rather than at any other time, to the ende their growth on height may be repressed by the comming of winter: for by how much the mallow is the lesse, by so much it is the better. They loue a fat and moist earth, and craue to be remoued after they haue put forth foure or fve leaues: though indeed it would be much the better not to remoue them at all, for so they will keepe a better relish: but to the end they should not grow vp into high and great stalkes, after that they be come forth of the earth, you must put some little bricke in the midst of their leaues. They would be oft wed, and when they are remoued, if their leaues be tied together at the end, they will bring forth a well liking and thicke set root.

The roote of mallowes steeped in wine a whole day, and afterward wrapt in a paper, and roasted vnder the ashes and dried, is a fine medicine to rub the teeth withall, and to cleanse and scowre off from them the filth gathered thicke about them: the iuice drunke to the quantitie of halfe a pound, or the decoction of the rootes and leaues comming to a certaine thicke consistence, is exceedingly good for women which are in trauell of child-birth. It is singular also for many other things, and therefore it is called of some *Omnimorbia*.

Hollhocks.

Hollhocks craue the like husbanding and tillage that the mallowes do, because they are of the same kind, and in both of them, especially in the mallowes, wee must obserue as a miraculous thing, that their leaues and flower doe open at the approach and comming of the Sunne, and shut vp themselves to go to bed when it setteth, as doe the marigolds.

Both

Both these haue great vertue to mollifie, they serue also to loosen the belly, especially the yongue and tender crops of mallowes haue vertue to assuage the paine of the reins, and do canse a man to make water. The iuice mingled with oile doth take the sting of waspes. The iuice mingled with wine doth helpe women trauelling of child-birth. Their leaues stamped with the leaues of willowes doe stay inflammations. A cataplasme made of their leaues, doth take away the hardnes of the mother and other parts, especially if it be made of mallowes with oile of roses.

The vertue of
mallowes and
hollhocks.

Gentian groweth in high places and open to the aire, being notwithstanding waterish and somewhat ouershadowed. This herbe through his bitternes draweth down the termes and the staied vrine: The water thereof, especially of the roote, being distilled through a limbecke in maries bath, doth marueilously heale the agues caused of the obstructions of any noble part: and which is more, it killeth the worme, and wipeth away all the spots of the face, if they be often washed therewith. It is exceeding good against the inflammation of the eies.

Gentian.

The roote is a present remedie against the plague, not onely in men, but also in all sorts of cattell: it is a speciall preseruative against all poison, and a meanes to withstand all putrefaction: in regard whereof the Switzers mingle it amongst their owne meate, and the fodder or prouander of their cattell, that so they may continue in good health.

Arsmart (so called because the leaues applied to the fundament for to wipe it, doe cause great paine, and of the Laung *Hydropiper*) doth require a marshie ground full of water, or at the least very moist, or often watered, and it groweth rather being planted of a roote then sown of seed.

Arsmart.

It is very singular in ointments for old vlcers and fistules, as also in clysters for bloodie fluxes: the leaues thereof washed in cold water, and applied vnto wounds and vlcers either of man or beast, doe take away by and by the paine thereof, and doth thoroughly heale them, as the swellings or gaules vnder the saddles of horses that are hurt, if they be renewed euery day, and the horse needes not to be forborne for all that. Or else take the herbe newe, steep it in water, and wash it, then rub therewith the swolne or gauled place, then put the herbe in some place where it may quickly rot, or else boile it in some fat ground, and couer it with a great stone; so soone as the herbe is rotted, so soone will the sore be healed.

If you spread it all Greene in the bed, it killeth fleas, you shal keepe powdered porke from wormes, if you wrapp it in the leaues of this herbe: the iuice thereof dropped into wormes eares, doth kill the wormes that is in them.

Eiebright

Eiebright.

Eiebright delighteth in a leane ground and shadowed place, and yet where moisture is not altogether wanting; such as are the meadowes and little mountaines; it groweth of rootes, not of seed. It is singular good against the dimities, waterishnes, cataraſt, rheume, and weaknes of the eies, being either applied and laide thereto, or taken inwardly by the mouth: there is a powder made of the dried leaues, which being oft taken by the mouth with the yelke of an egge, or alone, or mixt with aloes, and swallowed downe with fennell water, or with water of veruaine, doth comfort and strengthen mightily the weake and diseased eies: some vse much to take wine wherein eiebright hath been infused and steeped a long time for the same purpose, or the powder vsed with wine, but the powder alone, or the decoction without wine, is a remedie far more certaine, then the wine of eiebright, as I my selfe haue prouoed by experience, in as much as the wine by his vapours doth fill the braine, and procureth rheumes: and therefore if you would avoid these inconueniences, you must delay your wine with the water of fennell, or mixe sugar therewith. *Arnoldus de Villa-nova* affirmeth, that by the continuall vse of this he healed an old man, which had already wholly lost his sight; by the often vse of the leaues of this herbe as well greene as drie, as well in his drinke as in his meate.

Veruaine.

Veruaine as well the male as the female must be planted of roote in a moist soile, and that it may grow the fairer, it requireth to be remooued, and that into a place of the like nature and qualitie.

Besides the helpes that this herbe affoordeth vnto weake eies, it is also good against the paine of the head, teeth, and vlcers of the mouth, and principally in the infections of the skin, as the itch, the tetter, the flying fire, the ringworme, the leprosie, the Gangrenae and Sphacelus, if it be vsed in manner of a bath, or in manner of a fomentation made with fumitorie in water and vineger.

Elicampane.

Elicampane must not be sowne of seede, because the seede hath no power to grow: but it must rather be planted of the yong sprouts pulled gently from the roote, and that in a very well tilled ground and which hath bene manured, not very moist, but yet ouershadowed: It is good to plant it in the beginning of February, leauing three foot distance betwixt plant and plant, for it hath great leaues, and the rootes doe spread verie much, as doth the yong sproutes or rootes of seede.

The vertues of Elicampane.

The wine wherein the roote of elicampane hath steeped for the space of fower and twentie howers, is singular good against the collicke, as we haue already said in the first booke: the iuice of the roote is singular good to continue and keepe the faire and beautilfull hew of women. The decoction of the roote is likewise good for to reioice the heart and to prouoke vrine, and the termes of women, as also to cure

one

one to spet out, but then it must be vsed inwardly, and whiles it is new and greene. for when it is old and drie, it is fit to be vsed outwardly, and not to be taken into the body.

Dittander which hath the taste of pepper and mustard (for which cause it is called of the Latins *Piperitis*) must be planted before the first of March, cut as the vine-leeke, but not so oft, for feare it should die with cold. It will continue two yeeres, provided that it be carefullie weeded and dunged: it continueth in many places whole ten yeeres, and it cannot easily be destroyed.

Dittander.

The roote of dittander stamped with hogs grease, or with the roote of elicampane, and applied in forme of a cataplasme vnto the sciatica, doth cure it thoroughly. It taketh away the great spots, freckles, and scales or pilling of the face by raising of the thin skin wherein these are fixed, and as for the rawnesse left after the taking away of this skin, it is healed easily with ointment of roses.

The vertues of dittander.

Great celandine groweth in euery ground, so that there be shadow for it, and it would be sowne in Februarie, and may so continue ten yeeres, so that alwaies after it hath cast his seed, the stalkes thereof be cut downe within fower fingers of the roote.

Celandine great and small.

The iuice of the flowres mixt with honie or womans milke, or some other thing to asswage the sharpnesse of it, doth take away the spots in the eies, drieth vp their scarres and vlcers, healeth the ring-wormes and itch of the head, and the falling of the haire of little children. The Alchymistes doe make great account of it about their extractions of mettals. Some say that the old swallowes doe recover the sight of their yong ones being pore-blinde, by applying vnto their eies the leaues of celandine: some say likewise that the leafe of this herbe carried in the shooes next vnto the bare sole of the feete, doth heale the iaudise: being applied vnto the paps, it taketh away the abundance of milke: stamped together with the roote in the oile of cammomill, and being warmed or fried, and applied vnto the nauell or stomacke, it asswageth the frettings of the bellie, and paines of the mother: the whole herbe being dried and made in powder, doth heale wounds and vlcers: the iuice thereof dropt into a rotten or hollowe tooth, mortifieth it and causeth it to fall out: it causeth also the tumor called *Parum*, to fall away.

The vertues of celandine.

The small celandine otherwise called pilewoort, or the herbe for the kings euill, because it healeth the same, doth grow well in watric, moist and shadowie places, it groweth likewise in drie places, but not so well, though there it get a more sharpe qualitie: it hath as well in his leaues as in his roote vertue to heale the kings euill come to exulceration, as also other virulent vlcers, hemorrhoides, cankers, hard tumours, whether scirrous or porracious and other cold tumours, by a mollifying and dissolving qualiry that they haue.

Little celandine.

Asarum

*Asarum
bacchar.*

Asarum bacchar craueth a leane ground and drie, and where there is much shadow, as also rather to be set than sowed. The root of *Asarum* being dried and made in powder, is good to be taken the waight of a French crowne in white wine to cause to vomit, and by this it cureth the quartane and tertian ague: and this is the cause why some in tertian and quartane agues, giue to drinke euery day, or euery two daies, the quantity of a good goblet full of the decoction of this root, made in wine with honie, putting thereto some cinnamome, mace, and other such spices, by which they purge very much as well vpward as downward: likewise when they feeble the fit comming, they chafe the backe and soles of the feet with oile, wherein they haue caused to be infused this roote in the hot sunne-shine, and after lying downe in bed, the shiuering and shakings of the ague is taken away, and a great sweat procured. The decoction of *Asarum* is good against the leictica, the infusion thereof in wine doth cure the dropisie and jaundise: the iuice dropt into the corner of the eies, doth heale the web in the eie, and dazling of the eies: many good women do applie *Asarum* to the wretts of the hands, to driue away the heate of an ague: you must obserue as it were diuers parts in this herbe: for the roote is a prouoker of vomit, and the leaues are aromaticall, and agreeing well with the stomacke.

Valerian.

Valerian groweth very well in a moist and well manured ground, and would be often watered, that so it may put forth a tall stalke.

The good wiues are wont to apply to the wretts in burning agues the leaues of *valerian*, but without reason: for the *valerian* doth rather increase the ague by his heat than diminish it. It will be better to vse it in the paines of the sides, and in the prouoking of vrine and womens termes: if you wet lint in the iuice of *valerian*, & put it into any wound, made either with arrow, or sword, or otherwise, and the drosse or grosse part thereof laide vpon it, you shall cause the iron to come forth if any such be staied behinde, and so also heale the wound. Cats do delight much to eat this herbe. The decoction is good against venome and the plague: it is good also against shortness of breath if there be mixed therewithall, licorice and damaske raisons.

Angelica.

Angelica would be sowed in a well tilled ground, oftentimes wed and reasonably watered.

*The vertues
of Angelica.**The plague.*

The roote is soveraigne against the plague and all sorts of poyson: whosoever shall keepe a little piece of it in his mouth, or which shall drinke onely in a winter morning a little draught of wine and rose water, wherein it hath bene steeped, he cannot be infected of any euill aire of all that day. Englishmen vse the leaues and rootes of this herbe in sauce with their meats, because it correcteth grosse humours, and a stinking breath, and furthereth digestion verie much. The leaues of *Angelica* stamped with other leaues of rue and hony and applied

applied in form of a cataplasme do heale the bitings of mad dogs, and the stinging of serpents: being laide vpon the heade of one that hath an ague, it draweth vnto it all the burning heate of the ague; and it is good against foreerie and enchantment. The distilled water of *angelica*, is singular good against the fainting of the harte, the bitings of mad beasts, the stings of venomous creatures: especially against the plague, if with this distilled water there be drunke halfe a dram of the root in powder, and a dram of treacle, and that afterward the patient giue himselfe to sweating, for by this meanes many haue bene saued. The root put into a hollow tooth asswageth the paine: being chawed, it maketh the breath sweet, and concealeth the smell of garlick, or any other such meat which causeth an ill breath.

Blessed thistle would be ordered and dressed with such manner of tillage as *angelica*: It is true that it would be sowed in the increase of the moone, and not about three fingers depth in the earth. It loueth the company of wheat very well. It will not be prickly, if before that you sowe it, you put the seede in the roote of a lettuce, the leaues broken off: or if you breake the sharpe pointed ende of the seede against a stone, alter the manner spoken before in the chapter of *Artichokes*.

Blessed thistle hath no lesse vertue against the plague, or any other sort of poyson than hath *angelica*, whether you vse it inward or outward. This vertue is it which driueth away moulds; and other kinds of such cattell being hurtfull vnto gardens, from the place where it groweth. Such as are troubled with a quartaine ague or other agues, which haue their fits comming with a cold, are cured if they take in the morning three ounces of blessed thistles waler, or of the decoction, or the weight of a French crowne of the seede in powder. The same remedy is good for pleurifies, and for children that haue the falling sicknes. If it be boiled in wine, the decoction is good to assuage the paines of the reines and colicke, to kill wormes, and to prouoke sweat. Blessed thistle as well drie as greene taken inwardly or applied outwardly, doth heale malignant vlcers: phyicians likewise command it to be mingled in decoctions and drinckes for the pockes.

Mother-wort.
Mother-wort groweth in vntilled and rough places, and standeth not in need of any tilling: notwithstanding it is singular against the beating and fainting of the harte, for which reason it is called of some *Cardiaca*: it prouoketh also womens termes: it taketh away obstructions, and prouoketh vrine: it raiseth flegme deliuering the lungs thereof, by making it easie to be spet forth; it killeth wormes: dried and made in powder, and the quantity of a spoonefull taken in wine, doth mightily helpe forward the deliuerie of women labouring of childbirth.

Golden-rod would be sowed in a fat ground, which is not open vnto

The vertues of
goldenrod.

vnto the heat of the Sunne, but hath the shadowes of some trees, the toppe of a mountaine or some other such like thing. It hath a verie astringent power, as also it is verie desiccative, by which (after the manner of comfrey) it healeth woundes, vlcers, and fistulaes, as well inward as outward: it staith rheumes, and bloodie fluxes, healeth the vlcers of the mouth, and the inflammation thereof. Which is more, it is very singular to prouoke vrine and to breake the stone.

Saxifrage.

Saxifrage as well the great as the small, delighteth in a drie ground, chalky, claiy, sandy, stony, and altogether barren: and it is sown of small seedes, which are found hanging to the rootes. It prouoketh vrine, and so driueth forth the grauell of the reines and bladder. If you boile the roote and feede thereof in wine, it procureth women also their termes, and bringeth out the after-birth.

The great and
small burre.

The great and small burre (otherwise called *Bardana*, and of the Greekes *Personata*) hath not need of any great tilling, for it will growe either of seed or root in a leane ground that is drie and vntilled, as we may well see in ditches where it groweth without any labour, and in the high wayes and by pathes in the fields.

The rootes, seeds, and iuice of the great and small burre, are verie singular to prouoke vrine, to breake the stone of the reines & bladder, & to stay the bloody flux: the iuice is drunk with white wine or alone, and the seed in like manner, which is sometimes for the more pleasantnesse take confected or couered with sugarcane. The leaues stamp with a little salt, and applied vnto the bitings or stings of adders, madde dogges, or other venomous beasts, are very soueraigne: the rootes or seeds of small burre, stampd and layd on cold swellings and rebellious strumaies, are very profitable and good.

Star-thistle.

Star-thistle, so called, because it hath little heads at the tops of his stalkes (as other thistles haue) set round about with sharpe prickes, after the maner of starres: it groweth in vnhusbanded grounds, as well of his root as of his seed. Some doe greatly esteeme of the seed made into powder and drunke in wine for to prouoke vrine, and to auoide grauell: and heerein it is of so great vertue, as that the much vse of it doth cause one to pisse blood sometimes. The decoction of the root with hony, after the maner of a honied water doth the like, but more gently, and without causing the partie for to pisse blood.

Ladies thistle.

Ladies thistle (otherwise called *Spina alba*, or white and siluer thistle, or wilde artichoke, or asse-thistle, because that asses delight much to eate it:) doth loue a fat and well tilled ground, and other ordering like to that of beetes: and it is as true that it letteth not to grow in vntilled and vnhusbanded grounds. The seede and rootes haue as it were the like power to take away obstructions, to prouoke vrine and to breake the stone that star-thistle hath. The Italians vse the rootes thereof in sallades, after the maner of artichokes, and good wines

wines to gather the milke of it for to eate: some make a ptisane with the roote of this thistle made in powder, the seed of fennell and a litle long pepper, to giue to nurses to vse; which haue small store of milke: the distilled water of the leaues is good against paine in the sides, being drunke with halfe a dram of the seed of the same herbe.

Siluer-grasse (so called because the leaues doe resemble siluer on the backside) doth delight in a moist and grasse ground, howe soeuer vnhusbanded it be. It hath one excellent propertie about all other herbes, for to breake the stone, to heale vlcers and malignant woundes within the bodie, to staie the bloodie fluxe, and to dissolue cluttered blood being taken in drinke. Some say, that if you put it in halfe a baten full of cold water and couer that baten with another baten or vessell, of other couering, that there will gather great store of vapours in the hollow of the thing couering it, and will turne into the forme of distilled water, and that this water thus gathered, is verie good to take away the spots, freckles, stainses and die of the sunne out of the face.

Patience doth willingly grow in coole and moist groundes, and we see it ordinarily to grow neere vnto rivers and little brookes. The roote by reason of the great bitternes and desiccative power hath singular commendation against the plague: for being dried and powdered and afterward drunke with wine, it driueth away all venome from the heart, by the abundance of sweate which it procureth. Some for this purpose take away the rinde and core of this roote, stamping it in vineger, and after making a drinke of the vineger, the iuice of rue and treacle, for to take in pestilent agues: the powder of this roote drunke with wine, is excellent for the suffocations of the matrix, and the wringing throwes of the belly: this powder also killeth the wormes, healeth maligne vlcers, the falling of the haire called *rima*: and the kibes, the farcie in horses, whether it be taken inwardly or applied outwardly, either in iuice, or in the decoction thereof.

Scabious groweth in the same ground that patience doth, that is *Scabious*, to say, in woods, vntilled places, and especially in sandy places.

It is verie proper and appropriate vnto the cough, and diseases of the lungs: for the same purpose also the iuice is sometime extracted, sometime the herbe it selfe made into powder, & sometime the decoction of it is made to indure for a long time: likewise there is sometime confectie made of the flowers: his leaues or rootes applied to itchie places, and the places bare of haire, or mixed with oiles and ointments do great good to the same, as also vnto plague carbuncles, for they being rubbd with the iuice of scabious, will be found to vanish away within three houres: the iuice of scabious drunke in the quantitie of fowre ounces, with a dram of treacle not yet one date olde, is a singular remedie against the plague, so that afterward the partie sweate

swear in his bed, and withall continue the drinke for many times: the same remedie serueth for the bitings of venomous beasts, if besides the drinke you apply outwardly vnto the sore, the leaues of the same herbes brused: a liniment made of the iuice of scabious, the powder of borace, and a little camphire, is singular against tetter, itch, freckles and other infections or defilements of the skinne: aboue all other things the decoction of scabious being drunke the space of fortie daies doth heale the tetter thoroughly, yea though it came of the pockes, as I may selfe haue oftentimes proued by experience.

Rough spleen-
wort, stonewort
or finger fern.

Scolopendrium, or rough spleene-wort, called also harts-toong, would be planted in a stonie and grauelly ground, which is moistned with some running brooke, and for want of this it must be often watered: the rootes thereof must neuer bee pulled vp, but onely the leaues cut: for it cannot be sowne, seeing it bringeth forth no seede. The decoction thereof made in white wine, is very good for such as haue a hard spleene, and are subiect to a quartaine ague.

The vertues of
spleene-wort.

Betonie.

Betonie delighteth to be sowne in a moist and colde ground, and neere to some wal, by which it may be shadowed, for it is not far in loue with the sunne beames. The roote hath contrarie properties to the leaues and flowers: for the roote disquieteth the stomacke, and is verie vsauoury vnto the mouth, his leaues & flowers are of a very good smell, and a taste correspondent and answerable.

The properties
of betonie.

The decoction of Betonie made in white wine, asswageth the paines of the reines, breaketh the stone, and healeth the iaudice: the leaues stampd and applied in forme of a cataplasme, do quickly ioyne together the woundes of the head. A cataplasme made of the leaues with porkes-grease, doth ripen the tumours called cat-haires, and all other sorts of impostumes: the leaues stampd with a little salt, doe heale hollow and cancrus vlcers. To be brieft, this herbe hath so many and so great vertues, as that the Italian when he would highlie commend a man for his gifts, will say that he hath moe vertues then betonie.

Bugle or Bu-
gle.

Bugle would be planted in a stonie, drie, and hillie ground: in respect whereof the latines call it *Consolida petrosa*: it craueth no great paines to betaken with it: the leaues thereof are good to conglutinate and soulder together both outward and inward wounds: it is likewise put in drinckes for wounds: and that is the cause why some doe commonly say; that he that hath bugle and fanicle, will scarce vouchsafe the chirurgion a bugle.

Lions-paw.

Lions-paw groweth in a clayish ground, being withall fat, red and somewhat moist, commonly in meadowes, situated in some high place. It hath like properties with bugle and fanicle: but moreover it taketh away all the paine and heate of inflammations and vlcers. The same herbe stampd and applied vnto the teates of women and

yoong

yoong maides maketh them hard and firme.

Great comfrey groweth in moist places, and hath the same property that bugle hath, that is to say, to soulder woundes, and this is so great in both of them, as if that you put bugle or comfrey into a pot wherein flesh is boiling, the peeces of flesh will become no more many but one. The roote of great comfrey whiles it is yet greene and newlie pluckt out of the earth, being spread vpon leather or vpon linnen, and applied in forme of a cataplasme, vpon gouty or rheumaticke places, doth presently appease the paine of the gowte, being a thing often proued and tried; the same roote dried and made into powder, is good to put in childrens pappe, which haue their rim broken, as also to stay the fluxe of the bellic. A cataplasme made of the roote of great comfrey, with beane flowre, and applied to the place where the child's guts fall downe, is a foueraigne remedie to cure the same.

Gout.

Rupture.

Self-heale craueth a fat ground, and where the sunne beareth not much, it groweth of seeds, and not of rootes, and hath like properties that bugle and comfrey haue, especially to stay the spetting of bloud, the bloody fluxe, and to conglutinate woundes within the bodie, (where no man can come to apply tent or ointment) if there be made a drinke of the iuice of the rootes and leaues thereof, which being chafed in your fingers or put vnder your toong, doth smell and taste like myrrhe.

Self-heale.

Water germander (called of the Latins *Scordium*) groweth very easily, and without great paine or toile, so that it be planted by little slips taken from the old stalke, and set in a moist ground: for it specially requieth (to grow well) to be planted in a moist ground, and to be often watered. It hath the like qualities that angelica hath against poison & the plague; and furthermore the decoction thereof taken as a drinke for certaine daies, doth heale the tertian agues, and putteth away the obstructions of the spleene, and prouoketh vrine.

The vertues of
germander.

Fole-foote must be planted in a very moist place, and craueth to be often watered, for so it appeareth when as it is seene to flourish and like best in marshy groundes and about currents of waters. There groweth a whitish mosse about the roote of it, which if you gather and picke very cleane, and afterward wrap it in a linnen cloth with a little sal nitrum, and so boile it a little in lee, and afterward lay it to drie in the sun: you shall haue an excellent match to take fire at a flint and fire Steele, for it taketh fire so easily, that it will light at the first stroke of the steel. Amongst other vertues it is singular good to comfort the luges, and parts about the breast, whether you take it in a decoction, or in a syrupe, or in maner of a fume at the mouth, or otherwise; especially if you mingle some slips of hyssop and some figges, or syrupe with the said decoction; the great colts-foote, especially the

roote

roote thereof dried, powdred, and taken in the weight of two deams with wine is singular against the plague, if so the partie sweat presently after. It is good also to giue vnto horses which haue the bots or are short winded.

Carline thistle.

The great and small Carline (so called as though it were Caroline, because this thistle was in a diuine maner made knowne vnto *Charles* by an angell for the deliuering of his hoste from the plague which did miserably annoy them) doth require to be sown and planted in a drie ground and stony, and where the moone, and sunne, doth shine pleasantly.

The roote of the great Carline made into powder, and taken the weight of a French crowne, is singular good against the plague, the feebles and faintnes of the heart, for the keeping of the vrine, the breaking of the stone, the paines of the sides, and conuulsions: applied outwardly after it hath been steeped in vinegar, it helpeth the sciatica.

*Hundred headed thistle.
Eringium.
Sea hollie.*

Eringium groweth in an vtilld, rough and drie ground. The wine wherein the rootes of eringium haue bene boiled, prouoketh the termes and restrained vrine, breaketh the stone, and casteth out it and grauell: it is good for such as haue the falling sicknes, dropsie or iandise: the decoction of the root is singular good to resist drunkenness: the distilled water of the yong buds of the leaues being drunke euerie day, and that so oft as one can, is marueilous good for them which haue their bodies troubled with vlcers caused of the french pockes, inasmuch as it comforteth the liuer: the same water is verie profitable for the quartaine and quotidian agues: the roote thereof taken either in powder or in a decoction with the broth of those frogs which are vsed to be eaten, or for lacke of frogs in the decoction of a gollin or greene goose, is a preseruatiue against the poison of the toad, hedgefrog and other venomous herbes: it doth good also in the diseases of the hart, being drunk with the decoction of buglos or balm.

Beares-breech.

Beares-breech called of the Latins *Acanthus* groweth in stonie and moist places, although it loue to be diligently tended or otherwise not to yeeld any profit. The root and leaues are very mollifying: taken in drinke they prouoke vrine: and applied in forme of a cataplasme they are good against conuulsions, wrenches, and contractions of the ligaments: they are to good effect vsed in the clifters of them which haue the dropsie.

Diuels-bit.

Diuels-bit (so called because it sheweth as though the middle or the hart of the roote were gnawed or bitten by some diuel, so soone as it is planted or hath put vp in any place) (as though the diuel did enuie the good which it bringeth vnto men by the incredible vertues that are therein) craueth no great husbandrie, neither yet any fatte earth or verie moist: for as we see it groweth vpon mountaines, in bushes, and places altogether barren: it is true that it groweth also in medowes,

medowes, but yet such as are not verie moist. It is found in great abundance in the medowes of *Verriere* a borough neere vnto *Paris*.

The roote and greene leaues being stamped together and applied vnto carbuncles and pestilent Buboes, do heale them: the wine wherein they haue boiled is drunke with good successe against the plague: and against the griefes and suffocation of the mother: the powder of the roote is verie good against wormes.

Cinquefoile (so called because of the fife leaues which it beareth) craueth a low, waterish, and shadowed ground: it groweth also in drie and grauelly places. The decoction of the roote vsed for a gargle, doth assuage the toothach, and heale the vlcers of the mouth: in a clifter it staith all manner of fluxe of the belly, as well the bloodie fluxe as others: taken as a drinke it is singular against the iandise, the stopping of the liuer, and against a pestilent aire and poison.

Cinquefoile.

Tormentill (like in stalke vnto cinquefoile, but vnlike in number of leaues, in as much as it hath seauen) delighteth in the same ground that cinquefoile doth, though not altogether so waterish, and called tormentill because the powder or decoction of the roote doth appeale the rage and torment of the teeth: is ouer and aboue all other remedies most singular, against the plague, and against the furie of all poisons and venomes: it staith likewise all fluxes of blood, whether it be spetting or menstruous, or of the belly, all vomiting and vntimely birth, whether it be taken inwardly by the mouth, or applied outwardly, or whether it be taken in substance, or the distilled water onely.

Tormentill.

Peruincle delighteth in a shadowed and moist place: we see it grow likewise in willow grounds, hedg-rows, and outsidcs of woods.

Peruincle.

The leaues as well in decoction as otherwise do stay all manner of fluxe of the bellie, or spetting of blood or otherwise, as the monethly termes, and whites, conuenient purging hauing gone before, and bleeding at the nose, if you bruise the leaues and put them in the nose: or if you make a collar thereof to put about your necke, or a garland for your head: or if you put them vnder and about the tooing: after the same manner, you shall staie the monethly termes, as also prevent vntimely birth, if you applie them vpon the grines.

Bitort, as well the great as the small, doth delight in a moist, waterish, and shadowie place: it groweth also in high mountaines. The roote thereof doth staie all manner of fluxes, as the termes and vntimely slipping away of the vrine, if it be drunke with the iure or distilled water of plantaine, it staith the fluxe of blood running of a wound, if the powder of it be cast vpon the bleeding wound, it suppresseth cholericke vomits, if it be fried with the whites of egges vpon a red hot tile, and be eaten by and by. It is singular good also in the decoction, and substance, as in the distilled water, against all venome:

Bitort.

nome : as also against the plague : against wormes in little children : against the meafels, purples, and small pockes in young children : against the bloody flux, and all manne of falles : against the paine and rheumes of the teeth, if you put it into the hollow tooth with a little allom and pellitorie of Spaine.

Pionie, as well the male as the female, craueth to be planted or set in drie ground where the sunne hath his full force. The seed or root gathered in the wane of the moone and hanged about the necke, or applied vnto the wretts alone, or with the miseltoe of the oake, is a very singular preferuative against the falling sicknelle : whereunto notwithstanding I would not haue thee so much to trust, as that thou shouldst not looke after some other remedy : assure thy selfe rather that it is singular in bitings and stings that are venomous, as well taken inward as applied outward : thirty seeds of pionie husked and braied, and the very kernell made into powder and drunk with wine, doth fetch again the speech when it is lost.

Paulus betony, both male and female, would be either sowne or planted in the very same ground with pionie. This herbe, especially the female, is very much commended for his vertues : for the iuice that is pressed out of his leaues, and the water that is distilled thereof, doth heale all sorts of wounds, as well new as old : all sorts of vlcers, whether maligne or cancrus : swellings, and hot tumours, itch, and all the diseases of the skin ; and which is more, the often vie as well of the iuice as of the distilled water of Paulus betonie, doth perfectly cure the leprosie : whereof we haue a notable and famous testimony of a French king, who thereby was throughlie cured thereof. And this is the cause why this herbe is called the lepers herbe. Some doe make a balme thereof (as we will further speake in the chapter of balmes in the third booke) which is singular aboue all others, for all sorts of wounds and maligne vlcers, as also for the leprosie : and that it is so good, is proved, for that a certaine person well knowne vnto me, hauing a virulent vlcere, in manner of a Polypus in his nostrils, of the cure whereof, many as well physicians as surgeons, being excellent men, and dwelling in this towne, did altogether despair, was notwithstanding woonderfully cured by the application of this balme, and often vie of porions made of the decoction of the leaues of the female Paulus betony. This herbe is singular also in clysters for bloody fluxes ; and in drinckes for pestilent leaues, vlcers of the lungs, and obstructions of the liuer and spleene.

Gromell is the same which we call in Latine *Mulinum solis*, and it groweth better being sowne than planted, it delighteth in a drie and vntilled ground, being withall itony and hauing a good aire.

The iuice of the leaues and powder of the seed being drunke with wine, hath a singular vertue against the grauell and stone, and procuring

ring of the vrine to passe away : there is nothing more singular for the burning of the vrine, then to drinke many mornings the seede of gromel, to the quantitie of two drames, ceterach halfe a dramme, and amber two scruples : all being powdred with the iuice of plantaine, or purcelaine, or lettuce : in like manner two drames of the seed of gromell with womens milke, doth much comfort and strengthen a woman in her childbirth.

Hypericum loueth the like intreatie that gromell loueth, and yet withall it doth refuse a fat and well tilled soile. The iuice of the leaues and flowers healeth cuts and woundes : the seede drunke with white wine, taketh away the tertian ague : the flowers and crops are principally in vie to make balmes of for the curing of wounds, such like as this is. Take of the fruite of the elme tree, the flowers of hypericum, and the buds of roses, put them all together in a glasse bottell, and set them in the sunne, so long, as vntill you see them all so altered and changed, as that they may seeme to be rotted : then straine them all through a linnen cloth, and reserue it for your vse : see further in the third booke of the oile of hypericum.

Ground pine loueth a drie, sandie, and stonie soile, and groweth better planted then sowne : the whole herbe boiled in honied water, doth heale the iauundise, prouoke the termes in women, prouoke vrine, and is soueraigne against the sciatica, either taken in drinke, or applied vpon the hippe in forme of a cataplasme : for the whole herbe with the flowers and rootes made into powder, and taken at the mouth fortie daies with halfe an ounce of turpentine, doth throughly heale the sciatica : the conferue made of the flowers is good for such as are subiect vnto the palsie : the whole hearbe boiled in vinegar, and taken at the mouth, doth minister infinite helpe to a trauieling woman, when the childe is dead in her bodie.

Agrimonie would be planted in a stonie and drie place, and further, craueth no great helpe of hand or husbandrie. The decoction openeth the obstructions of the liuer, and strengthneth it : and it being boiled and drunke, doth helpe against the bitings of venomous beastes : the iuice of agrimonie mixt with vinegar and salt in a liniment, doth cure the itch : agrimonie is good against the cough of sheepe, and for broken winded horses. The liquor of the decoction of agrimonie with fumitorie made like whaie, doth prouoke vrine, expell the termes, heale the itch and scab of the whole bodie : whereupon it is singular in the beginning of the leprosie : the seed mixt with the iuice of agrimonie, and taken in manner of pilles, doth kill the wormes ; the stagge being shot and wounded, is healed so soone as he hath eaten of this herbe.

White mullein groweth euerie where : but best in a stonie and sandie ground. The white mullein both leaues, flowers, rootes, and seede,

seede, is singular good against all manner of venome: as also to containe in his place the falling fundament: good wines in like manner for this consideration do make a fume of the seed and flowers of mullein, the flowers of camomill and masticke, all made into powder: the iuice pressed from the roote before it put forth his stalke, and drunke fowre times in the quantitie of an ounce, with hippocras or malmesey in the beginning of a fit of a quartaine feauer, doth driue it quite away: the iuice pressed out of the flowers or leaues, applied to warts, doth take them cleane away. Likewise gentlewomen finde no better remedie then the iuice of white mullein flowers, to take awaie the wrinkles and other blemishes in their face. The leaues bruised betwixt two stones, and applied in forme of a cataplasme vpon the foote of a horse that hath bene cloied, doth affoord him a singular and present reliefe. The water distilled of the flowers, quencheth the firines of the face if there be a litle camphire added thereunto: it doth in like manner with the tumour called Erisipelas, the itch, burnings, and other diseases of the skin: the flowers of white mullein with the yolke of an egge, crums of bread, and the leaues of leekes, applied vnto the hemorrhoides, doe stay them altogether. There groweth about the leaues of white mullein a whitish mosse, which is good to make match or tinder to take fire.

Mercurie craueth one and the same ground with the vine, there to be sown and grow in great abundance, without any great care of husbanding: and yet there must care and regard be had not to sowe it among vines, because the wine which the vines shoulde yeeld amongst whom mercurie hath bene sown, would retaine the taste of mercurie, and become very vnpleasant to drinke.

The iuice of mercurie being drunke, helpeth conception, prouoketh womens termes, and deliuereth them of their afterbirth: the decoction of mercurie doth loose the belly, being drunke or taken in a clister. Some make a honie of the iuice of mercurie, with a halfe quantitie of honie, and this is good for laxative clisters: the iuice of mercurie taketh away warts: the seed of mercurie in a decoction with wormewood doth cure the jaundise: and the iuice thereof with vinegar, doth ripe vp the scab and scurffe.

Yarrow doth grow in a ground that is indifferent fat and moist. The decoction thereof doth stay all manner of fluxes and especiallie the red tearmes of women, as also that which commeth of a wounde, especially the leaues dried, made in powder and drunke with the iuice or water of comfrey or plantaine: the leafe put into the nose, staith the bleeding, and put into a clister it staith the bloodie fluxe. Milfoile bearing a white flower, being pouned with his flower and drunke with water distilled from the same, and goates milke, doth cure the burning of the vrine in men and the whites in women.

Danewort

Danewort groweth better planted than sown, and craneth a fat ground, well manured and somewhat moist.

The iuice pressed from the rootes of danewort being drunke for a certaine time, preserueth a man from the gout. The seed of danewort being well washed and drunke in powder to the quantitie of a dram, hauing been first steeped a whole night in wine, doth helpe the drop sicke, because it procureth stooles do wward and vomit vpward, to the voiding of great store of water: being drunke also with the decoction of ground pine, it assuageth the paine of the gout and pockes. There is also made a soueraigne ointment of the same for the appeasing of the sayd paines. Take the iuice of the roots of danewort, the flowers of rie, and fresh butter, of ech alike, mixe all and let them worke together in an earthen pot set in the ouen, with this ointment rub the aking parts: or else infuse the flowers in oile with mans greafe set in the heat of the Sunne. Some also make an oile of the seeds pressing it forth of them.

Orpin groweth for the most part in moist and shadowie places: the countrey people doe by their good wils plant it vpon Saint Johns night in dishes or vpon trenchers of wood, in some cleft of a wall, the foote being thrust into clay, and there they set it, where it abideth a long time greene, growing and flourishing if it be now and then watered. The liquor of the decoction of the leaues is a soueraigne remedie to heale wounds and stay fluxes of blood: for inward wounds and vicers, and for burltings and ruptures.

Goats-beard groweth very well in a moist ground and shadowed, and craueth to be oft watered. The Latines call it *Vlmaria*, because the leaues are like to the leaues of elme. The root & leaues made in powder, do cure the flux of the belly and bleeding: the distilled water being drunke, is singular good for wounds both inward and outward.

Ground-iiue groweth likewise in a moist and shadowed place. The decoction of the leaues hath great power to take away the obstructions of the liuer and spleene, to prouoke vrine, and the termes in women: there is made of it an excellent balme for newe cuts and wounds: also for the collicke ministred in clysters, or taken in drinke, putting the small chopt leaues into a glasse-viole well stoppt with gumme wax, and strong parchment, & setting the said viole in horse dung for the space of fortie dayes. The iuice thereof with the rust of bras is a fit medicine for fistulaes and hollow vicers: the decoction thereof with betonie, pimpermell, mouse-eare, bistort, horsetaile, tormentill, red colewoorts, and dittander, is singular for wounds in the principall and inward parts, if it be oft vsed.

Hounds-tongue groweth easily in pebly and vntilled ground. The leaues pouned and applied vnto burnings, the wilde-fire, old vicers, woundes, and inflammations, aches, fluxes, and hemorrhoides, doe very much good: there is made a singular ointment for woundes, of

of the iuice thereof, with honie of roses and turpentine : there are also made thereof pilles, to stay vehement and violent rheumes.

Adders-toong. Adders-toong doth require about all other things a fat place well tilled and moist: it groweth also in medowes, but it is destroyed by and by and spoiled. The leaues stamped and applied vnto burnings, inflammations, burstings, and principally vnto wounds and maligne vlcers, are of a maruellous effect: there is a balme made of the leaues thereof for the same effects: whereunto some put turpentine: redde wine wherein this whole herbe hath bene steeped, is good to stay rheumes falling downe vpon the eies.

Goose-grasse. Goose-grasse doth grow in any kinde of ground, and hath no need of great tillage. Some do distill the water of it, which is singular good against the pleurisie and other paines of the side, being taken in the beginning of the disease, as also against the bitings and stings of venomous beasts, and to coole the heate of cankers.

Of cornes-rose or wild-poppie. Corne-rose craueth a fat ground and well tilled, such as are corn grounds, wherein we may see them grow faire and verie well blowne. The flowres of corne-rose aswell the great as the small, either in decoctions or the distilled water, or in syrups, or in powder, the weight of halfe a french crowne, are singular means to prouoke spetting in pleurifies, and to cure the same.

Bastard dittany. Bastard dittany in like manner requireth a fat ground and well tilled, and therewith a diligent care to water it, and to keepe it from the coldnesse of the aire. The seed, root, leanes and flowres, aswell in powder as in a decoction, do prouoke vrine, breake the stone, prouoke the monethly termes, cast out the dead conception and afterbirth: being eaten with rubarbe, they kill and cast out the wormes: the iuice applied outwardly, doth draw forth thornes and thistles, and stumps of splints.

Knot-grasse. Knot-grasse is called in Latine *Polygonum*, it groweth by the edges of vineyards and fieldes that are badly tilled, especially when it is a moist yeere. Amongst the principall vertues thereof, the distilled water is soueraine against the difficultie of vrine, as I haue oft proued by experience.

Salomons-seale. Salomons-seale must be set in a drie ground, and raised high: the roote whiles it is new being pouned, or the iuice of the same, wipeth out freckles, spots, blew markes of blowes, fallies, or other such like thing, whether they be in the face or in any other part of the bodie: some distill the water which is very good for the paintings of women.

Great and small dragons. Great dragons must be planted in a shadowed place, and good earth, the small dragons loue a moist ground and waterish, as neere vnto the fountaine in the garden. Their rootes boiled, or roasted and mixt with honie, and afterward taken as an eclegme, do profit greatly for

for shortnes of breath, difficult and hard coughes, and painfull getting vp of the spittle: in such sort as that they cut ripen and waste the grosse humours and slimie: being powdred and mixt with honie, they heale maligne and corroding vlcers, especially the Polypus: their leaues spread vpon cheese, doe keepe them from spoiling and rotting.

As concerning the nettle, it hath no neede either of sowing or setting, for it commeth vp in gardens more than one would haue it: notwithstanding it is not without his great vertues, as well the Greeke nettle, as the Hungarian or dead nettle.

The leaues and especially the rootes of dead nettle stampd and put vpon the nostrils, doe stay the bleeding of the nose, and their iuice rubd vpon the brow doth as much: the leaues of the stinging nettle stampd with a little myrrhe, and applied vnto the nauell in forme of a cataplasme, haue great power to prouoke the termes of women. Their iuice drunke a certaine time prouoketh vrine and breaketh the stone. A liniment prepared with the leaues of nettles, salt and oile, doth defend the partes of the body from all cold and staruing, how great so euer it might proue to be, if so be that you rub the ridge of the backe, the soles of the feete, and the wretts of the hands therewith: likewise the iuice of this nettle mixt with a little populeon, and applied vnto the wretts, appeaseth the great heate of agues: the leaues beaten and mixed with oile of violets of poppies, and applied vnto the wretts doe alike: the vapour of the decoction of nettle seede, doth take away the stuffing of the nostrils. Such as haue the cough with a great rattling in the throate, cannot meete with a better medicine to make them spit out lustily, than to take with some pectorall syrupe or decoction, the waight of halfe a French crowne of nettle seede finely powdred: you must furthermore obserue this vertue in nettles, as that if it bee put into a pot wherein is flesh boiling, it will cause the flesh to be the sooner boiled.

Stauesacre must be sown in a place reasonably drie and shadowed. The seed chewed and held in the mouth, draweth vnto it by his heat, great quantitie of moisture; stampd and mingled with oile, it driveth vermine out of the head and other parts of the body, it cureth skurui-nesse and itch; steeped in vineger and held in the mouth, it asswageth the tooth-ach.

There is not any neede of great care to be taken in sowing the great, small or middle plantaine, for they grow euery where; and yet they must be esteemed by reason of their vertues. The iuice of plantaine leaues or rootes pressed out, and drunke two howres before the fit to the quantity of two ounces, doth asswage the tertian feauer; the leaues of plantaine stampd with the whites of eggs doe heale buttings. An emplaster made of the iuice of plantaine, the white of an egge, and

and bole armoniacke, applied vnto the browes, doth stay the bleeding of the nose.

Horfe-tail. Horfe-tail as well the great as the small requireth a very moist ground, as neere to some poole or shadowed place. The decoction thereof in wine or water doth stay bleeding and all other fluxes, whether it be the bloody, or any other such: the iuice put into the nostrils doth stay the bleeding of them, and with a pessarie put vp into the necke of the matrix, it stayeth the fluxe thereof.

Pellitory of the wall. Pellitory craueth no great care or tillage, for it groweth naturally neere vnto wals: a cataplasme made of pellitorie, and the grease of a male or female goat, is a singular remedy for the gout and slidings or falls: the leaues of pellitory fried with fresh butter or capons grease, and laid in forme of a cataplasme vnto the belly, doth allwaie the paine of the colicke: the iuice mingled in like quantitie with white wine and oile of sweet almonds newly drawn, doth allwaie the paine and torment of the stone. A cataplasme made of greene pellitorie, stampd with crums of bread, and oile of lillies, roses, or cammomill, doth resolute apostemes hapning in the breasts: it is good for mollifying clysters and bathes that are deterging.

Shepheards pouch. Shepheards pouch, groweth in all ground, but principally vpon the ruines of old wals and neere vnto wals. The decoction of this herb in raine water with plantaine and bole armoniacke, being drunke certayne mornings, or taken in clysters, doth stay the bloody flux, and the spetting of blood: a bathe prepared with the decoction of the leaues stayeth the excessive fluxe of the termes. The iuice doth heale greene wounds, and being dropt into the eares doth drie vp the vlcers of the same: the leaues stampd and applied in forme of a cataplasme, doth kill inflammations and the wilde fire: the leaues eaten do stay all sorts of bleeding being put into the nostrils, as also holden in the hand, they stay the nose from bleeding.

Sow-bread. Sow-bread desireth a shadowed ground, as vnder some tree or bush, which must notwithstanding be fat, and well tilled to feede the roote thereof, which is full, grosse, solide, and as it were like vnto the turnep: the Forrest of *Orleance* is well stored and replenisht with this herbe.

The vertues. This is a thing to be marvelled at, that the iuice of the roote of sowbread, snuffed vp into the nose purgeth the head; and the distilled water thereof, snuffed vp also into the nostrils, doth presently stay their bleeding: the same water drunke to the quantity of sixe ounces, with an ounce of sugar, doth presently stay the blood running downe from the breast, stomacke or liuer, and knitteth together the vessels therein if any be broken, which I my selfe haue proued and tried: two draims of the iuice drunke with honied water doe loosen the belly, and free the liuer from obstructions, as also the spleene: in respect whereof it is singular good for the dropisie and iaudise, but you

you must mixe with it a little masticke or nutmeg, or rubarbe, for to correct the vehemencie thereof: it is incredible what ease the iuice thereof worketh in the colicke, and other such like griping pangs, if it be put into clysters, how greatly also it profiteth in ointments, liniments, and cataplasmes, appointed for the hardnes and swellings of the spleene and liuer: if you infuse the roots chopt small in the oyle of roses or cammomill, or sweet almonds, and afterward boile them together, putting thereto a little wine, in the ende you shall presse them out: this oyle dropt by two or three drops into the eares, doth drie away the noise and deafenes of the eares, especially if vpon the eares, you apply the drosse of these rootes at night at the parties going to bed: or else chop small the rootes, stamp them with peaches & bitter almonds, steep them all in aqua vitae: afterward straine them, and drop certayne drops of that which shall be pressed out into the eares: this is verie soueraigne for deafnes and the noise of the eares.

Crowfoote, although there be sixe kinds of it, yet they all loue a moist and marriish ground, and whereas the frogs delight to liue, which also take pleasure in and tumble themselves about this herbe: it is true that some of the sorts doe loue these moist places more then other some: for the crowfoote that hath a double flower, not very yellow, but somewhat red, and which appeareth only in autumnne, cannot grow in a verie moist place, so as it doth in the drie medowes, and in places a little moist: contrariwise that which beareth a single floure of a yellow and golden colour, cannot grow but in some waterie medowplot, and neere vnto standing water. The other which beareth a double flower not very yellow, hath a bulbous and whitish roote, of a sharpe taste: this same (as well the leaues, but specially the roote) being applied vnto any part, is as causticke as pigeons dung, or the causticke stone, or any other the most violent cauterie that may be found: for though you put betwixt the flesh and the herbe a linnen cloth fine or sixe duple, yet it will not leaue to cauterize and pearce deep eue vnto the flesh: this is the herb which being steeped in dragons blood, the cursed rogues and wicked rousers vp and downe, doe rub their armes, legs, and thighes withall, thereby to exulcerate them, that so they may moue the people with remorse, and so get the larger almes: this is the herbe which *Silvius* calleth Crowfoot, and which is so much esteemed for the plague and plague sore called a Carbuncle. Take (saith he) crowfoot (hauing a roote like vnto a small flat onion:) this roote either alone if it be big ynough, or two or three of the stampd & laid vnto the thomb of the hand that is on that side in the arm, whereof the plague is broken out; or vnto the great toe of that foot, that is on the same side that the grine is that hath the plague sore, and there leaue it fower and twentie howers, and it will make blisters, which breaking of themselves do let run out the matter of the plague drawn

drawen thither by a veine common vnto both parts : but because that this roote is very strong, you must put betwixt it and the thombe, fowre or fve doubles of new and strong cloth, or fixe or seuen of thinne and worne cloth, and so couer it and binde it vp : and afterward you shall heale the vlcere of the thombe with the yelkes of egges and fresh butter, bet together with a litle of the middle comfrey stamped with them, or a litle washt aloes. And if you cannot haue it new, the drie is also good for the same purpose, but then you need not so many doubles of cloth betwixt them : this operation and worke is quickly done and certainly, without blood letting or other euacuation.

Pettie-whin.

Pettie-whin, groweth in euerie ground, whether it be meadow, plowed land, drie, scorched, moist, tilled or not tilled. The husbandman doth greatlie abhorre this herbe, whereof he cannot by any meanes rid his grounds : the roote is singular as well in powder as in a decoction, or in the water distilled from it (so that before it be distilled the roote be steeped in malmeley twice so much as it weigheth) for to prouoke vrine, womens termes, and to procure the opening of the obstructions of the spleene and liuer : but aboue all to breake into powder and drue forth the stone, as also to walte such carnosities as may be begotten in the bladder and conduit of the yarde. The powder must be taken with white wine. There is also made a kinde of wine of this roote during the vintage time, with new wine and white grapes put into a vessell adding thereto a certaine quantitie of winter cherries.

Dittanie.

The dittanie of this countrie groweth in a drie ground being also stony and open vpon the sun. The roote is much commended against poisons and venoms, wormes in children and cold diseases of the matrix : being taken inwardly by decoction, or in powder with wine the weight of two drams, or applied, or ministred in a fume, it mouch the termes in women : it bringeth forth the afterbirth and dead child : it also driueth out the stone from the reins : but principally it is good for the pockes, taking it euerie morning a long time, the weight of a dram with the decoction of *Guanicum* : it is profitable also against the plague, euery way that one can vse it.

Germander.

Germander (called of the Latines *Chamedrys*, that is to say, a small oake, because the leaues are like to those of the oake) requireth no other ground or manner of ordering than dittanie. This herbe is called the seauers scourge, because the decoction thereof being drunke in the morning for a certaine space, doth drue away and make an end of tertian agues : the leaues eaten in a sallade in the morning fasting, it preferueth from the aire and pestilent contagion, no lesse effectually than water germander, of which we haue spoken before. The decoction thereof is singular good against the iaudise, and be-
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ing vsed a long time for the falling sicknes, headach, and other diseases of the braine, and for the wormes.

Rupture-woort groweth in a grauelly or sandie ground which is drie and vnhusbanded : there is likewise great store of it found in the wood of *Bolton*, neere vnto *Paris*. This herbe made in powder and drunke with wine, prouoketh vrine that hath beene long detained, and breaketh the stone of the raines and of the bladder, if for some long time the partie take the weight of a dram. *Galopinus* a great and famous Chirurgion in *Italie*, affirmeth, that he had cured an infinite number of persons of the rupture therewith, giuing it them in drinke for a verie long time together.

Moufe-eare will grow in the same ground that rupture-woort doth : it hath a verie strong astringent qualitie : and that is the cause why shepherds haue no great affection to draw their sheepe into such fields, as haue store of moufe-eare in them, because it bindeth them in their bodies, which for the most part worketh in them vnto death : likewise Phytitions are wont to make their benefit of this herbe in the bloodie fluxe, and abundance of termes : as also to heale vp both inward and outward wounds, the spetting of blood, and falling downe of the fundament.

Moufe-eare.

Dogs-grasse without setting or sowing, groweth more then one would with both in gardens, and also in corne grounds that are fat. It serueth in Physicke to coole and drie indifferently : and withall (notwithstanding this) to open and take away obstructions, and to expell and breake the stone : it is true that the seed drieth more, but it bindeth somewhat.

Dogs-grasse.

Water betonie groweth in moist, watery, and marshie places. Of the roote thereof gathered in autumn and made verie cleane, and stamped with fresh butter, all being closed vp in an earthen vessell well leaded and stopp, and the same vessell set in some moist place, and let stay there some fifteene or twentie daies ; after let the butter be melted vpon a soft fire and in the ende strained : is made an ointment that is singular good to rub and annoint the kings euill withall, and the hemorrhoides : this roote is set about with many small knots, hauing the resemblance of hemorrhoides or the swelling of the kings euill.

Water betonie.

It groweth without any great paine in gardens, and being sown groweth more aboundantly then one would haue it. The seede purgeth those that haue the dropie verie much, if they be giuen in whay : it is true that they maie be vied without annoiance done to the stomacke, if it be parched and dried, as also mixt with anise and fennell seede : furthermore it is good to set in gardens, to kill and drue away moles.

Palma christi.

This herbe is of two sorts, male and female : both of them will grow in all manner of earth, but principally in that which is moist.

T 2

Neither

Neither the one nor yet the other doth beare any feede, as writers record : notwithstanding it hath beenetried, that the male beareth feede, and that it cleaueth to the hindermost part of the leaues, but yet so little, that hardly can a man see it, and which cannot be acknowledged, or gathered but in the end of Iuly, which is the time when it is ripe: for to gather it you must cut the leafe neere vnto the roote, and then hang them vp in your house, spreading a linnen cloath vnder them, or else some faire cleane white paper: I knowe well that the common sort doe verily thinke and auerre, that this feede cannot be gathered but on the night of the wakes of *S. Iohn* in sommer, and that more is, not without great ceremonies and mumbling and muttering of many words betweene the teeth, which haue power to driue away diuels, which haue the custodie of the same feede: but all this is nothing but fables.

The decoction thereof is good to prouoke womens termes, to cast out the dead childe, to kill wormes, and some doe vse it to heale the frettings or hurts that may be in the fundament fallen downe: but especially the female.

Herbe two-pence (so called because the leaues resemble small peeces of siluer) requireth no great peece of husbandrie about it, saue onely that it would haue a moist ground. The whole herbe either in decoction or powder, but especially the water thereof distilled in a limbecke, is very singular good for the falling downe of the fundament.

Flawoord (being called of the Latins *Pysyllium*) craueth a very fat, well manured and battled ground, for else there will no good come of it. The feede prepared in forme of amucilage, and applied in vineger doth kill the wilde fire and tetter: applied vnto the head or browes it taketh away the paine thereof: it taketh away also the rednes of the eies being applied thereunto. The distilled water is of infinite goodnes serving in the paines of the eies, two or three drops thereof onely being dropt into them.

This herbe requireth a verie fat place, well manured and tilled: likewise we see it grow abundantly in vineyardes and groundes for wheat and barlie. The leaues are verie singular good for the opening of the liuer, and cleansing away of adust humours, and this also is the cause why physitions prescribe it with whay, in scurvie, scabbed and itchie cafes, and where the leprosie is. The iuice thereof is good to cleere bleared eies.

Groundswell groweth in euery ground, and without any great care: we see it growe likewise neere vnto walles, and vpon the townes walles: it is greene all the yeere, and flourisheth as it were in euery moneth, and this is the cause why the Italians call it euery monethes flower. Some thinke that groundswell distilled is very singular good

for

for the whites in women: but beleue it not before you finde it true by prooffe, for I haue obserued by often vse, that this herbe whether in decoction or otherwise, prouoketh the termes that are staied.

Birthwoort as well the long as the round, must be planted in a fat and fertill soile, such as that where wheate is sowne and oliue trees planted. Their rootes (amongst other almost infinite vertues) cause womens courtes, purge the lungs, cause spitting, cure the cough and prouoke vrine: which more is, if either of them be taken in drinke especially the round one made in powder with pepper and myrrhe, it driueth forth the afterbirth, the dead conception, and all other superfluities gathered in the matrix: it doth the like being applied in forme of a mother suppositorie,

Centaurie or the gall of the earth as well the great as the small, desireth a fat ground, that is fruitfull and well tilled, and yet in such a ground they thrive not well without the great care and industrie of the gardiner. Their roote indecoction, iuice or powder, moueth womens termes and prouoketh vrine, expelleth the dead childe, purgeth flegmaticke humours which cause the sciatica, openeth the obstructions of the liuer and spleene, killeth the wormes, profiteth and helpeth palsies, conuulsions, and diseases of the finewes, it cleareth the sight, and taketh away all mistinefle from them, especially the iuice dropt into the eies doth heale their fresh and new wounds, and cicatizeth old and maligne vlcers.

Woodbinde craueth no great tilling or husbanding, for it groweth euery where and in what place it listeth. It is true that it desireth greatly to be neere to broome hedges, and the borders of fields. The fruit of woodbinde drunke with wine the space of fortie daies, taketh away the obstructions of a hard and indurate spleene, it purgeth out vrine with such force, as that the tenth daie the vrine becommeth all bloodie: it helpeth women in their childebirth: the leaues in decoction or distilled docheale wounds and filthie vlcers: wipe away the spots and tearnes of the bodie and of the face.

Pimpernell hath red and blew flowers, and craueth a moist and shadowed ground, so likewise we see it grow in the shadowes of hedges and bushes. Pimpernell with the red flowers, it ampt and applied vnto the eies, or the iuice the eof dropt within them, taketh away the inflammations, dimnesse and vlcers of the eies: and healeth the inflammations of the secret partes: pimpernell with the blew flower boiled with salt and water, is a very good and proper medicine to cure thench or scurfe, and the lice, or wormes in the hands, if you wash them oft therewith.

Buckwheate is a very common herbe, and yet but little knowne by his name: it is very ordinarie in corne and tilled grounds about harvest time. The peasants of *Champaigne* doe commonly call it *Vel-*

Note, because (in my iudgement) the leaues are hairie : which name I minde not to change, but rather to keepe for the easier knowing of the herbe. They make vse of it by applying it, if at any time in shearing they happen to cut themselues with their sickles. For to know it better therefore (then onely by the name) it putteth forth from the roote, fīue, sixe, seuen or eight small branches, for the most part laid along vpon the earth, of the length of a hand and sometime of a foote, bearing leaues somewhat like vnto the little bindweede, but indeede they be lesse and more round, very hairie, and a little fattie. The flower is small and of diuers colours, drawing very neere vnto a pale yellow, but in greatnesse it commeth neere vnto the flower of cie-bright, but in shape and fashion vnto the nettle flower.

The water of the leaues and branches distilled (whiles it is in force) in a limbecke in Maries bathe, is singular and maruellous good to stay the spreading of the cancer in the brestes and the creeping polypus, howsoeuer some hold them as incurable. The same applied to the browes taketh away the heate, and asswageth the paine of the head. In an injection it mundifieth first, and afterward conglutinateth wounds, and drieth vp fistulaes very readily, and maligne vlcers which are easily prouoked, and become woorse by other remedies : being dropt into weeping cies it healeth them, and staieth such rheumes as fall downe vpon them and cause inflammation and dazeling of the same : being applied with a linnen cloth vpon itchings, wheales, scabs, poukes, the wilde fire, S. Antonies fire or shingles, it cureth and healeth them in a very small time, as also all other burning inflammations. Being drunke for certaine daies it staieth all rheumes, vomitings, and fluxes of the bellie, it drieth vp the water in those that haue the drop-sic, appeaseth the paines of the colicke : it cureth tertian and quartan agues, and I am verily of minde that it may be giuen to good and profitable purpose to other agues, the temperature thereof considered and his infinite other secret qualities, which euery day are more and more manifested : being drunke and applied a certaine time it reunith the rupture and falling downe of the bowels, the falling downe of the mother, and the excellent courses of women by suppressing them and whatsoeuer other fluxes of blood. Taken in a gargarine with a little wine, it drieth the vlcers of the mouth : and being vsed for a gargarine it selfe alone, it is singular against the distillations, causing the swelling of the vula or the inflammation of the throte called the squinancie : likewise taken in the same manner it is good against the blacknes and roughnes of the toong caused of a continuall ague. The iuice and decoction of the leaues worke the very same effectes, whiles as yet the herbe is not too much dried by the heate of the sunne.

Of this buckwheat there is made a cōpound water to make the face faire

faire and beautifull, and vndoubtedly to take away the freckles, and it is thus made: Take of the leaues thereof bruised in a mortar two good hādfuls, of the root of Salomons seale made clean with a linnen cloth & after braied a quarter of a pound, mingle al together, & infuse them for the space of twelue howres in white wine, this being done put all into a lembecke, adding thereto the iuice of three limons or oranges, then distil & draw out the water in Maries bath, which you shall keep very carefully for your vse: but it is requisite that before this you haue made prouision of the liquor of the brionie roote, which must be gathered about the ende of Aprill, or in the beginning of May, whiles the dewes continue, and that in this manner. The head of this roote must be cut a little, vncouering the top, and not pulling it vp by the roote, after it is thus pared at the top, you must cut a hollow hole in it some two or three fingers deepe, and then couer it againe with the cappe you haue cut off from the head, and some fewe of the leaues thereof, and so to leaue it to the next morning before sunne rise, not taking off this cap or couering : then there will be found in this hole a liquor which must be gathered with a spoone, and put vp and kept in a vialle glasse, after which the couering must be put on againe as it was the day before, and this to be continued euery day vntil mid-May, & longer if so be that one be so disposed. Now when you would vse it, take an ounce of this liquor, & mixe it in a vialle with two ounces of the abouenamed compounded water; & at night when you goe to bed, you must wet a linnen cloth in this mixture, & spread it al ouer the face, there letting it rest a good part of the night, but in the morning you must auoid the burning heate of the sunne : and this course shall be continued certaine nights.

But although the herbe alone applied, his iuice, water, and decoction haue great and excellent qualities, as it is easie to iudge by that which hath been said before, yet forasmuch as that one simple, or one drugg, or many ioyned together, and to good purpose and effect in that thing for which it was compounded and made, is of much more efficacie by the helpe and assistance afforded vnto it, I am willing for that cause to impart vnto you a marueilous ointment made of the same bucke-wheate, and the description of it, is in manner as followeth. Take of the iuice of the leaues of bucke-wheate, laide in steepe in a little white wine the space of fower and twentie howres, one pound of the iuice of veruaine (which is as yet but a little shot vp into branches) in like manner steeped as before, and that by it selfe a quarter of a pound, of the iuice of the leaues of yellowe henbane (commonly called smal nicotian, or the Queenes herb) halfe a pound, oile oliue a pound : mixe all these together in a skillett, & boile the vpon a small fire, stirring it often with a spatule of wood, vntill the iuices be almost consumed : then adde thereto of new waxe, broken into

peeces, and of perrofine of each a quarter of a pounce, and melt the whole by little and little, still stirring it with a spatule, and keeping a low fire without increasing of it: which being done, take the skiller from the fire, and put into it at that present instant of Venice turpentine a quarter of a pound by little threads as it were, and stirring it continually with a spatule: then when the ointment shall beginne to waxe colde, put in masticke and frankincense mixt together in powder, of each the weight of two french crownes, and cease not to stirre it as before, vnill it be all well incorporated. The marke to knowe when the ointment is well made and fully finished, is, if a drop thereof being put vpon your naile do congeale and clutter together, or that it cleaueth vnto the spatule stirring it. Then put you vp this composition in gallipots, for to serue you as shall be declared hereafter.

This ointment aboue all other remedies is singular good in the curing of the canker, alwell of the dugs as of other parts, in the curing also of the polypus, *Noli me tangere*, the kings euill, brused or squar nailes, wounds old and new, fistulaes, and maligne vlcers, be they neuer so rebellious. It quencherh all sharpe inflammations, the shingles, and burnings either of water or fire. It rooteth out all sortes of ring-wormes, scabs, itches, pustules, the wilde scab, and the wilde fire. It fil-leth vp chaps which happen in the hand or fundament. It is good for cuts of sinewes if there be added to it pouned wormes. It cureth the moth, or falling of the haire, if before you annoint the head, the haire be puld and taken away. It taketh away the swelling and paines of the hemorrhoides. Being applied with mans grease and a little oile of roses, it likewise taketh away the paines of the gout. It mundifieth & draweth out mightily the gunshot out of the bodie, and healeth the woundes vp without any other thing applied: it taketh away the blewnesse of dry blowes. To be brieue, it is a most sure and infallible remedie by reason of his temperature in all impostumes either hot or cold, and resolueth and discusseth all tumours that need not to be sup-purated and ripened. But this must be obserued, that before you apply it, you must discerne of the offending humour, to the end that you may vie some either generall or particular euacuation, according to good order, and that by the aduise of some Physicion.

The foure and fortieth Chapter.

A discourse of Nicotian, or the male petum.

Nicotiana though it haue bene but a while knowne in France, yet it holdeth the first and principall place amongst Physicke herbes, by reason of his singular and almost diuine vertues, such as you shall heare of hereafter, wherof (because none either of the old or new writers that haue writtten of the nature of plants, haue said anie

any thing:) I am willing to lay open the whole historie, as I haue come by it through a deere friend of mine, the first author, inuentor, and bringer of this herbe into France: as also of many both Spaniards, Portingals, and others which haue trauailed into Florida, a countrey of the Indians, from whence this herbe came, to put the same in writing, to quite such of grieue and trauell, as haue heard of this herbe, but neither know it nor the properties thereof.

This herbe is called Nicotiana of the name of an ambassadour which brought the first knowledge of it into this realme, in like manner as many plants do as yet retaine the names of certaine Greekes and Romans, who being strangers in diuers countreies, for their common-wealthes seruice, haue from thence indowed their owne countreies with many plants, whereof there was no knowledge before.

Some call it the herbe of Queene mother, because the said ambassadour Lord Nicot did first send the same vnto the Queene mother, (as you shall vnderstand by and by) and for being afterwarde by her giuen to diuers others to plant and make to growe in this countrey. Others call it by the name of the herbe of the great Prior, because the said Lord a while after sailing into these westerne seas, and hapning to lodge neere vnto the said Lord ambassadour of Lisbon, gathered diuers plants thereof out of his garden, and set them to increase here in France, and that in greater quantitie, and with more care then any other besides him, he did so highly esteeme thereof for the exceeding good qualities sake. The Spaniards call it Tabaco, some call it the holy herbe, because (as I thinke) of his holy and maruiculous effects: very many haue giuen it the name of Male petum, to knowe it from the Female petum, which is in truth the proper name of the herbe, vfed by them of the countrey from whence it was brought: notwithstanding it were better to call it Nicotiana, after the name of the Lord which first sent it into France, to the end that we may giue him the honour which he hath deserued of vs, for hauing furnished our land with so rare and singular an herbe: and thus much for the name, now listen vnto the whole historie.

Master Iohn Nicot, one of the kings counsaile, being ambassadour for his Maiestie in the realme of Portingall, in the yeeres of our Lord God, 1559. 60. and 61. went on a day to see the monuments and worthie places of the said king of Portingall: at which time a gentleman keeper of the said monuments presented him with this herbe as a strange plant, brought from Florida. The noble man sir Nicot hauing procured it to growe in his garden, where it had put forth and multiplied very greatly, was aduertised on a daie by one of his pages, that a yong boie kinsman of the said page, had laide (for triall sake) the said herbe stamp, the substance and iuice and altogether, vpon an vlcere which he had vpon his cheeke, neere vnto his nose,

why it was called Nicotiana

The herbe of Queene-mother.

The herbe of the great Prior.

Tabaco. The holie herbe.

Monseur Nicot ambassadour for the king in Portingall.

Nicotiana the chief of physick herbes.

A matter of experience in the case of a noli me tangere.

nose, next neighbour to a *Noli me tangere*, as hauing already seized vpon the cartilages, and that by the vie thereof it was become mercurious well: vpon this occasion the noble man *Nicot* called the boie to him, and making him to continue the applying of this herbe for eight or ten daies, the *Noli me tangere* became throughly kild: nowe they had sent oftentimes vnto one of the kings most famous phisitions, the said boy during the time of this worke & operation, to marke and see the proceeding and working of the said *Nicotiana*, and hauing in charge to do the same till the end of ten daies, the said phisition then beholding him, assured him that the *Noli me tangere* was dead, as indeed the boie neuer felt any thing of it at anie time afterward.

Proesse of it in wounds.

Some certaine time after, one of the cooke: of the said ambassadour hauing almost all his thombe cut off from his hand, with a great kitchen knife, the steward running vnto the said *Nicotiana*, made him to vie of it five or sixe dretings, by the ende of which the wounde was healed. From that time forward this herbe began to become famous in Lysbone, where the king of Portingals court was at that time, and the vertues thereof much spoken of, and the common people began to call it the ambassadours herbe.

The ambassadours herbe.

Now vpon this occasion there came certaine daies after a gentleman out of the fieldes being father vnto one of the pages of the said Lord ambassadour, who was troubled with an vlcir in his legge of two yeeres continuance, and craued of the said L. ambassadour some of his herbe, and vsing it in manner afore mentioned, he was healed by the end of ten or twelue daies: After this yet the herbe grew still in greater reputation, insomuch as that many haisted out of all corners to get som of this herb. And amongst the rest, there was one woman which had a great ringworme, couering all her face like a maske, and hauing taken deepe roote, to whom the said Lord ambassadour caused this Petum to be giuen, and withall the manner of vsing of it to be told her, and at the end of eight or ten daies, this woman being throughly cured, came to shewe herselfe vnto the said Lord ambassadour, and how that she was cured. There came likewise a captaine bringing with him his sonne diseased with the kings euill, vnto the said Lord ambassadour, for to send him into France, vpon whom there was some triall made of the said herbe, whereupon within fewe daies he began to shewe great signes and tokens of healing, and in the ende was throughly cured of his kings euill.

Proesse for ringwormes.

Proesse for the kings euill.

Madame of Montigny dead of a noli me tangere in her breast.

The said Lord ambassadour seeing so great proesse & trial of the said herb, & hauing heard say that the late deceased madam of Montigny died at saint Germans in Laye, of an vlcir growne in her breasts, which was turned to a *Noli me tangere*, for which neuer any body could finde any remedie: and likewise that the Countesse of Ruffe had sought for all the famous phisitions of the realme to cure her of a ringworme which

which she had in her face, and that they could not all heale it, here- solued with himselfe to sende of it into France, and thereupon accordingly sent it vnto king *Frances* the second, and vnto *Queene* mother, and many other Lords of the court, together with the manner to order it and applie it to the abouenamed diseases, as he himselfe had found by experience: as also vnto the Lord of *Iarnac*, gouernour of *Roche*ll, with whom the said ambassadour had intercourse of letters by reason of the king his affaires: which Lord *Iarnac* also tolde him one day sitting at table with the *Queene* mother, that he had caused of the said *Nicotiana* to be distilled, and had caused the water thereof to be drunke being mixt with the water of eiebright by one that was stuffed in his lungs, and that he was cured thereby.

How *Nicotiana* was first brought into France.

The distilled water of *Nicotiana* good for a short breath.



This

The figure of
Nicotiana.

The stalk.

Leaves.

Branches.

Flower.

Seeds.

Roots.

Such
Nectar as
is contained.How to see if
it be true
Nicotiana.

This herbe resembleth in figure, fashion, and qualities, the great comfrey, in such sort as that a man would deeme it to be a kinde of great comfrey, rather then a yellow henbane, as some have thought. It hath an vpriight stalke, not bending any way, thicke, bearded or hairie and slimie: the leaues are broad and long greene drawing somewhat toward a yellow, bearded or hoarie, but smooth and slimie, hauing as it were talants, but not either notched or cut in the edges, a great deale bigger downward toward the roote then about: while it is yoong it is leaved, and as it were lying vpon the ground, but rising to a stalke and growing further, it ceaseth to haue such a number of leaues below, and putteth forth branches from halfe foote to halfe, and foresh it selfe by that meanes with leaues, and still riseth higher from the height of fower or fife foote, vnto three or fower or fife cubits, according as it is sown in a hot and fat ground, and carefully tilled. The boughes and branches thereof put out at ioints, and diuide the stalke by distances of halfe a foote: the highest of which branches are bigger then an arme. At the tops and ends of his branches and boughes, it putteth forth flowers almost like vnto those of Nigella, of a whitish and incarnate colour, hauing the fashion of a little bell, coming out of a swad or huske, being of the fashion of a small goblet, which huske becommeth round, hauing the fashion of a little apple, or sword pummell: as soone as the flower is gone and vanished away, it is filled with very small seedes like vnto those of yellow henbane, and they are blacke when they be ripe, or greene, while they are not yet ripe. In a hot countrie it beareth leaves, flowers, and seedes at the same time, in the ninth or tenth moneth of the yeere, it putteth forth yoong sciences at the roote, and reneweth it selfe by this store and number of sciences, and great quantitie of sprouts, and yet notwithstanding the rootes are little, small, fine, threddie stringes, or it other wise they grow a little thicke, yet remaine they still very short, in respect of the height of the plant. The rootes and leaues do yeeld a glewlike and rosinlike kinde of iuice, somewhat yellowe, of a rosinlike smell, not vnapleasant, and of a sharpe, eager and biting taste, which sheweth that it is by nature hot, more then in the second degree, and dry in the first, whereupon we must gather that it is no kind of yellow henbane as some have thought.

Nicotiana craueth a fat ground well skird, and well manured also in this cold countrie, that is to say an earth, wherein the manure is so well mingled and incorporated, as that it becommeth earthlike, that is to say, all turned into earth, and not making any shewe any more of dung: which is likewise moist and shadowie, wide and roomie, for in a narrow and strait place, it would not grow high, straight, great and well branched. It desireth the South sunne before it, and a wall behind it, which may stand in steed of a broad paire of shoulders to keepe

keepe away the northren winde and to heate backe againe the heate of the sunne, it would also be defended from the tossing and force of the winde by reason of his weaknes and height: it is true that it will be out of the danger of the winde, if the roote be deeply taken in the ground. It groweth the better if it be oft watered, and maketh it selfe sport and iolly good cheere with water when the time becommeth a little drie. It hateth the cold, and therefore to keepe it from dying in winter, it must either be kept in cellars where it may haue free benefit of aire, or else in some caue made of purpose within the same garden, or else to couer it as with a cloake verie well with a double mat, making a penthouse of wicker worke from the wall to couer the head thereof with straw laid thereupon: and when the southren sunne shineth, to open the doore of the couert made for the said herbe right vpon the said South sunne.

For to sow it, you must make a hole in the earth with your finger and that as deepe as your finger is long, then you must cast into the same hole ten or twelue seedes of the said Nicotiana together, & fill vp the hole againe: for it is so small, as that if you should put in but fower or fife seedes the earth would choake it: and if the time be dry, you must water the place easly some fife daies after: it may be sown also after the manner of lettuces, and such other herbes, mingling themould verie well with the seede, and afterward couering it most carefully. Some mixe with the said earth verie cleane ashes, being well sifted and made small, but in a small quantitie. It is a long time in springing and putting forth, and after that it is put forth, you must keepe it from the cold and frost, couering it in the night, even while it is yet yoong and small: and so it will be preferred and kept continually greene and beautifull. And when the herbe is grown out of the earth, in as much as euery seede will haue put vp his sproute and stalke, and that the small threddie rootes are intangled the one within the other, you must with a great knife make a great circle or compasse within the earth in the places about this plot where they grow and take vp the earth and all together, and cast them into a bucket full of water, to the end that the earth may be separated, and the small and tender impes swim about the water: and so you shall sunder them one after an other without breaking of them, & thus hauing freed them one of an other, you shall plant them along the said wall some three foote from it, and fower foote euery one from an other: and if the earth nere vnto the wall be not so good as it ought, you shall helpe it by such manner of batteling as hath bene spoken of, and shal close vp all your care about the plants so remooued with watering them oft. The time to sow them is about mid-Aprill or in the beginning: or else earlier, if the spring-time begin earlier: the Indians and Spaniards sow it in autumn.

As

To water Nicotiana.

How to handle Nicotiana in winter.

To sow Nicotiana.

The way to remove Nicotiana.

At what time Nicotiana must be sown.

As concerning his vertues seeing it is hot and drie in the second degree, as his byting and sharpe taste doth declare: we cannot doubt but that it is good to cleanse and resolute, as also good for the effecting of the things which it hath bene tried to haue wrought, that is to say, for the healing of the *Noli me tangere*, all old wounds, & inueterate & cancred vlcers, hurts, ring wormes, and exulcerated scabs, what maligne qualitie soeuer is in them, kings euill, cloudes of the eyes, conlusions, impostumes, stingings of liuing creatures, rednes of the face, and many other accidents which we will runne ouer hereafter particularly. But in respect of the vertues thereof the best and most to be esteemed part are the leaues, and for want of them the seed, though it haue no such vertue as the leaues: the leaues thereof are vsed, either as they are greene at the time of their ripenes, or being kept dry in the time of winter, or in powder, when they are dried and made in powder: as for the way to keepe them we will speake thereof hereafter.

The leaues of
Nicotiana are
the best part of
the same.

Acbe of the
head, armes and
legs.

And to speake particularly of the effects of Nicotiana. The cold and windie paine of the head, armes, and legs will be holpen, if you lay vpon the grieft oftentimes the greene leaues of Petum somewhat dried ouer the fire: the tooth-ache is staied by rubbing the teeth with a linnen cloath that hath bene dipt in the iuice of the said herbe, and by putting into the rooth a pill of the leaues of the same herbe. The wounds of the armes, legs, and other parts of the bodie low and soeuer they be, will be thoroughly cicatrized, if you wash them first with white wine or vrine, and afterward wipe them verie cleane with a linnen cloath, and by and by after put thereupon one or two greene leaues well stamped with the iuice, or the iuice alone, and vpon it some fine white lint, or whiter linnen cloth, continuing the same daily vnto the end of the cure: and, if you haue no greene leaues, take drie ones and powder them, and put of this powder into the wounds, after you haue washt them as hath bene said, and wiped them with cleane linnen. The Indians vse it to comfort the feeble and not digesting stomacke, first rubbing it with oile oliue, and then applying thereupon one or two leaues somewhat dried and made pale ouer the fire: it is in vse also among the Indian Canibals against poison, wherewith they vse to annoint their arrowes to shoote, and this poison will kill by and by if blood be but drawen: for when they goe to war, they carrie in one harts foote of that poison, and in another of the iuice of Petum to remedie the mischief: and if they haue no greene, they carrie drie with them: and so soone as they haue applied it to the wound, they account themselues out of all danger of death, how great soeuer the wound be. This remedie was tried by the Indian Canibals by reason of a battell where they were hurt in a prouince called *Saminam*, and as their custome was to cure their poisoned wounds with sublimate, so they not finding store thereof sufficient, were made to applie vnto their

A weakle stomacke
not able to
digest.

their woundes, the iuice drawne out of the leaues of this herbe, which shortly after tooke away the paine and venome thereof, and so they became whole: the prooue of this thing hath also bene made in Spaine sundrie times; and amongst others by the catholike King himselfe, who to make triall of this herbe, caused the wound of a dog to be rubd with sublimate, and presently after to be applied the iuice of Petum the substance and all. This same remedie may serue against the bitings of mad dogs, so that it be vsed within a quarter of an howre after. The leaues or their iuice applied together with their drosse, do heale the hurts of beastes comming by striking, it taketh away the bruius of all manner of beastes, and from horses such swellings as happen in the ioints, of grosse humours, as also it asswageth the paine of the sciatica, spaurins, the place being first rubd with oile oliue, and a leafe of Petum scorched ouer the fire and laide thereupon: by the same meanes it asswageth any paine in any part of the body. The decoction of the leaues boild in water, and made into a syrupe with sugar, or into a iuleb or apozeme; and taking euery morning the quantity of two or three ounces, remedieth the difficulty of breath, old cough, and causeth to spet out grosse and slimie humours, so that the party before he vse this decoction, haue bene vniuersally purged, by some purgatiue medicine: the iuice and drosse of the said leaues stamped in a mortar, doth open the obstructions of the spleene, and soften the hardnesse of the same, applied vnto the region of the spleene in the morning: for want of the leaues the powder may be applied, being mixt with some ointment appropriate vnto such diseases. The same remedie serueth for the paine of the stomacke, the paine of the belly, and the colicke, as also such other griefes comming of coldnesse and windinesse, being applied warme, and vsed oftentimes, till at length the paines be asswaged. It is not of the least seruice for the paines of the matrix, the said leaues applied vnto the nauell in maner afore said: as also if the fume thereof be put into the nose of a woman grieued with the suffocation of the mother, should haue of the same alwaies readie. Some hold it for a singular remedie against the gowte, to chaw euery morning fasting the leaues of Petum, because it voideth great quantitie of flegme out at the mouth, hindering the same from falling vpon the ioints, which is the very cause of the gowte. If you put the leaues amongst hot embers for some space, and afterward taking them forth, applie them (without shaking of the ashes from them) vnto his bellie that hath eat and drunke much, you shall assuage his swelling fulnesse and keede him from surfetting. The iuice of the leaues of Nicotiana stamped, clarified and mixt with melted sugar of the forme of a syrupe, being taken in the morning killeth and gasteth out wormes: but therewithall you must lay vpon the parties nauell some of the leaues bruised,

Sciatica.

Difficulty of
breathing.
An old cough.

The spleene
stops and hard.

Paine of the
stomacke,
Colicke.

Paine of the
matrix.

Surfetting.

To kill the
wormes.

bruised, stamp in a mortar, and wrapt in a linnen cloth, and let it be presently after he hath taken a clyster of milke and sugar. All aches of the ioints comming of a colde cause, all swellings, tumours and impostumes comming likewise of colde and windie causes, all kibes on childrens heeles, as also exceeding great itches are healed by applying the leaues of Petum. The iuice of Petum laide vpon a carbuncle how pettilent or venomous soeuer, doth heale and cure the same presently: it doth the like in olde vlcers, though they pearse vnto the bone, if you continue the vse of it so long as there shall be any neede: for it maketh the flesh to grow againe, and consumeth the filthines of the vlcers: which I my selfe haue prooued in two vlcers of the nose, caused of the French dis ease, out of which the iuice of this herbe caused great store of wormes to come. Greene wounds (prouided that they be not very deepe) are healed in a day, by putting into them of this iuice, and applying of the droile vpon them: and if it happen that they should be deepe, then it is but the further washing of them with wine, and then to put this iuice into them, and the drosse thereof aboue and vpon them with a linnen cloth dipt in the iuice: also for the more bricfe and speedier curing of them, it were good that they were washed within and without with the same iuice.

Nicotiana dried hath the like operation in the diseases and accidents aboue spoken of: the way to drie them is this: you must take the fairest leaues and those also that are indifferent faire, and put them vpon a file, and afterward drie them in the shadow, hanging vnder some chamber floore, not in the sunne, winde, or fire, and so you may keepe them whole, to vse them afterward thus dried or else in powder. And that I may particularly touch the diseases which the dried leaues are good for, if you burne the dried leaues of Nicotiana vpon a chafingdish, and take the fume at your mouth through a pipe, the head being well couered, you shall auoide at the mouth such quantitie of slimie and flegmaticke water, as that your bodie thereby will become leane, as if you had fasted long: by which one may coniecture that the dropisie not confirmed may be holpen by taking the same fume: the same fume taken at the mouth is singular good for them that haue a short breath, olde cough or rheumes, in which cases it maketh them to auoide infinite quantitie of thicke and slimie flegme. The disease of the mother, otherwise called the suffocation of the mother, is healed by taking this fume into the secret parts. For the headache comming of a cold or windie cause, if you cannot come by the greene leaues, then take the drie, moistening them first with a little wine, and after drying them at liue ashes, then afterward sprinkle vpon them sweete water, and so apply them vnto your head, or any other such place where you feele any paine: you may doe as much with the powder of the leaues dried, mingling therewithall things

appropriate

appropriate vnto the disease. Such as are subject vnto swoonings are by and by brought againe, by taking at the mouth or nostrils, the fume of the said leaues burnt, in respect whereof Indian women keepe this herbe very carefully, because they be subject to swoonings, Which is more, the inhabitance of Florida doe feede themselves a certaintie space with the fume of this herbe (whatsoever a certaine new Cosmographer say to the contrary, who seeketh by his lies to triumph ouer vs in this respect) which they take at the mouth, by the meanes of certaine small hornes, the picture whereof you may see by the figure of the herbe. And the truth hereof we gather from them which haue bene in Florida, and by mariners comming daily from the Indies, which hanging about their neckes little pipes or hornes made of the leaues of the date tree, or of reedes, or of rushes, at the endes of which little hornes there are put and packt many drie leaues of this plant, writhen together and broken. They put fire to this end of the pipe, receiuing and drawing in with their breath at their mouth wide open, so much of this fume as possibly they can, and affirme therupon that they finde their hunger and thirst satisfied, their strength recovered, their spirites reioyced, and their brains drenched with a delightfulome drunkennesse: as also to auoide out of the mouth an infinite quantitie of flegmaticke water. But in that the fume of this herbe maketh men somewhat drunke, some men haue thought it to be very cold, and by that reason a kinde of yellow henbane, which it resembleneth much in his stalkes, leaues, cups and seede, as we haue said before: but we must know that the fume of this herbe doth not make drunken so quickly, and withall that this drunkennesse doth not proceede of exceilue colde, such as is found in henbane, but rather in a certaine aromaticall vapour which doth fill the ventricles of the braine. All which vertues and properties, besides that we haue prooued and tried them in many diseases here in Fraunce, to the great comfort of the sicke: they also which come from the Indies, and newe world of Florida, haue confidently auouched vnto vs to haue prooued and tried the same in themselves, hauing bene wounded and hurt, when they made warre in the countrey against the rebellious Indians: who likewise affirme that much good is spoken of this herbe, euen of all the priests of these barbarous nations, whereof they make vse in their magicall practises and diuinations, imagining that by the vertue thereof the things which they desire to knowe are revealed vnto them. And that it is so, the sauage Indians being accustomed to aske of their priests the successe and euents of things to come is prooued by the priests: for then they to fulfill the desires and requestes of the Indians, take the leaues of this plant and put them in a pipe, or hollow end of a cane and being mixt with wine, they sup in and receiue it all at the mouth, and by and by after they fall in a

trance

Swellings.
Rheumes.
Cold impostumes.
Carbuncles.

Vlcers of the nose.

Greene wounds.

Wherefore the dried leaues of Nicotiana are good.
To drie Nicotiana.

The dropisie.

The suffocation of the mother.
Headache.

Swooning.

The fume of Nicotiana asswageth hunger and thirst.

That Nicotiana doth not make drunke.

Divination by
Nicotiana.

trance, and become as men without life so long, as vntill the herbe haue ended his operation: and then they rise vp halfe giddie, and so make answer vnto whatsoeuer any man hath demanded of them: but wee must thinke that it is more probable, that such like diuination doth proceed of some diuinish arte, rather then by any vertue of this plant, seeing withall that this barbarous and heathenish nation is ordinarily giuen to call vpon the wicked feend in all their necessities, and he againe doth to dazle their eies, that he maketh them to conceiue an infinite number of ambiguous and doubtfull things, and false superstitions: representing vnto them a thousand diuinish and dreadfull visions and apparitions: thus is the simplicitie of this poore people deluded, by the company of the said priests, holding for a true and certaine oracle their vertue proceeding from this plant. Furthermore when they are thoroughly disposed to see strange and fantastical visions, they burne the leaues of the said plant, and take the fume at their mouth and nostrils, and very presently after they become as it were deprived of sense, falling to the ground in a trance. It is certaine that many Philosophers do deliuer that there are certaine plants which haue the like force & properties, making men to dreame of an infinit sort of things, and those well pleasing to the spirit & vnderstanding of man: furthermore they assure vs that if a man take of the iuice of it in any quantitie, he shall become beside himselfe for the space of three daies. *Dioscorides* likewise saith, that there are diuers plants which haue the same vertue, as mad nightshade, a dram of the roote whereof, as he saith, drunke with wine, doth bring dreames of vaine things; but not altogether vnpleasant: but taken the double quantitie it maketh mad, and taken fowerfold it killeth: if any man eate anise seed going to bed, he shall haue pleasant dreames in his sleepe: but and if he eate turneps, they will procure him noisome and troublesome dreames.

Mad night-
shade.

Anise seed.
Turneps.

Furthermore, the vse of the leaues of Nicotiana, as well Greene, as dry and made in powder, are distilled in a glasse lembecke, the water whereof is not lesse singular then the iuice in wounds, swellings, kibes, and the falling of the nailes of the fingers; if you powre of this water vpon the grieie, and, afterward couer it with linnen clothes dipt in the same.

Some likewise draw an oile out of it by descension (to speake after the manner of Chymists) in a glasse retort: some also doe make thereof a chymicall salt: both the one and the other, are a great deale more excellent in the foresaid diseases, then the leaues, iuice, powder, or distilled water of Nicotiana, forasmuch as quintessences drawn out of simples, are the subtile spirits thereof, wherein lieth the pure force and sincere qualities, of the matter from whence it is drawne: we will not speake here of the manner of distilling of the Chymicall oile, and

and salt of Nicotiana, but reserve the same for our booke of secret remedies.

The ointment of Nicotiana are made diuers waies, notwithstanding that this onely simple taken and applied as we haue already spoken at large, be of greater vertue and efficacye, I will onely make mention of two which seeme to me the most artificially described. The first is: take of the fairest, greatest, greenest, and most rosinish leaues of Nicotiana that can be chosen, a pound, wipe them as cleane as is possible with a linnen cloth from all dust, earth, and whatsoever other filth, not wetting them any thing at all; brate them in a mortar of wood or marble, with a wooden pestell; afterward melt halfe a pound of sweete seame prepared (that is freed from all manner of filmes and skins) in a braten vessel, putting to the said seame the drosse and iuice of Nicotiana stampd, as hath beene saide, let it all boile together in a braten vessell at a small and soft fire, set vpon a triuer, or in Maries bath (that is to say, a cauldron full of boiling water) until you see all the watry part of the iuice evaporated, and that the rest haue got the consistence or iust thicknes of the forme of an vnguent. The second ointment is such: melt and boile together perrosin, new waxe, and turpentine vpon a coole fire in a brasse skillet, of each three ounces, and when it is all melted and shall begin to froth, take a pounce of the drosse and iuice of the leaues of Nicotiana, so purged, chosen, and stamped, as hath beene saide: set them to boile with the waxe, perrosin, and turpentine, the space of five or sixe howers more or lesse, at a small and gentle fire of coales, vpon a treuet, or in a double vessel (that is to say, in a cauldron full of boiling water) stirre the same continually, vntill the watry parts of the iuice be consumed and spent, and the rest boild thick like an ointment: after that straine it through a thicke canasse, and put it againe into the skillet, with halfe a pound of Venice turpentine, not suffering it to boile, but stirring it very well: let it coole, & put it into pots for your vse. Some in dispensing the first and second ointment, put not in the drosse of the stamped herbe, but straining it through a thicke strainer; reserve onely the iuice, which seemeth to me to be the better. As concerning the properties of these two ointments, the first is better for wounds onely cancrus vlcers, ringwormes, skurfs, and fire faces, because it hath more force to cleanse and resolue, which is the principall and chiefe propertie of Nicotiana, not being hindered or restrained by the mixture of other ingredients. The other ointment is better to incarnate and consolidate all sorts of wounds, to resolue impostumes and swellings, to mitigate paines and other effects.

What is meant
by Maries bath.

The second
ointment.

Besides these two sorts of ointments, there may be made a very excellent balme of Nicotiana: distill the leaues of Nicotiana with the iuice pressed out (the drosse being cast away) put it into a glasse vialle, with

An excellent
balme made of
Nicotiana.

V 2.

with like quantity of common oile, set this viole well stoped with gumme wax in the sun a long time, and tie vpon the toppe of it a strong parchment, or else set this viole in a cauldron full of boiling water, or burie it in horse dung, and let it stand there full forty daies, changing the dung sometimes; the forty daies expired, you shall find a balme in the viole which is of no lesse efficacie than the quintessence of Nicotiana aboue mentioned, as concerning all the properties that may be desired in this plant.

See heere (friendly reader) the historie of Nicotiana euery where so much spoken of and esteemed, and that according to the very truth so farre as possibly I could finde it out, following the report and intelligences which I haue receiued of the Portugals, Spaniards, and our owne country men, which haue come hither these last yeeres past from out of *Florida*, (which is the naturall soile of the same) as also such experiments as haue been made heere in France of the faculties and vertues thereof, altogether like vnto those, which that plant (which *Florida* as the naturall country thereof) doth bring forth and nourish: which if you haue not alwaies found in euery point correspondent and answering vnto such effects, as we attribute and give vnto it, yet you must not therefore condemne the plant, as though those were but fained and counterfained properties and vertues, which we haue deliuered and reported of it; but rather accute the small care which is had in the planting of it heere amongst vs: assuring your selues that if you provide for it such a soile and other comforts, as it hath where it naturally groweth, or somewhat neere thereunto (for such in all respects cannot possibly be procured heere in France, by reason of the coldnesse and inequality of the aire) and that you husband it likewise as carefully as the Indians, that then you shall perceiue that what I haue heere set downe of it, is very faithfull and true.

The fise and fortieth Chapter.

Of female Petum.

THe experience (which is the mistresse of arts and sciences) which hath bene had of the faculties and vertues of this herbe which are almost like vnto those of male petum: the shape of the roote, stalk, leaues, flowres, & seed of the same, which is but a very little one, and in littlenesse onely differing from the figure and colour of male Petum, do giue vs some light & reason why we should call this herb by the name of female Petum, & yet the more boldly, for that of the seed of the male Petum this female doth oftentimes spring and grow. For if when the male Petum is in seede, it happen to shed the same vpon the ground where it is planted and hath put forth, then this ground the yere following will not faile to bring forth the female Petum. And which

Female petum
growth of the
seeds of the
male.

which more is, if you sow the seede of male Petum in a ground that is not hot, fat, well turned, and well manured, but rather which is leane and sandie, in steede of bringing forth male Petum, it will bring forth the female Petum, and that in such abundance, as that you shall hardly rid the ground of it, but that it will grow euery yeere without being either sowne or planted: which must be an argument vnto vs, that there is in Petum two sexes, a male and a female: like as we are accustomed to doe in many other herbes and plants, hauing betwixt them some resemblance and affinity as wel in their vertues as in their figure, proportion and colour. It is true that the female Petum hath a lesse stem and lower, the leaues not so great and shorter, not so rosiny, nor so many: the flowres not so much vpon carnation, nor so large spread: the seed more red: the branches not so long nor so high, neither yet so many as the male Petum putteth forth. And to utter my iudgement and make a particular description, this small female Nicotiana hath his stem or stalke of two foot height or thereabout, cornered, slimie and woolly, set by distances with long leaues, large, pointed and sharp, soft, vnctuous, hoary, not notched, and of a browne colour. It bringeth forth as it were a nosegay at the top of the stalke; and vpon the branches from betwixt the leaues two flowres of a pale yellow, which are like vnto the cowlip flowres: and when they befallen there remaine and stay behinde cups, and as it were greene pots, inclosed in small hoarie skins, open aboue, and hauing fise or sixe points, but such as pricke not. Within the cup is contained a seed, which is very little, of a brown tawny colour: the roote is tender and fibrous. Where the seed hath bene once sowne, it soweth it selfe againe; and increaseth and multiplieth mightily. This sheweth manifestly how greatly they are deceived, which call this herbe *Priapeia*, as though it were a kinde of Satyrion, which commeth neere to that which is called male royall Satyrion: for this herbe which we call female Petum, doth nothing resemble Satyrion, neither in roote, colour, figure, disposition, nor properties. For female Petum hath many small rootes, a jointed stalke, many branches, many long and large leaues, being hot and dry as is the male Petum: but Satyrion hath fewer roots but grosser, a stalke without any joint, no branches, fewer leaues, flowres only at the top of the stalke, without cods and seed, hot and moist in the third degree, and good for nothing but to stirre vp carnall heate. Monsieur *Gaspell* and *Dodonaeus* haue spoken more wisely, saying that it is a kinde of herbane bearing a yellow flowre.

Female Petum
is not Priapeia.

As concerning the vse and remedies which female Petum affoordeth, they are as it were like vnto the vertues of male Petum, for it serueth in steede of the other when the other cannot be gotten, and that in such sort as we haue declared, that is to say, in his leaues greene or drie, powder, seede, iuice, drosse and distilled water in ointments and

The vertues of
Female Petum.

The leaves of
female petum
for the bloody
fluxe.

and balme prepared after the manner that we haue spoken of: but you must obserue that the female Petum hath his particular properties, as that the leaues put in a decoction for clysters, are singular for bloudie fluxes, and that the balme made thereof according to manner aforesaid, is a remedy not second to any other, in the curing of the cancers of the breasts and other parts, and that the iuice thereof applied is singular against the falling of the haire called *Tinca*, the head being first shauen, and that the iuice mingled with mans grease and applied, asswageth the paine and inflammation of the goutte: and that taken inwardly it purgeth vehemently, and that therefore it is to be auoided and shunned, vntill such time as his correctiue be knowen, and the vse thereof in purgations receiued.

The sixe and fortieth Chapter.

A brieue discourse of the roote *Mechoacan*.

W Ithin certaine yeeres past, the Indians, Portugals and Spaniards haue sent vs the roote of an herbe, which they call *Mechoacan*, which hath vertue to purge the humours, in the same sort that our vsuall purging medicines. Our country men giuen to admit of and easily receiue new things, do greatly esteem of it, euen vntill this present: we will lay down the history thereof in briebe, and as truly as possibly we could come by it, to the end it may the better be discerned, whether it deserue to be had in such estimation as we haue it in or no.

The reason why
it is so called.

The roote is called *Mechoacan*, of the name of the region or countrie where it groweth, which is a province of new Spaine (situate in the west Indies or new world) called by the inhabitants *Chimicila*, and by the commandement of the Catholike King, *Mechoacan*, which province aboundeth with gold, siluer, cattell, corne, fruites, exquisite plants, mines of mettall and stones, and all sorts of good things, where also the people are well coloured, full of vigour, strong of body, and of a perfect health, and that by reason of the aire, which is more wholesome there, than in any other place of the Indies. The occasion of the name rose thus: The Spaniards Lordes of this province, and being desirous to plant it with Christians, did erect and set vp a couent of Friars Cordeliers, living monastically: whose prouinciall father being extreame sicke, was quickly cured by an Indian Physition, who caused him to vse oftentimes the powder of this well prospering and happily succeeding medicine, when as therefore they fell sicke, they tooke with good successe of this powder: and thus this roote came in great request throughout the whole province, and from thence the praifes thereof were carried and published throughout all Spaine and Portugale: and thereupon it hath kept the name of the province

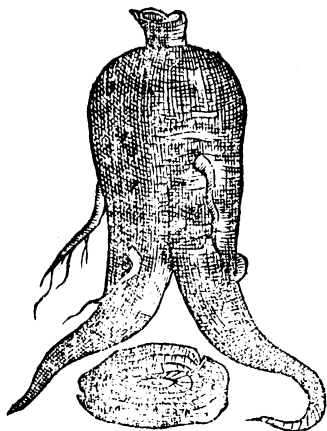
province of *Mechoacan*: the same thereof is likewise come into Fraunce, by the meanes of merchants desirous of gaine, who haue brought it vs hither from thence. Some call it *Rhamindicke*, because it seemeth that it hath the like propertie of attracting and purging flegmaticke and ferous humours; which the East rubarbe hath to attract and purge cholericke humours.

This roote is not brought vnto vs whole, but in pieces and round slices, whereunto it is diuided with kniues or with hands, so soone as it is drawn out of the earth, that so it may the better drie in the shadow (although in drying it grow but little lesse) and that it may keepe better in these round slices, than either whole or in powder: but the powder which is brought from the Indies, is of lesse operation, than that which is made into powder amongst vs: it is thicke and of a weightie substance, and the rinde thereof of an ash-like colour: the inward substance white and marked with many circles, without any taste, except such as meale is woont to haue: for it is neither sharpe, nor sweet, nor bitter: and smell it hath none, neither is it anything pitthie.

The best is that which is whitest, most close in it selfe, well set and ioined together, somewhat heauie, not full of holes or rotten: it becommeth, in time, of white, somewhat grayish or blackish, and thus by his colour is discerned whether it be new or old: for the new is white, but the olde grayish or blackish, and as it were wrought with duers colours.

This is the roote of a plant, which is a kinde of great bindweede, called in French *Lizeron*, which windeth it selfe about reedes or stakes along vp to the top of them, helping it selfe in this compassing sort to climbe without any manner of aide, it hath a stalke or trunke mixt of diuers colours, as deepe yellow, greenish, reddish, somewhat of the colour of ashes and medlay, commonlie called the lions colour: the leaues are somewhat moist (there being within the flowers as it were clappers with round knots at the vpper ende, the sharpe pointed end being toward the stalke of the foote) round and of a darke greenish colour: it beareth a fruit like a grape, as big as a coriander seed, and it is ripe in the moneth of September and in the Spring following: it putteth forth neere vnto the rootes small sciences and sproutes, which fall to creeping vpon the earth, if they be not borne vp with some pole, about which they may writhe and cast themselves rounde. The seede is like vnto that of bindweede. For your better assurance in all this that hath bene sayde, you may visit and see the Physicke gardens of Master *Nicholas Rafe*, that learned and well experimented Chirurgion, and of Master *Peter Cuth*, a skilfull and painfull Apothecarie, both which dwelling at *Paris*, haue enriched our countrey of *Fraunce* with an infinite number

ber of rare, exquisite and verie singularly qualified simples. This root is very like to the root of wilde vine, as well in colour, rinde, and wrinkles, as in thicknesse: in consideration whereof, some haue called this plant white vine: but and if you taste the one and the other root, you shall finde them somewhat differing: for mechoacan if you chaw it is found without any taste, except it haue a mealy taste, for it is nothing sharpe, but hath some small astringent and binding qualitie: Brionie Greene or drie is biting, and leaueth behinde it in the palate and roote of the mouth, a sharpe and displeasing taste: it agreeth much better with the blacke vine, or with turbith, at the least in facultie, and because they are both of them gummie.



The vertues of
Mechoacan.

And concerning the vertues and faculties thereof, they are of two sorts: the one proceedeth of his manifest qualities, as for that it is hot about the second degree, and drie about the third degree, compounded of airc, subtil, and somewhat earthie parts, and by this last it hath some binding and astringent qualitie, from whence it riseth, that in purging it comforteth. Furthermore, it openeth the obstructions of the inward parts, chiefly when it is taken in infusion. The other vertues that it hath come of a secret and hidden propertie, by reason whereof it purgeth speciall and choise humours, that is, it purgeth by some similitude and familiaritie of substance, flegmaticke and serous humours, but they naucike especially, then secondly cholericke, and lastly aduult and melancholick humours, and those not onely from the stomacke, liuer, spleene, and guts: but also from the head, parts about

the breast and ioynts: in regard whereof, it is good against olde agues, and long diseases, but especially the iauundise, dropsie, gout, kings-cull, woolues, flegmaticke tumours, head-ach, obstruction of the lungs, shortnesse of breath, the suffocation of the mother, collicke, paine in the flanks, retention of vrine, costiuenesse, agues of diuers humours, that is to say, proceeding of flegmaticke and cholericke causes mixt together, quotidian, tertian, and bastard agues: to be short, against all diseases comming of a cold humour. Wherefore it is not meet to be vsed in hot burning agues, nor yet in cholericke agues, nor yet in any other such sicknesses, as are ioyned with great heat and inflammation, nor yet where aduult humours doe offend: for although it purge them, yet it leaueth behinde it some notable heat: but it is very true, that in continuance thereof it would doe seruice, as namely when the thinnest part is purged, and nothing remaineth but the thicke and grosse behinde. This is the cause why this root is not fit for the beginning of cholericke diseases, if it be not first steeped a night in endiue or succorie water, with a very little white wine, and in the morning straining of it, to drinke the liquor strained from it.

The way to prepare it is on this maner: you must take the weight of a dram, or a dram and a halfe, or two drammes, more or lesse, according to the disposition of the bodie, the aptnesse of it to purge and the age and strength of him to whom you giue it: and afterward beat it in a mortar, and make it into powder, neither too grosse nor too fine: then afterward put this powder in three ounces of white wine, (when there is no ague) or water, or the decoction, or broth of endiue, or succorie, or of a chicken, or some other such liquor, which is meet and fit for the present disease, as in the water of betonie, for the headache: or in the water of motherwoort for the diseases of the matrix, and so forth of others: afterward the next morning you must drinke it, the liquor and powder all together: there may further at your pleasure, any sirupe that you wil, be mixed therewith, if so be you know it meete and conuenient for the disease in hand: it is true, that we haue often prooued, namely, that it endureth no mixture of sirups or such other things, no nor of cinnamon (if the ill disposednesse of the stomacke do not require it) for in such mixtures it maketh no operation, and therefore it is better to take it altogether simple. It may be giuen also in infusion, when we desire to take away the obstructions of the spleene or liuer, in steeping all night the powder thereof grossly beat (as we command to be done with rubarbe) in some wine or liquor fit and appropriate: afterward straining it the next day in the morning, and giuing the liquor onely (wherein it was infused) to drinke: but in this case the quantitie of the powder must be increased vntill it come to three or foure drams, for otherwise it will worke no effect, inasmuch as experience hath taught vs that the purging qualitie

Mechoacan is
not fit for chole-
ricke diseases.
The preparing
of Mechoacan
see to vs.

The infusion of
Mechoacan.

qualitie of this root lieth not so much in the subtil parts thereof, as in the substance. Which thing *Mefues* may seeme to haue found likewise in rubarbe of the East, when he wisheth vs to take two drams only of rubarbe in substance, and the double in infusion: this thing may happen vnto this roote, and to that rubarbe of the East, vpon their longer staying in the stomacke being taken in substance then in infusion, and thereupon make a stronger and a longer continuance of their purging. This powder may be also prepared in another manner: as namely, by making marchpanes of the saide powder with stamped almonds and sugar, which will be very fit to purge young children after a gentle manner: there may pillcs also be made of this powder, which may be as small as coriander seedes, to the end they may be the sooner dissolved within the stomacke, and not staie long there to liate it: or else they may be made greater, when there is any purpose that the saide powder should draw from the ioints and outward places.

The commodities and benefits that rise of the vse of this root are, that it may be taken at all times: it is not lothsome to the taste, nor horrible to the smell, neither yet hath it any displeasing colour, vnto all which the other purgatiues for the most part are more or lesse subiect: it procureth not any loathing vnto the stomacke, it causeth not any wringings in the belly, neither prouoketh it any vomit: it purgeth so gently as that it worketh not any weaknesse or relaxation, or any other such passion vnto the stomacke: it resoluech not or looseth the naturall power, neither doth it trouble or put the body to paine: but contrariwise it maketh it strong and lustie, as though indeed it were no purgatiue or medicine, but a familiar and acceptable thing to our natures: which thing falleth not out ordinarily in other medicines, so that young children, olde folke, and all such as haue taken anie great checke and dislike at other medicines, may safely, pleasantly, and profitably take and vse this.

It is true that before it be taken, it will be needfull to prepare and digest the humour that is to be euacuated, attenuating and making thinne and small the same, because it is colde and clammy: and opening the passages after the counsell of *Hippocrates*, with clysters and other convenient meanes, for otherwise the powder profiteth nothing: as we see it fall out euerie daie in such as vse it rashly and without preparation, and so also with them the thing that of it selfe is very good, doth get an ill name, but against all right and equitie, seeing it worketh good and laudable effects, being taken the body first prepared. When it is taken, the partie must keepe himselfe from colde, winde, much eating or drinking, and other excessse: he may sleepe an howre presently after he hath taken it, but not after that it begunneth to worke: there is no neede for him to take any broth two

or

or three howres after he hath taken it: for it is so worthie a medicine, that it causeth not anie paine in the guts: the day following if the bellie be bounde, you must procure it to stoole by clysters or otherwise: and put care it hath not sufficiently purged, you must then goe ouer it againe, so oft as till it hath wrought your wished intent. As concerning the symptomes or accidents which may follow the taking of it, they are easily reformed, although in deed the greater part of them growe rather of the qualities of the humours or of the enill dispositions of the bodies of them that take it, then of any maligne qualitie in the roote it selfe. For as for vomiting that may come by reason of the stomacke being easie and inclined to vomit, as hauing a verie sensible orifice; or of the abundance of superfluities and fretting humours contained in the same, rather then of the powder which doth strengthen and comfort the stomacke by his astringencie: notwithstanding it shall not be amisse to meete with this vomiting, to put into the infusion of this powder a little cinnamom. It is held for certain that if any be desirous to stay the working excessive or not excessive of this powder, that he needeth but take some small quantitie of broth, and the eating of it will stay the attraction of the medicine; although I haue prooued this not to be alwaies true. I further confesse that it leaueth some heate and drines behinde it when it hath wrought, which appeareth by the great alteration that is remaining; but this is no other thing, then that which other purging medicines likewise haue, for they being al of them hot doe shew themselves therein, but this heate may easily be corrected by the mingling of cold things: suppose likewise that such heate may as soone come of the hot and drie humour, as it happeneth in hot burning agues and true certains, especially if the sicke partie be of youthfull and flourishing yeeres, of a hot and drie temperature, in sommer, in a hot region, and when the present constitution of the aire is hot, and being such a one as hath a leane and thinne bodie: and then in this case I could wish such a partie not to vse this powder without the deuise of a learned and wise Physitian, for feare of running into a greater mischief. I confesse further that it leaueth a coltiuenes behinde it, in such sort as that some are fixe daies before they can goe to stoole after: but herein it deserueth no more blame then other like purging medicines, and especially rubarbe: notwithstanding to meete with this, you must take a clyster the day following, or eate some broth or plum portage, which may loosen the belly.

Loe here (friendly Reader) what thou art to iudge of the roote of Mechoacan, and what opinion thou art to haue of the properties thereof: and how thou canst not faile therein, if first thou knowing the good by his tokens and markes, dost provide thy selfe for thy vse accordingly: as namely, if thou buy that which is new, sliced into round pieces,

Marchpanes
of mechoacan.Pilles of me-
choacan.The commodi-
ties of the
vse of mecho-
acan.That the body
and humours
must be prepa-
red before the
taking of me-
choacan.The day of the
taking of it.The day after
the taking of it.

Costiveness.

Symptomes hap-
ning vpon the
vse of mecho-
acan.

pieces, white, dustie, and which, *quantitie for quantitie*, doth outweigh other roots. And if thou findest any one to be somewhat black and worne eaten, by that thou maist know that it is olde, and that therefore thou oughtest not to vse it: it is somewhat hard and quickly rotteth, for it will hard and scant indure three yeeres, if it be not hidden in millet, or wrapt in a linnen seare-cloth, or couered ouer with pitch or rosen.

The garden of pleasure or flower garden.

The seuen and fortieth Chapter.

Of the profit, pleasure, situation, working or tilling, and disposing of your garden of pleasure.

The flower garden.

THE most pleasant and delectable thing for recreation belonging vnto our French farmes is our flower gardens, as well in respect that it serueth for the chiefe Lord whose the inheritance is to solace himselfe therein, as also in respect of their seruice for to set Bee-hiues in. It is a commendable and icemely thing to behold out at a window many acres of ground well tilled and husbanded, whether it be meadow, a plot for planting of willowes, or carable ground, as we haue stood vpon heretofore: but yet it is much more to behold faire and comely proportions, handsome and pleasant arbours and as it were closets, delightfull borders of lauender, rosemarie, boxe, and other such like: to heare the rauishing musicke of an infinite number of prettie small birdes, which continually day and night doe chatter and chant their proper & naturall branch songs vpon the hedges and trees of the garden: and to smell so sweet a nosegaye so neere at hand: seeing that this so fragrant a smell cannot but reireth the Lord of the farme exceedingly, when going out of his bed-chamber in the morning after the sunne rise, and whiles as yet the cleere & pearlelike dew doth pearch vnto the grasse, he giueth himselfe to heare the melodious musicke of the Bees: which busying themselves in gathering of the same, do also fill the aire with a most acceptable, sweet & pleasant harmonic: besides the borders and continued rowes of soueraigne, thyme, balme, rosemarie, marierome, cypers, soothernwood, & other fragrant herbes, the sight and view whereof cannot but giue great contentment vnto the beholder.

The garden of pleasure (as hath beene said) must be cast and contriued close to the one side of the kitchen garden, but yet so, as that they be sundred by the intercoure of a great large alleye, as also a hedge of quickset, hauing three doores, whose ground must be of a like goodnes, and vouchsafed the like labour, tilling and husbanning, that the kitchen garden hath bestowed vpon it: and as the kitchen garden

garden is to be compassed and set about with lattise worke, and yooing common bordering stuffe to be made vp afterward and contriued into arbours, or as it were into small chappels, or oratories and places to make a speech out off, that many standing about and below may heare: in like sort shall the garden of pleasure be set about and compassed in with arbours made of Iesamin, rosemarie, boxe, iuniper, cypers trees, sauin, cedars, rose-trees, and other dainties first planted and pruned according as the nature of euery one doth require, but after brought into some forme and order with willow or iuniper poles, such as may serue for the making of arbours. The waies and alleyes must be couered and sowed with fine sand well bet, or with the powder of the sawing of marble, or with the fine dust of slate-stone and other hewen stone: or else paved handsomely with good pit stone, and ryles that are well burnt: or with faire pieces of stoness such as staires be made of, the whole laying of them being leuelled and made euen with a beater or mall made for the purpose.

This garden by meanes of a large path of the breadth of six fette, shall be deuided into two equall parts: the one shall containe the herbes and flowres vsed to make nosegayes and garlands of, as march violets, Prouence gilliflowres, purple gilliflowres, Indian gilliflowres, small paunces, daisies, yellow and white gilliflowres, marigolds, lilly conually, daffodils, canterburie bells, purple veluet flower, anemones, corne-flag, mugwoort, lillies, and other such like, and it may be called the nosegaye garden. The other part shall haue all other sweet smelling herbes, whether they be such as beare no flowres, or if they beare any, yet they are not put in nosegayes alone but the whole herbe with them, as soothernwood, wormewood, pellitorie, rosemary, Iesamin, marierom, balme, mints, penniroyall, coltmarie, hyssop, lauander, basil, sage, sauory, rue, ransey, thyme, cammommill, mugwoort, bastard marierom, nept, sweete balme, all-good, anis, horehound and others such like, and this may be called the garden for herbes of a good smell.

These sweet herbes, and flowres for nosegayes shall be set in order vpon beds and quarters, of such like length and breadth, as those of the kitchen garden: and some of them vpon seats, & others in mazes made for the pleasing and recreating of the sight: other some are set in proportions made of beds interlaced and drawn one within another, or broken off, with borders, or without borders: the greatest part of which sweete herbes, as also for nosegaye flowres, though they grow naturally and of their owne accord, without any labour or trouble of the gardener, especially herbes for nosegayes, yet such of them as stand in need of dressing and ordering, shall be sowed, planted, removed, gathered and kept, no otherwise than the potherbes; but yet notwithstanding regard must be had of the nature of euery particu-
lar

lar one, as shall be declared heereafter in the particular description of some of them.

The eight and fortieth Chapter.

Of herbes for flowres or nosegayes.

March-violets.

MArch violets as well the single as the double must be set of whole plants in a well manured ground, and digd the depth of a foote before the Kalends of March: if you will sow them, you may doe it in autumne and the spring. But especially you must beware not to set violets euery yere in one and the same place, for otherwise it will beare a yellow flowre and haue very little or no smell in it: you may make that one and the same violet shall beare all the colours that others do, that is to say, white, pale, yellow and red, if you mixe together the seeds of all and tying them in a linnen cloth, put them in that sort into a well manured earth. The violet must be gathered in the morning before the sunne rise, and when it raineth not, if so be that you will haue it to keepe his vertues and sweet smell.

The vertues
of violets.
A blow on
the head.

The flowres of March violets applied vnto the browes do assuage the headach which commeth of to much drinking, and procure sleep. He that shall haue taken a blow vpon the head, so that it hath astonied him, shall not haue any greater hurt if presently after such a blow he drinke violet flowres stampd and continue the same drink for a certaine time. There is made of the flowres of violets, syrups and conserues, good for the inflammation of the lungs, the pleurisie, cough, and agues.

White, yellow
and red gill-
flowres.

White, yellow and red gillflowres, do craue the like ordering that the March violet doth, and grow better vpon wals, house tops and old ruines of stone, then planted or tilled in gardens, especially the yellow, which come nearer to the resemblance of a shrub than of an herb, hauing hard and woody stalkes, and set ful of branches, commonly called of apothecaries Keyry. The seed of gilliflowres stampd and drunk with white wine, is soueraigne to prouoke womens termes, and to further deliuerance in them that trauell.

Daisies.

Daisies must not be sown but planted after the maner of violets, this is the least kind of the cunifreies, which is likewise found in the fields without being tild, it flourisheth all the yere long if it be well ordered. Daisies stampd with mugwoort resolueth the kings euill. A cataplasme made of daisies is good for the pallsie, and all maner distillations. For wounds in the breist, whereinto tents may be put, it is good to drinke by and by a drinke made of stamped daisies: they heale the pustules of the tooong if they be chewed, as also of the mouth: being braied they assuage the inflammation of the priuy members: eaten in salade, or broth of fleish they loosen the belly.

Purple

Purple veluet flower, called in Latine *Aramanthus*, doth recreate more with his colour, then with any smell that it hath, for it smelleth nothing at all: notwithstanding who so will haue it in their gardens, must plant it in a dry and sandy place. The flower supt in portage doth stay the fluxe of the belly, the termes and white flowers of women, the spetting of bloud, especially if there be any veine broken in the lungs or breist. The flower infused in water or white wine the space of an howre, maketh the colour of the wine redde, and thus one may helpe himselfe the more easily to beguile any that are sicke of some ague, and cannot abstaine from wine.

Canterburie bells, aswell the simple as the double, require a fat ground and well enriched. The Latins call it *Viola Calathiana*.

Their flowres mingled with wheate flower make a good cataplasme against scruines and other sorts of scabbes, likewise their rootes boiled in white wine, to the consumption of the halfe, and a linnen cloth dipped therein, and applied to scabs and scruines doth heale them: the roots boiled in wine and taken in a portion, do heale all the ruptures of the inward parts of the bodies, do cleanse the exulcerated lunges, and spetting of bloud: braied & ground in manner of meale and druncke in wine the weight of a french crowne, with two or three graines of saffron, are singular good against the jaundise, if the partie sweate thereupon presently: the like vertue is in the distilled water of the flowers: the iuice drawne out of their roote and flowers applied vnto wounds doth heale them presently: a pessarie drencht in this iuice, prouoketh womens termes, and draweth out the childe dead in the mothers wombe: being dropt into the eare, whereinto there hath some flea or such other vermine crept, it killeth them.

Gilliflowers of all sorts are seldome sowne, but oftentimes planted of rootes or branches pluckt from the plants: the roote shall be planted in the beginning of Autumne, in a fat moulde, and so put in pots of earth, that it may be remooued and set vnder some couert in winter for feare of the frostes: somner being come before the great plant haue cast forth his sprouts, you may breake off so many small branches from about the roote, as will almost serue to set and plant a whole bed withall, and so you may breede new plants of them.

You may make gilliflowers smel like cloues, if you lay brused cloues round about their rootes. In like manner you may make them haue faire flowers, large, pleasant, and sweete smelling, if you plucke away their leaues often, and take paines to digge and water their earth: furthermore such gilliflowers are commonly called gilliflowers of Prouence, of the place where gilliflowers so ordered do growe, large, tufted, and ample: those which haue not their flowres so large nor so sweete, neither yet are so carefully looked vnto and dressed, are called purple gilliflowers.

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The flowers of gilliflowers of Prouence, as also their roote, are soueraigne against the plague. And for this cause such as are well aduised, in the time of the plague do make conserues or vineger of the flowers of gilliflowers, to keepe themselves from the euill aire.

Indian gilliflowers.

Indian gilliflowers, called of the Latins *Flos petilium*, and *Ocellus Indicus*, although it refuse no ground, notwithstanding if you plant it, of the whole plant, or of the branches thereof, or else sowe it in a fat and well manured ground, especially in the beginning of Iuly, it will grow vnto such a height, as that it will seeme to be a thing degenerated into the bignes of a tree, and will put forth of his stalkemanie boughes, after the manner of a tree or shrub: and by the same meanes there will put forth flowers induring vntill winter.

The Indian gilliflower doth cause the headach and an ill and vniolesome aire.

Who will be counted careful of preserving his health, must not smel vnto the flower of the gilliflowers of India: for the smell thereof doth procure headach & giddines, & is a meanes to breede the falling sickness: further also which is more dāgerous, som haue found it by experience, that it ingendreth an infectious aire: lekwise Physitians giue special prohibition to smel vnto the Indian gilliflower in the plaguetime, because the flower thereof is venomous, and of temperate much like to the hemlocke, which may easily be perceived by the vnpleasant smell it yeelde h, being both most strong and stinking. That it is so, namely that it is venomous, I haue giuen thereof sometimes vnto a cat the flower of the gilliflowers of India bearen and mixt with cheese to cate: and she hath thereupon become very much swelled, and within a short time after dead: I sawe likewise a little yong childe, who after hauing put these flowers in his mouth, his mouth and lips did swell, and within a day or two after became very scabbed.

Wild gilliflowers.

Wilde gilliflowers aswell white as red, although they growe in the edges of fildes and along the waies, may notwithstanding be planted and set in gardens, where if they be oft remooued, they will grow to haue a double flowre. Their seede, flower, and whole herbe is good against the stinging of Scorpions: and indeed haue so great vertue this way, that the herbe onely cast among scorpions, taketh from them al power to hurt: their seede taken to the quantitie of two drams purgeth hot and cholerick humours.

Dame violets.

Dame violets haue great leaues somewhat blacke, notcht round about, and broad: the flowers are white and incarnate, and in shape like vnto the Auens: they grow sometimes so high, as that they degenerate into a tree.

Garter beard.

Goates-bread, that it may haue faire, double, and full flowers doth craue a fat and moist ground. The leaues thereof open at the sun rise, and they close at noone: the roote boiled in mudde doth appeale the paines and pricking of the side: taken in forme of a lohoch with sirupe of violets, it helpeth obstructed lungs, and the pleurisie: boiled in

in water and preferued with sugar, it is a singular preseruatiue against the plague, poisons, venome, and deadly stinging: the iuice or distilled water of this herbe doth heale greene wounds, if you dippe linnen clothes therein and applie them to the woundes: some vse the roote of this herbe in salades, where daintie and fine fare is: the same boild in a pot with veale and mutton, and afterward prepared and made ready betwixt two dishes with butter and vineger.

Marie, or Marians violets for the beautifulnes of the flowers, de- Marie's violets.
serue to be sown in a fat & wel laboured ground: the flowers are good to make gargarismes, for the inflammations and vlcers of the mouth.

Lillie conuallie, called of the Latins *Lilium conuallium*, notwithstanding that it groweth in shadowed woodgrounds, yet it deserueth to be tilled in gardens, aswell in regard of the faire little flowers, white as snow, which it beareth, being also of a most amiable smell, somewhat like vnto the lillies; as also in respect of his vertues: because the distilled water of the flowers being taken with strong and noble wine, doth restore the speech vnto them which haue loit it vpon an apoplexie: it is good likewise for the palley, distillations and fainting of the hart.

Lillie Conuallie.

Water lilly as well the white as the yellow desireth a waterish and marshie place: we see it grow likewise in pooles and fishponds. The roote of white water lilly boild with grosse red wine and drunke, staierh womens whites: the flowers, rootes, and seeds, as well in decoctions as in conserues, are verie singular to procure sleepe, and to preferue chastitie.

Hyacinth.

Hyacinth groweth verie well in a sandie ground. The roote and seed boild in wine and drunke, doth stay the fluxe of the belly.

Narcissus (so called of a Greeke word, because the smell of it coming vnto the nose doth cause an inclination vnto sleepines and heauines) would be sown in a fat ground that is hot and moist: it groweth also abundantly in *Languedoc* and *Italy*, and but a little in this countrie.

Narcissus.

The roote thereof boild or roasted, and taken with mear or drunke doth procure vomit: the same braied with a little honie and applied doth heale burnings: taketh away the freckles and spots of the face, being mixt with the seed of nettles.

Corneflag (called in Latine *Gladiolus*) as well the blew as the white, would be planted of new plants in March and Aprill: or elie of slips, but such as haue roots, for they are neuer sown, nei her doe they require any great rylling. Their flowers differ from the flowers of marigolds in this, in that the flowers of the marigold doe open at the sunne shine, but the flowers of corneflag doe shut and close vp themselves then, not opening againe but when it is cold and moist weather. The roots must be pulled out of the earth in the beginning of the spring,

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spring, that they may have a pleasant smell, and after dried in the shadow of the sunne. Some to take away the superfluous moisture thereof, which putteth them in danger to be consumed with wormes, doe wet them with lee of ashes, as well whiles they are in the earth as when they are out, and so dry them and keepe them for to procure the linnens and woollen garments to smell well.

The iuice of the rootes put in a clyster, doth appease the paine of the sciatica: the roote dried and made in powder, doth cleanse and consolidate hollow and filthie vlcers: being held in the mouth it causeth a good breath: laide amongst clothes, it preserueth them from all vermin, and maketh them smell pleasantly. The iuice of the roote taken at the mouth sundrie times, purgeth water in such as haue the drop sicke, especially if it be taken mixt with the yelke of an egge halfe boyled. The roote mingled with the root of ellebor and twice so much honie, doth wipe away freckles, red pimples, and all spots of the face, if it be annointed thereupon. The decoction of the roote taketh away the obstructions caused of a grosse humour, prouoketh vrine, killeth wormes, and casteth out the stone. The Italians make a preserue of this roote whiles it is new with sugar or honie, and vse it in all the cases afore said: some make an oyle of the flowers infused in oile: which hath power to resolue, soften, and appease the grieve of colde rheumes or distillations.

Lillies must be planted in the moneth of March and Aprill in these countries: and in hot countries in the moneths of October and Nouember, as well the white as the orange colour, in a fat and well digged ground: you shall make their flowers of what colour you will, if before you set them, you steepe their roots in such coloured substance as shall best like you, and afterward likewise o water the rootes when they are set and planted in their trench with the same liquor, and that after this manner. Some say that the flowers of lillies become red and purple, if their rootes before they be planted be steept in the lees of red wine or in dissolved cinnabrium, and after watered with the same in the little pit or trench wherein it is set. Or else when lillies are in flower in the moneth of Iune, you must take ten or twelue plants and tying them together to hang them in the smoake, for so they will put forth small rootes like vnto wilde garlicke, and when the time of setting is come, which is in the moneth of March and Aprill, steepe the same plants in the lees of red wine vntill they be prettily well coloured, as being become red when you take them out, afterward set them in prettie pits continued in good order and water them sufficiently with the said lees: for by this meanes the flowers that will come of them will be purple coloured. You shall likewise haue yoong and fresh lillies all the yeere long, if before they be open you gather them and after close them vp in some bottell or well stopp vessel, that so they

The vertues of
corneflag.
Sciatica.
Vlcers.
Drop sicke.

Lillies.
Lillies of diuers
colours.

Purple coloured
lillies.
Fresh lillies.

they may come by no aire. Or else close them vp in some oaken vessell well pitched, so that there can no water get in, and after sinke the vessell in some well, cesterne or running water, for so they will keepe yoong and fresh all the yeere. And it at any time during the whole yeere you would vse them, set them in the sunne, that so by the heate thereof they may open. And to the end that lillies may flower at many times, when you set their roots, you shall set some of them twelue fingers within the ground, others eight and some fower, for thus you shall still haue flowering lillies for a long time.

A cataplasme made with the onion of the rootes of lillies, hoggrease and the oyle of cammomill doth maturate and ripen buboes. An ointment made of the saide roots, oile of bitter almonds, and white waxe, hath singular vertue to polish and smooth the face, and to take away the wrinkles of womens faces. The water of lillies distilled out of an alembick, doth take away the wrinkles of womens faces, & maketh them looke very faire & white. The roote boyled or roasted in hot embers, and stampd with oile oliue, is a singular remedie against all sorts of burning, as well of fire as water. Being boyled with garlicke and stampd in the lees of red wine, cleareth womens faces and countenances, which haue but ill colours after their lying in bed, if they be smere their faces therewith at nights, and in the morning wash them with barely water. This roote roasted and stamped with olde swines grease, and applyed to the cornes of the feet, doth wholly spend them, if they be kept thereto but three whole daies together: the distilled water of the flowers with a little saffron and sweete zylocassia, helpeth women in childbirth and deliuereth them also of their afterbirth: the oyle that is made of the flowers by infusion, is good to soften all manner of hardnes in swellings or otherwise: if you chafe the priuie parts with oile of linseed, and apply woolle wet in these oiles vpon the belly, women that are in trauell will finde great ease in the same.

Small paunces (otherwise called autumnie violets) desire a dry and sandie place: they are to be planted in the spring time, and beare flowers continuing to autumnie, yea to winter, if so they be oft watered and carefully handled. The leaues or iuice of small paunces taken at the mouth or applied outwardly, are singular good to conglutinate wounds: the leaues of small paunces boyled and druncke doe stay the falling sicknes in children when they froth and some the same flowers boiled with their herbes and druncke, doe cleanse the lungs and breast, and are good for inward inflammations. The leaues dried and made in powder and druncke with red wine to the quantitie of halfe a spoonfull, haue great force to stay the falling downe of the fundament,

Lillies in flower
at diuers and
seuerall times.

The vertues of
lillies.

Wrinkles.
Water of lillies.

Burning and
scaldings.

A smooth and
glistering beu.

Small paunces.

The nine and fortieth Chapter

Of sweet smelling herbes.

Basill as well the greater as the small is sown in Aprill and May in a fat ground, and cometh vp quickly, if so be that by and by after it is sown, it be watered with water somewhat heated: It may be sown likewise in autumn, and the seed would be watered with vineger, for so (though it be but a very little) it wil grow forth into braunches. If you sow it in a drie ground lying open vpon the sunne, it will by and by turne and become either mountaine tyme or cresses. When you haue sown it you must draw vpon the ground some roller to fasten and set it close together, for if it should lye light & hollow, the seede would easily corrupt. It must be watered at noone-tide, cleane contrary to other herbes which would be watered at morning or evening. To cause it to grow great, it is good to crop it oft with your fingers and not with any yron thing. Some report a maruellous strange thing of basill, as namely that it groweth fairer and higher, if it be sowne with curses and iniuries offered vnto it: and further that there is a deadly hatred betwixt amber and basill: for whereas amber or blackeier is giuen to draw strawes vnto it vpon the touching of them, it driueth and putteth farre from it the leaues and stalkes of basill.

Such as are subiect vnto headache, or feare to be troubled therewith, must shun the smell of basill altogether: for the smell thereof begetteth paine and heauines of the head, yea sometimes it ingendred in the head little small wormes, like vnto scorpions: as we reade to haue hapned to a certaine Italian in our time (as Monsieur Houlier D. in Physicke doth testifie in the beginning of his *Practica*) in whose braine the oft smelling of basill did beget a scorpion, which caused him to endure extreame paine, and brought him to his death in the end. The greatest vertue that this herbe can haue is, that if a woman doe hold the roote of basill in her hand, together with a swallowes feather when she is in trauell, she shall be deliuered by and by without any paine.

Rue as well that of the garden as the other which is wilde, doth not loue either a moist or cold ground, neither yet a ground made very fat with dung: but rather a hot and drie ground free from winde, and where the sunne shineth much, in respect whereof it must be couered with ashes during the winter time: for the naturall heate of the ashes doth cause it to resist the cold. It may be sowne in March, August and September, although in deede it grow better set of rootes or branches, then sowne. When it groweth old it degenerateth into a wooddie substance, and therefore you must cut the stalkes twise euery

yeere euen to the roote, to recover his youth againe: it must not be suffered (if possibly it may be let) to flowre, for if it be suffered to put forth flowres, it groweth so much the more drie. Some report that this herb hath a maruellous property, as that if it be toucht or come neere vnto, be it neuer so little, by a woman that hath abused her body, or that hath her termes, that it dieth by and by.

To cause that it may grow faire and haue a more pleasant smell, it must be planted vnder the shadow of a figge-tree, or grafted in the rinde of a fig-tree: for the warmth and sweetnesse of the fig-tree doth temper the sharpnesse and acrimony of the rue. Some say likewise that rue will grow fairer, if the branches thereof be set in a beane or onion, and so put into the ground. It is likewise reported, that it groweth fairer, if one curse and hurt it when they set and plant it. But looke how friendly and kinde it is to the figge-tree, so much it is enemie vnto and hateth the hemlocke: likewise gardeners when they would pull vp rue, for feare of hurting their hands, rub them with the iuice of hemlocke.

Wilde rue is of greater force than the garden rue, and of a more vnpleasant smell, and also a more dangerous smell: furthermore of so sharpe a vapour, as that if it come neere vnto the face neuer so little, it will breed the wrld fire in it. The seed both of the one and the other by the hot and drie temperature it hath, drieth vp the seed of man, and maketh him barren: the same seed in decoction is good for distillations and the moisture of the matrix.

Rue hath a singular vertue and force against all manner of venome. Likewise we read that the king *Mithridates* was accustomed to vse an opiate made of twenty leaues of rue, two drie figs, two olde walnuts and a little salt, to preserue his state against all manner of poison. For this cause you must plant in your gardens and neere your sheepecoates, houses for your fowle and other cattell, great quantity of rue: for adders, lizards, and other venomous beastes, will not come neere vnto rue, by the length of the shadow of it. Some also hold it as a tried thing, that to driue away cats and fulmers from hen houses and done houses, there is nothing better, than to set rue at the doore the one of or round about them. And that to free a roome of fleas and gnats, it is good to water the same with water sprinkled about with a branch of rue. In the plague time it is not good to put rue neere vnto your nose (contrarie to that which wee see many men practise) because by the sharpnesse of the sent there is caused a heate and excoiation of the part which it toucheth: notwithstanding to draw out the venome that is in a bubo or pestilent carbuncle, there is nothing better than to apply thereupon a cataplasme made of the leaues of rue it ampt with leauen, hogs grease, onions, figs, vnquencht lime, sope, cantharides, and a little treacle. If a man haue eaten of hemlock, ceruse, mandrakes,

Basil.

Basil neuer
through better,
than when it is
curfed.
Hated betwixt
amber and basill.

The smelling of
basill is a
great paine and
sometimes in the
head.

M. J. Houlier.

To be deliuered
of childbirth
without paine.

Rue.

The bewraier
of women.

Rue shining
best when it is
most curfed.
Rue and hem-
locke are
enemies.

Mithridates
his opiate for
the plague.

Rue an enemy
to venomes
and poisons.

Rue an enemy
to cats and
fulmers.

That rue should
not come neere
to the nose.

For a bubo or
plague sore.

blacke poppie, or any other herbes, which through their great coldnesse haue caused them to be sleepeie and blockish, they may profitably vse the iuice of rue, to drinke it for the deliuering of them from such danger, or else the wine wherein it hath bene boiled. The distilled water of rue powred into wine and rose-water of each as much, is good for the weaknesse of the sight.

Mints. All sorts of mints whether garden or wild, doe nothing desire the ground that is dunged, fat, or lying open vpon the sunne, but rather a moist ground neere vnto water, for want thereof they must be continually warred, for else they die: it is more sowne than set; but if it be set, then it may be either of roots or branches, in autumne or in the spring time, especially about the twelfth of March or September. Who wanteth the seed to sow it, may in steed thereof sow the seed of field mints, putting the sharpe point downward, thereby to tame and reclaime the wildnesse of it. When it is growne it must not be toucht with any edge tooke, because thereupon it would die. Neither need you take care to sow it euery yeere, for it will grow of it selfe without being sowne or set in great abundance.

The vertues of mints. Mints stampd and applied to breasts too hard and full of milke doe soften them, and hindre the curding of the milke: stamp with salt, it is good against the bitings of a mad dog: stamp and put into a cataplasme it comforteth a weak stomacke, and strengtheneth digestion: two or three sprigs of mints taken with the iuice of a pomegranate, staith the hickit, vomiting and surfers. It is good to help them which haue their smelling, by putting it oit to the nose. The leaues dried, made in powder, and drunke with white wine, doth kill the wormes in yong children. Such as loue milke, after they haue eaten it, must by and by chew of the leaues of mints, to stay the quailing of the milk in their stomacks: for mints haue the speciall propertie of keeping milke from curding, as also to keepe cheeke from corruption and rottenesse, if it be sprinkled with the iuice or decoction of mints: being applied vnto the browes, it asswageth headach comming of cold. The water of the whole herbe distilled in Maries bath, in a glasse alembicke, and taken the quantity of fowre ounces, doth stay bleeding at the nose, which is a very strange thing: they that would liue chastly, must not smell vnto nor eat any mints: and therefore in ancient time it was forbidden captaines in warre to eat any mints.

Calamint. Calamint, (otherwise called *Mentastrum*) delighteth in the same ground that mints, we see it likewise grow in vntilled grounds neere vnto high waies and hedges. It prouoketh the termes in women, whether it be taken at the mouth or in fomentation, and that with such violence, as that women may not in any case meddle with it, if they take themselves to be with child: it is singular good vsed in fomentation for the paines of the stomacke, for the colicke and distillations: the

the iuice thereof taken at the mouth killeth wormes in the bellie, and bing dropt into the eare, it killeth them there also.

Thyme as well of Candie as the common, doth grow better planted then sowne, and craueth a place open vpon the sunne, neere vnto the sea and leane, and it must be planted at mid-March in a well tilled ground, that so it may the sooner take: as also that it may growe the fairer and fuller of leafe, it will be good to water the ground oft with water wherein hath bene steeped for the space of one whole day drie thyme somewhat bruised. If you be disposed to gather the seede, you must gather also the flowers wherein it is contained, seeing they cannot be sundred.

A cataplasme made of thyme boiled in wine, appeaseth the paine of the sciatica, and the windinesse of the bodie and matrix. The smelling of thyme is soueraigne to raise them that haue the falling sicknes out of their fit, and also to keepe them from their fit, by decking their bed about with the leaues thereof. The oft vsing of thyme with wine or whay, is good for melancholicke persons.

Winter sauorie craueth no far, manured, or well tilled ground, but rather an open, stonie and light ground, lying so as the sunne may shine full vpon it. Both thyme and winter sauorie are good for the nourishing of bees, and for the preferuing and seasoning of meates: they are also called fine, sebtill, or small and slender herbes.

Organie, otherwise called bastard margerome, loueth a rough, stonie, peble, weake and yet well furnisht ground, and withall craueth a manured ground, as also to be watered, vntill it be growne vp to his full bignes, notwithstanding it be seene to grow in many places without watering or dunging. It may be remoued of little sproutes or sciences, and the lower end set vpward, to the end that it may put forth new springs & shutes; & be sown of his seed, the which the elder it is, so much the sooner it will put forth of the earth, although that organie do not ordinarily shew it selfe before the thirtieth or fortieth day after the sowing of it: in many places it is sowne neere vnto bees, because they willingly load themselves from thence and make singular honie.

Organie boild in wine and laid vpon the region of the raines, doth take away and vndoe the difficultie of making water: being boiled in wine and drunke, it is good against venemous beasts, or the stings of scorpions and spiders. A cataplasme made of Organie and barley meale boild together, resolueth the tumours vnder the eares. The decoction thereof is good to comfort the sinewes, and the relaxed and weake partes: the seede thereof drunke with wine doth prepare and dispose a woman to conceiue: the flowers and leaues of the saide organie dried at the fire in an earthen telt or melting pot, and being wrapped vp verie hot in a cloath, and applied vnto the head, and kept fast tied thereunto, doth cure the rheume comming of colde.

Hyslope.

Hyslope affecteth a place free from shadow, and lying open vpon the sunne: it may be set or sown about the twelfth of March. It must bee cut in the moneth of August, and dried to put in pottage in winter.

The vertues of
hyslope.

Amongst other principall vertues that it hath, it is of great vse for the affects of the lungs, and to prouoke womens termes; if there be a broth made thereof to suppe fasting in the morning. Some say that the sirupe of hyslope, taken oftentimes with fowerfold so much of the water of pellitorie of the wall, causeth the stone and much grauell to auoid from the reins: hyslope with figs, rue, and honie boiled together in water and druncke, is good for those that are short breathed, & for old & hard coughes: stampd with salt, cumine, and honie, and applied, healeth the stings of scorpions: stampd with oile and rubbd, it killeth lice: pilles made of hyslop, horehound, and pionie rootes do heale the falling sicknes.

Sommer
sauory.

Sommer sauorie doth delight in an open sunne shining place, and therefore must be set or sowne in such a one, nor in a fat or manured ground: for it is often seene growe of it selfe in leane groundes and neere vnto the sea. It groweth more delightfully and of a better taste, if it be sown amongst onions. It is very good for sauee to meat. The leaues and flowers applied vnto the head in forme of a cappe or garland, doth awake the drowsily inclined. A cataplasme made of sauorie and wheate meale doth cure distillations.

The vertues of
sauorie.
The drouse
dyscale,
The sciatica,
Coriander.

Coriander forteth well with any kinde of ground, notwithstanding in a fat and newe ground it groweth a great deale more abundantly, and it seeketh for an hot aire: againe, that which groweth in a sunnie place doth ouerthriue that which groweth in a shadowed place: when you go about to sowe it, choose the oldest seede you can get, for by how much it is the elder, by so much it is the better, so that it be not mouldie and foughtie: sowe it also in a fat and moist ground, and yet despise not a leane ground: and to cause it to spring vp the sooner, you must steepe the seede in water two daies before you sowe it. If you must dung the ground where it is to be sown, it must be with sheepe or goates dung rather than any other.

The vertues of
coriander,
Digestion,
Windines.

The excellent heate thereof bringeth headach, and the trembling of the braine, being eaten after meate, it comforteth digestion, and dispelleth windines so that it be prepared. The way to prepare it is as followeth: you must haue dried it well cast vpon it very good wine and vinegar mixt together, and leaue it thus sprinkled and wet the space of fower and twenty howers, then dry it vp, and keepe it for Physicke vse: being stamped in vinegar and cast vpon flesh, it keepeth it from corrupting. It prouoketh womens termes, and some say, that looke how many feedes a woman drinketh with white wine, so many daies shall her termes continue. The seede drunke with the iuice of pomegra-

To keepe flesh,
It prouoketh the
termes.

pomegranats, killeth the wormes in children. The iuice thereof with ceruse, litharge of siluer, vinegar, and oile of roses, healeth the wilde fire, and all rednes: the seede stampd in vinegar, doth keepe the flesh from corrupting in sommer.

Sage, as well the little as the great, is planted of branches writhen Sage at the foote, and also of rootes in the spring and Autumne. It is sown also at the same time: the roote delighteth to be laide about with lee ashes. It must be set neere vnto rue, to keepe it from adders and lizards: which vse to take vp their lodging neere vnto sage, as may be knowne by the leaues, which haue their tops oftentimes withered and dried, the same comming of haueing beene toucht by serpents. Sage refuseth neither hot nor cold aire, howbeit naturally it groweth in a barren, stonie, and ill conditioned ground: and that in such sort as that in some places of Spaine, the mountaines are all ouergrown therewith, and the country inhabitants burne no other woode. Notwithstanding, to growe faire it would be well digged about, and kept cleane from leaues and stalkes that are dead.

It hath a singular vertue to comfort the sinewes that are hurt by being troden vpon, or otherwise become weake. And for this cause some make sage wine for to drink, and a fomentation with the decoction of sage for the trembling of the handes, and other partes. It comforteth the mother being taken in a fume at the secrets parts: by such fume it also staeth the whites: such as cannot beare their conception out their time, but miscarie vpon slight causes, must oftentimes in the morning eate some sage leaues, for they strengthen the retentive facultie, keepe aliue and strengthen the childe, and make women very fruitfull. And this is the cause why the Egyptians after a great mortallitie contrained their wines to drinke the iuice of sage with a little salt, keeping the selues fower daies from haueing to do with their husbands, & then afterward to lie with them, that so they might conceiue & bring forth many children. To stire vp appetite, and cleanse the stomacke full of ill humours, sage must be vsed oftentimes in pottage and other wife: it asswageth the paine of the head, and cleneth the teeth and gums: it maketh a sweete breath being boiled in wine: the distilled water thereof doth cleare the sight: the conferue of the flowers of sage hath the like vertues.

Oake of Ierusalem (called of the Latines *Botrys*) craueth a drie and sandy ground, or else a waterie ground, but such a one as is sandie or grauelly: we behold it also now and then to grow in swift running brookes: being once sown it needeth not to be sown againe afterward: for it groweth againe euerie yeere and that as it were in manner of a shrub. It hath vertues much like vnto thyme, that is to say, it is good against the suppression of the termes and vrine: being dried and laid in wardrobes, it giueth a verie good smell vnto the garments, and

The vertues.

and keepeth them from vermin. The decoction thereof with licorice is wonderfull good for such as haue a short breath, and are stuffed in their lungs, if you put thereto a little sugar or syrupe of violets, yea and furthermore to such as tper matter, vpon no other penaltie, but that it be vsed a long time. The herbe parched vpon a hot ryle, and besprinkled with malmeisey and applied vnto the belly assuageth the paines of the matrix, yea and more too, if you adde thereunto the leaues of mugwoort, and the flowers of cammoill, all fryed with oyle of lillies and the yelke of an egge.

Horehound. Horehound (called in Latine *Marrubium*, or *Prassium*) as well the blacke as the white groweth in euery ground, but rather in an vntilled then in a tilled ground: you may also see it grow neere vnto wals, hedges, waies, and borders of fields: it is true that the wilde desireth watric places, as ditches, little riuers, moist and low places. It is verie good in decoction for the cough and difficultie of breath, because it cleanseth the lungs and causeth spetung: it prouoketh womens termes and bringeth forth the afterbirth.

Wormwood. Sea, Romaine, and common wormwood is not so much fowen or set because of his smell, as for the profit that it bringeth vnto the health. The Romaine groweth in a sandie ground: the sea wormwood groweth in a salt and allic ground: the common in hilly, stonie, drie and vntilled grounds; for to set them you must writhe the roots.

The vertues of wormwood. A weake stomacke. Wormwood amongst other his vertues almost infinite and admirable, doth especially comfort the stomacke laden with cholericke humours, but not the stomacke oppressed with flegmaticke humours, and for that cause there is a wine made of wormwood, and called by the same name. The decoction of dogs-grasse his roots and the crops of wormwood, doe heale the jaundise. *Jaundise.* The conferue of the crops made of a pound thereof, and three pounds of sugar doth cure the old, inveterate, and desperate drop sic if it be oftentimes vsed after purging: it doth prelcue likewise from drunkennes. *Drop sic.* It is an antidote in case a man haue eaten venomous mushrooms, or taken downe any other venom especially the hemlocke, as also in bitings and stings of spiders and other venomous beasts. The iuice mingled with the kernels of peaches doth kill the wormes. *Wormes.* The leaues made into ashes, and mingled with oyle of roses doth make the haire blacke. *To make the haire blacke.* The leaues laide in wardrobs, do keepe the garments, and doe driue away flies and gnats.

Sothernwood and his vertues. Sothernwood groweth best being planted of rootes or shootes, for it doth not so well being sown of seede. It cannot abide much colde, nor much heate, and therefore it must be planted in some such place of the garden as is temperate. The seede the weight of a French crowne stamp with some of the leaues in white wine, adding thereto an old nut, and a litle bole armoniakke, all being strained and drunke,

is a singular drinke against the plague, and all manner of poison. *The plague, Poison.* The crops of the tops of the leaues, and the flowres being beaten & stamp in oyle, and made into the forme of a liniment, do serue to shift off the shuerings of agues, if so that the soles of the feet and vertebres of the backe of him that hath the ague be rubd therewith. *Shuerings of agues. Wormes.* Sothernwoode taken inward, or applied outward, doth kil wormes in yong children. It is true that *Galen* forbiddeth the taking of it at the mouth, because it is an enemy to the stomacke.

Rosemary loueth chiefly a reasonable fat ground: it groweth *Rosemarie.* in any aire, but best by the sea sides, and thereupon it beareth his name. It must be planted in the Spring and Autumne, of rootes or branches writen and set fast in the earth, and that in a warme place, or at the least lying open vpon the sunne, and not such a place as is very moist or subiect vnto the northren winde, because this plant can hardly endure the colde, and therefore it must be planted vpon the South vnder some wall, and the good time of planting of it, is, when it will pricke, and then you must take off the small yooing sprigs, and set them three inches within the earth, making the earth fast and close vnto them aboue: or els of some part of the moist leauy branches thereof, which being afterward helped by making the ground light, doth spread and continue fresh, hauing no need to be watred, except at the very time of setting of it, if the ground be fat: and yet notwithstanding if it be watred, it will prosper the better, and flourish the more. So long as it is yong, it would be diligently weeded and picked: it requireth no dung, but onely a good mould, and to be compassed about the roote with good earth: the lees of wine and the scraps broken off from bricks, laid at the foote thereof do cause it to grow maruelloulie. There are two sorts of rosemary: the one bearing seed, and the other not. Some plant it for foode neere vnto hiues, because it flowreth betimes, and for that the bees do greatly delight in it, and by it do better continue in health, as also make better honie than those which feed not vpon it at all: the flowres of it will keepe a yeere or two without being spoiled, if you gather them cleane and not mixt with any filthy thing, hauing also dried them a litle in the sunne, vntill they haue lost their newnes and freshnes: afterward drie them vp thoroughly in the shadow, and put them not vp to keepe till they be perfectly dried.

It is good in the plague time to perfume the house with rosemary, *The vertues of rosemarie.* for the fume thereof driueth away the ill aire. The leaues and flowres are good against headach, especially to stay the whites, if a woman doe vie them long time euery morning: but more speciallic to make the sight better, if the party that hath the weake sight doe eate fasting both the leaues and the flowres of rosemarie ioint together, with bread and salt euery morning. The flowres thereof made in conferue doe

do comfort the stomacke, and are good in melancholike passions, the falling sicknesse, conuulsions and palsies. The seede drunke with pepper and white wine, do heale the iaudise, and take away the obstructions of the liuer. The decoction of the leaues in white wine do comfort weake and oppressed sinewes: if you wash your head therewith it will make a hard skin, and comfort the little braine, and keepe the haire from falling so quickly. Some do make tooth-picks of the wood-die parts thereof, and those very good, as also coales to draw the first lineaments and ground-worke of pictures and such other things to be painted.

Iesamine. The ordering of Iesamine is like vnto that of rosemary, save that Iesamine doth continue alwaies greene, & not so subiect to frost as rosemary, and is much in request for arbours and shelters, and for the setting forth of a quarter. There may be made an oile of his flowres, infused a long time in oile of sweete almonds, strained in a bag from betwixt a presse, which will be soveraigne to comfort the weake sinewes and other parts of the body troubled with cold distillations: and to appeale the frets of yong children.

Mountaine thyme. Mountaine or wild thyme delighteth to be planted or sown in grounds neere some fountaine, small rundle or well, and such as is ill tilled, being drie in sommer, and full of water in winter: and thus placed, it yeeldeth a great deale the fairer leaues. It requireth notwithstanding a ground that is neither fat nor dunged, but open to the sun, and would be oft transplanted. Sometimes it commeth of basill that is ill husbanded.

Headach. Mountaine thyme boiled in vineger and oile of roses, asswageth the headach if the temples be rubd therewith: boild in wine and drunke, it prouoketh womens termes, bringeth forth the afterbirth and dead child: with hony it cleneth the lungs: helpeth the falling sicknes: the decoction is good for the windines, swellings, and hardnes of the matrix. The perfume of mountaine thyme killeth serpents and other venomous beasts, and drieth away fleas. The weight of a French crown of the powder of mountaine thyme, drunke with water, asswageth the belly ach, and deliuereth the party which is troubled with difficulty of vrine.

Penny-roiall. Penni-roiall groweth well either sown or planted, wherein this must be marked, that if it be planted of the roote or branches in Autumne, it will bring forth leaues and flowres in mid-November: it being once planted, continueth alwaies, so that it be wel wed and pickt every yeere: it must be watered very diligently. Penny-roiall is excellent good against the drop sicke, for the spleene, iaudise, and furthering of womens deliuerance in travell, as also to bring forth the afterbirth, and to procure the termes being drunke with white wine. The perfume of penny-roiall killeth fleas and venomous beasts. A cataplasme made

made of penny-roiall boiled in wine, doth asswage the paine of the sciatica.

Dill loueth better to be planted than sown, and craueth chiefly a ground somewhat warm but more inclining to cold. If you would haue it to grow faire, you must water it oftentimes: when it is sown, it is not needfull that the seed should be covered with earth; because it is not subiect to be eaten of birds. Dill hath power to take away belchings, and inward gripes, vomit, and hicket, and that only with smelling to it, to prouoke vrine and helpe the digestion of the stomack: it causeth a spring of milke in nurfes, healeth the suffocation of the matrix, and ripeneth all manner of tumours.

Anise craueth a well batled, tilled, fat and manured ground: it must be sown in march and oft watered. Euery man knoweth how good and profitable the seed thereof is, eaten in the morning: for such as are subiect to the gripes of the stomack and guts, to the hicket, belchings, stinking breath, and which desire to haue a beautiful and comely countenance: after meat, it also helpeth digestion: it is good for nurfes to cause them to haue much milke.

Bishops-weed craueth such ground and such tillage as anise, which being once sowne, doth lightly grow there euery yere by the seed falling from it: it groweth chiefly in rested grounds. The seed is excellent good against wringings and gripes, to prouoke womens termes, and vrine, if it be drunke with wine, so that it be vied but seldom, for otherwise it causeth a pale colour: the perfume doth mundifie and cleane the matrix, and maketh barren women fruitful, if together with this suffumigation, the barren woman do take euery second morning the waight of a dram of the powder of this seed, three howres before she eat any thing, continuing it for fower or fve times: but in the mean time the husband must lie with his wife, vpon such daies as she shall vfe this powder: a thing proued diners times.

Caraway is sown in the moneth of May, in a good, cleane and manured ground, in such sort as we haue said in the kitchen garden. The seed helpeth digestion, prouoketh vrine, expelleth windines, and hath the same vertues that anise hath: being made into powder, it is with good successe mixt amongst such remedies as are vied to be given for drie blowes.

Cumin doth grow fairest when it is sown in a fat and hot ground, or in a ground lying open to the eastern sunne amongst the potherbes (for so it groweth better) in the beginning of May. Some likewise say that for to make it grow faire and well, it must be cutted and tailed vpon: it must not be watered so presently after it is sown; but after it is put forth of the earth, it must be oftentimes watered.

The seed taken at the midnith, scattereth the winds which breake vpward, it mendeth the inward gripes, and taketh away the difficulty

Difficulty in
making water.
Drie blowes.

to make water, as also the blacknes of drie blowes, the powder thereof being presently applied after it hath bene beat very small and fine, and heared at the fire: being taken in a suffumigation, or put vp into the feeret places, it helpeth conception: the fume of this seede taken vpon the face, doth make it pale and deadly: and this do they very well know which are giuen ouer to counterfait holines, syncere and vpright dealing, or the subduing or bringing vnder of the body.

Fennell.

Fennell findeth not it selfe agriued with any aire or soile, howbeit naturally it is more inclining vnto a hot than vnto a cold aire, and vnto a grauelly ground, rather than vnto a better: onely it flieth and refuseth a sandy and altogether barren ground, as not thriving any while therein. It is sown in the spring and autumn, and it is planted likewise at the same times, the stalks are remoued hauing put forth a tuft, euery one from another, or else the whole tuft only, notwithstanding the sweet fennell louth rather to be sown than planted, and that rather in the spring than in autumn, for so it groweth more sweete and beareth the greater seed. It must be sown in and remoued vnto a ground open vpon the sunne and reasonably drie, and seldome sown, as not about one yeere. It must be kept very cleane so long as it is in growing, and vntill it be come vnto his full growth, for otherwise bad weedes would choake it.

Sweet fennell.

To haue very sweet fennell, put your seed in a Marsellis fig, and so sow it, or else mix hony with the earth wherein you sow it, or else steep the seed in hony one or two nights before you sow it, or else in the water of hony or in milke, changing the same and putting new in steed in such sort as we haue said in the handling of melons.

Clear sight.

Fennell as well the leafe as the seed, is wholly dedicated to the clearing of the eyes, and for this cause some draw the iuice of the leaues and stalks while they are yet tender, and drying it, keep it for the same effect. Sometimes the water of fennell is distilled all alone and by it selfe, or else mixt with hony. The seed of fennell is good to restraîne wind, taken after meat, notwithstanding that it is hard of digestion, and bringeth but little nourishment vnto the body. It may be eaten green after the beginning of August, as also the buds and tender stalks may be preferred, and likewise the branches as they beare their seed, with salt and vineger in earthen pots to vse at all times, and especially whiles there is raining any excessive heat. The vse of fennell causeth women to haue great store of milke.

Windnesse.

Abundance
of milke.
Margarome.

Margarome groweth of seede, rootes or shootes, as sage doth: it desireth shadowed places and that fat, well manured, and oft watered. It will be the fairer if it be remoued in the beginning of sommer. The roots must be defended from rats and mice: for this kinde of vermine doth it more iniurie than any other, which you shall finde and proue true, if it please you but to make trial therof. The iuice pressed out

out of the leaues, and drawne vp into the nostrils, doth purge the head: made into a lee, it drieth the rheumes, and scoureth away the filthines of the head. The broth wherein it hath boiled, is good against the beginning of a dropsie, as also for them that cannot make water well, and which are subiect to gripings.

Mugwoort, whether it be set or sown, craueth a drie and stony ground, contrarie to another herbe resembling it, and called herbe John, and groweth in marshes, and is indeede the male southernwood.

Mugwoort hath singular force against the bitings of serpents vsed as well inward as outward, as also against the plague: that it is so the Almaines doe sufficiently prooue, who account not themselves to haue any more soueraigne remedie against the plague then mugwoort made into ashes, and afterward boiled into a chymicall salt: vnto so soone as they perceiue themselves stricken with the plague, with fower or fife ounces of good wine or malmesey, and afterward to lay themselves downe in bed, to cause themselves to sweate two or three howers: it hath singular vertues against the diseases of the matrix: for the leaues put into a bag, or made in forme of a cataplasme, and applied warme from vnder the nauell vnto the flankes, doe procure the termes, and doe appease in like manner the matrix relaxed, or out of order and place. The leaues stamped with oile of bitter almonds and applied vnto the stomacke, doe staie the paine thereof. There is made a singular pessarie to bring downe womens termes, with the leaues of mugwoort, myrrhe and figs, all being braied with oile of Ireos. The roote powdred and drunke with white wine, doth so purge the matrix, as that it casteth forth the mole and afterbirth: the iuice is with good successe drunke against Opium; the powder of the dried leaues drunke with wine the waight of three drams, is exceedingly good for the sciatica: some say that the traveller which carrieth mugwoort the whole herbe, tied vnto his legs or thighs, shall not finde himselfe wearie at all, and that hanged at the entres of houses, it withholdeth all incantations and witchcraftes. When a woman laboureth of childe, and cannot auoide her afterbirth, there is nothing better, then to applie vnto her vnder her nauell vnto her thighes and flankes, a cataplasme made of mugwoort leaues boiled with barbie meale, but presently after the childe or afterbirth is come forth, you must take away this cataplasme, otherwise it would draw downe the matrix also. If you stampe the iuice of mugwoort with the yelkes of egges boild, adding thereto hogs grease and the seede of cummin, and applie it all in manner of a cataplasme vpon the matrix, you shall remedie all the paine that ordinarily doth follow after childbirth.

Tansie as well the great as the small groweth in moist places as vpon the brinckes of riuers and small brookes, and sometimes in drie places, as we see it grow in waies, and in the edges of high waies. The seede

Wormes.

Stops.

Gravel.

Fetherfew.

Nept or cats
mint.

Conception.

French Lauan-
der.

Lauander.

Weake sinewes,
Palsies,
Convulsions,
Apoplexies.

seede or flowers drunke with milke or wine, doth kill the wormes; and that is the cause why some call it wormehanc. It serueth also to pro- uoke vrine, and to breake the stone and gravell of the reines, especial- ly in men, as fetherfew doth the same in women.

Fetherfew doth require the like ordering and ground that mug- wort doth, and they are also as it were of the like vertues, both of them appropriate vnto the affects of the matrix, but fetherfew sur- passeth in this, that the flowers, but principally the leaues, stampd, and applied vnto the teeth or eare of the side that aketh, it wholly allwa- geth the paine of the teeth. And this is the cause why the Parisiens doe call it *Espargonise*: because the leaues thus stampd and applied, doe cause to distill out of the mouth drop after drop the flegmaticke humour, which causeth the said toothache. It is good also for them which haue the swimming of the head, as also for them which are troubled with melancholie or with the stone.

Catsmint or nept is a kinde of calamint, whereof we have spo- ken before, so called, because that cats doe exceedingly delight in the smell thereof, and doe tumble themselues round vpon the leaues and stalkes: it groweth without any great husbanding in marshie and wa- trish places, as may easily be seene and tried. It is reported to haue a singular vertue in helping women to conceiue. In like manner phy- sitions are wont to prescribe bathes and fomentations made of this herbe, for women that cannot conceiue and haue children.

French lauander being an herbe of a very good smell, and very vsuall in *Languedoc* and *Prouence*, doth craue to be diligently tilled in a fat ground and lying open to the sunne. The decoction, syrupe or distilled water doth comfort the braine and memorie, taketh awaie the obstructions of the liuer, spleene, lungs and matrix: but such as are cholericke must not vse it, because it disquieteth them mightily in causing them vomite, and altering them much by bringing a heat vpon all the bodie.

The drie, stonie and sunne shining place is very fit for lauander, whether male or female: before it flower, it must be cut and picked very carefully. It is of a sweete smell, and good when it is dried to put amongst linnen and woollen clothes, imparting of his sweetnes vnto them, and keeping of them from vermine. It is very excellent to com- fort weake and wearied sinewes, or otherwise ill affected through some colde cause: and by reason hereof barbs and fomentations made of lauander for palsies, convulsions, apoplexies, and other such like affects, are very soueraigne: the flowers with cinnamon, nutmeg, and cloves, doe heale the beating of the hart: the distilled water of the flowers, taken in the quantitie of two spoonefulls, restoreth the lost speech, healeth the swoonings and dis ease of the hart: the con- ferue and distilled water thereof doe the like: the oyle drieth vp

rheumes,

rheumes, and being annointed vpon the nape of the necke, it is sin- gular good against convulsions and benumbednes of sinewes.

All-good (otherwise called in French *Orualle*, because it is as *All-good*, other- much woorth as golde) groweth in any ground without seede and with seede: it delighteth notwithstanding to be often watered. The leaues stamped and applied doe draw forth thornes and pricks that are fastened and ranne into any part of the bodie whatsoever: it doth in like manner bring the childe out of the mothers body being in travell. The wine wherein it hath bene steeped in small quantitie doth make men pleasant and cheerefull and apt to carnall copulation. The seede thereof put into the cie, and turned many times round a- bout the cie, doth cleanse and cleere it, in wiping away the flegmaticke humour, wherewith you shall well perceiue the seede to be laden, and as it were wrapt in small fimes after that it is taken out of the cies. The flowers and seed put in a vessell full of sweete wine whiles it yett purgeth, giueth it the taste of malmeley: it is true that such wine will quickly make one drunke and cause the headach, as we see that beere doth, wherein brewers boile clarey in steed of hops.

Nigella of the garden must be sown in a ground that is fat and well tilled. The fume of the seede taken doth stay the rheume, dry the braine, and causeth the smelling that is lost to come againe: boyled with water and vinegar and holden in the mouth, it allwageth tooth- ache.

Sweete balme groweth rather in woods and forrests then in gar- dens; notwithstanding he that will haue it in his garden must sow it in a fat and well battild ground, where the heat of the sunne commeth not very strongly.

It serueth to reioice the heart, and deliuereth the spirit from me- lancholicke imaginations and fancies: it is good not onely against bi- tings and stings of venomous beasts, but also against the plague, in whatsoever manner it be vied: and further if any man doubt himsele to haue eaten any venomous or poisoned meate, as it falleth out often in them which haue eaten mushroomes and such like things: then this serueth for a singular remedie against the same. Such as esteeme it a fine thing to keepe bees to the end he may preuent their flying away and forsaking of their hives, as also to cause them to come againe if they be gon away, doe rub the hives with the flowers of sweete balme: as on the contrary to driue them and to cause them to for- sake them they rub them with the flowers of fetherfew.

Camomillas well the white as the yellow hath no neede of great tilling: it is sufficient to plant it in a drie, leane, and stonie ground.

Camomill is singular good to mollifie, resolue, rarifie, and loo- sen, and in this respect there is no remedie better for lassitudes or wearisomnes,

Y

wearisomnes without iust outward causes then bathes made with the leanes and flowers thereof: the leanes of cammomill stampd with white wine, make a very good drinke to cure all sorts of agues, but especially tertians: for which reason the priests of Egypt did consecrate it vnto the sunne: also the water of cammomill drunke warme in the beginning of the fit, doth throughly heale the tertian by vomit: the leanes of cammomill yet greene, being dried vpon a tyle or hot fire pan, do by and by appeale the headach.

Mellilot.

Mellilot refuseth no ground be it fat or be it drie, and yet it loueth to be watered. Mellilot doth mollifie, resolue, and rarifie as doth cammomill, and yeeldeth a verie good sinell, especially when it is new or when it rameth in sommer: it ailwageth the ache of any part or member whatsoeuer it be.

Apples of loue.

Many men being very desirous to adorne and set forth their garden with all sorts of plants, doe amongst the rest provide to furnish it with apples of loue (which the Latines call *Mala insana*) by reason of the beautie of their fruite, which is as thicke as a cucumber drawing towards a red colour. They must be sown in the spring in a fat and well battild soile, and where the sunne hath great power, because they cannot abide any cold: they craue the like ordering and husbandrie that the cucumber doth.

Many licorish mouths let not to be eating of these, no more then of mushrooms: they take away their pilling, they cut them in slices, boile them in water, and after frie them in the flower of meale and butter or oile, and then cast vpon them pepper and salt: this kind of meate is good for such men as are inclined to dallie with common dames and short heeld huswiues, because it is windie, and withall ingendreth cholericke humours, infinite obstructions and headach, sadnesses, melancholike dreames, and in the end long continuing agues: and therefore it were better to forbear them.

Mandrakes.

Mandrakes as well the male as the female is more acceptable and to be commended, for the beauty of his leaues, fruit, and whole plant, then for the sinell it hath: it must be sown or planted in some shadowed place, a fat and well battild ground, and be kept from the cold which it altogether detesteth and cannot abide.

The vertues.

The apples of Mandrakes procure sleepe, if you put but one of them vnder your eare when you are laide in bed: it is all but fables which is spoken of the roote which is not so cooling as the apple, and hath vertue on the contrary to drie, soften, and resolue all the hardnes of the liuer, spleene, kings euill, and such other tumours, how hard and rebellious soeuer that they be. Which is more, *Dioscorides* reporteth that if one boile the rootes of mandrakes with iuorie for the space of six houers, it maketh the iuorie so tractable, and softneth it in such sort as that you may set what impression vpon iuorie that you please:

pleaso: peraduenture such as bring vs vnicornes horne from thence, doe vse such deceitfull and wily dealing with vs, seeing by such their cunning skill, they are able in such sort to soften iuorie or the harts horne, and thereby likewise able to worke it to the same forme which we receiue the vnicornes horne in at this day.

Within this small time there hath beene scene a plant somewhat like vnto apples of loue, bearing a round fruit like an apple, diuided vpon the outside as the melon is with furrowes, in the beginning it is green, but afterward when it commeth to ripenes, it becometh somewhat golden, and sometimes reddish. This plant is more pleasant to the sight, then either to the taste or sinell, because the fruit being eaten it prouoketh loathing and vomiting. Golden apples.

The fiftieth Chapter.

Of the forme of setting herbes in order, by proportions of diuers fashions.

WE haue already deliuered the forme of setting herbes in order, as well such as are of a sweete sinell, as those which are for nese gaies, and that either vpon particular beds or quarters: now we will speake of the manner of bestowing of them in proportions of diuers fashions, and in labyrinthes or mazes. But in this course I cannot set thee downe an vniuersall, and as it were inuolable precept and ordinance, seeing the fashions of proportions doe depend partly vpon the spirit and inuention of the gardiner, and partly vpon the pleasure of the matter and Lord vnto whom the ground and garden appertaineth: the one whereof is lead by the hops and skips, turnings and windings of his braine; the other by the pleasing of his eye according to his best fantasie. Notwithstanding that there may not any thing be here omitted, which might worke your better contentment and greater pleasure, by looking vpon the beautie and comelines of this your garden-plot: I intend to set before you diuers figures of proportions, and the manner of drawing of them cunningly, to the end you may haue the meanes to chuse those which shall most delight you and best agree with your good liking. In which I desire you to giue great thanks and acknowledge your selfe greatly beholden and bound vnto *Monsieur Porcher*, Prior of *Crocq in Brie*, the most excellent man in this arte, not onely in *France*, but also in all *Europe*: and not vnto me, who shall be but his mouth in deliuering what he hath said, written, and communicated vnto me in precepts, yet extant and to be scene with the eye. To come therefore vnto the matter, all the sweet sinelling herbes and others for nese gaies, which we haue mentioned before, are not fit and good to make proportions of

of. The most fit and meet are, penniroyall, lauander, hyssope, wilde
tyme, rosemarie, thyme, sage, marierom, cammomill, violets, daises,
basill, and other such herbes, as well those that are of swete smell, as
those which are for nosegayes: as for example, lauander and rosemarie
of a yeere old to make borders about the proportions or knots; and
as for boxe in as much as it is of a naughtie smell, it is to be left off and
not dealt withall. All the rest of the herbes, as penniroyall, hyssope,
wilde thyme, thyme, sage, marierom, and such like, are fittest to be
used about the quarters, or else in some such prettie little deuises as
are made in the midst of borders, or whereof proportions of quarters
without borders, as well whole as broken, are made.

The herbes whereof borders shall be made, must be more high
and thicker set of leaues, then those whereof proportions of quarters
either whole or broken are made, or yet the other which are in the
middest of the borders, that for the beautie of the knot or quarter,
may be seene and discerned more easily.

I call in these places that the border which compasseth the pro-
portion or quarter about, as also the alleyes of the garden: I call
broken quarters, those many small parcels which are sundred and
separate one from another. The proportions either without borders
or with borders, are either equally square in widenes and length, or
else vnequally squared, that is to say, longer then they are wide, or
wider then they are long. Or else of the forme and shape of an egge:
or of a forme and fashion that is mixt of a round and a square, or of
some such other forme, as shall please the gardener: as for example
the fashion of a flower-de-luce, of a true lounes knot, of a lion rampant,
and other such like portraictures.

That which shall be in the midst of the proportions with borders,
or without borders, shall be of a square forme, or of the fashion of an
egge, or round, or mixt of a square and a round, or some other such
like forme.

If you be disposed to plant any herbe in the midst of broken quar-
ters, it must not be ouer high, but lesse and shorter then those where-
with the proportions are set, that so it may not hide or hinder the sight
of any part of the quarter. It is true indeed that in this middlemost
part you may set an herbe of a meane and middle height, yea, or some
such as for his bignes may resemble a shrub or little tree, but it may
not be thicke set with leaues, nor spreading farre abroad, but rather
putting forth his stalke vpright as doth the bay and cypres tree.

But in respect of the beautie and comelines of the quarter, you
must not plant any thing in it, or if you doe plant any herbe, you must
set that it be of a shorter stalke then that which compasseth it about:
the knot that is made of borders, must consist but of two sortes of
herbes: as for example of lauander or rosemarie, or boxe for the bor-
der:

ders and of penni-royall or hyssope within. It is true that in the midst
and fower corners thereof, there may bee set some cypres or rosema-
rie, or some such other herbe or little tree, which is not thicke set with
leaues, nor spreading farre abroad, but rising in height vpright.

But the knot made of broken quarters, may bee made of diuers
and differing herbes, which notwithstanding may not grow great and
tall, because they would hinder the view of the garden, but they must
bee short and thinne set with leaues, as sage, penni-royall, margerom,
cammomill, daises, violets, basill, rue, and such others, which herbes
shall be planted in diuers quarters, to the setting forth of greater va-
riety in the knot, and to giue grace vnto the little quarters. It is true
that within some round quarters, or squares of broken quarters, you
may worke some small birdes, men, or other such portraictures made of
rosemarie, according to your pleasure and the intention of your gar-
dener.

The herbes wherewith proportions are set out and deckt, must
bee planted of rootes or slips: the time to plant them is Ianuarie, Fe-
bruarie, March and April.

It is true that if you plant herbes, especially penni-royall and la-
uander vpon slips: the time of gathering of good plants will be at the
end of Ianuarie, and in the moneth of Februarie, and not later, because
this kinde of slip will not be frozen by any frost that may happen, and
withall in the meane time it doth not stande in neede of watering, be-
cause it hath taken roote before the hot times of the yeere come in.

Againe, if you set herbes of the roote, you must staie till March &
April, and looke well to it that your herbes haue sound, liuing, and
euery way sufficient rootes, for otherwise they will not be able to pro-
spere, spread, and grow in the earth, but will die for the most part. It is
meeke also that when they are planted, you should water them often,
because of the heat then growing more and more euery day, for other-
wise they will wither, or grow small and dwarfish, or die right out.

Wherefore for the greater assurednes, I could wish you to plant your
herbes rather of slips than of rootes: for besides that, it will be more
easie and of lesse charge and cost to purchase slips, then to purchase
the whole herbes with their rootes: it will be also lesse labour and tra-
uail for to preterue and make to growe the one then the other: for
the slips will assuredly grow without watering, and notwithstanding
any frost, and they will shew faire and thicke leaues, by such time
as forner shall begin to plant within the earth, whether it be roote,
or slip, you must cast tre iches, rather with some short handled hand-
forke, or hand spade, then with a dibble, which you shall finde a great
deale more easie. Seruant's fische.

Beholde heere the greatest part of the things which you are dili-
gently to looke vnto before you put your hande to the worke of ca-
sting

sting your proportions or knots : and whereas their whole beauty and commendation doth consist in a wel framed and proportioned form, and in a well caried & appointed order of disposing them, such as may delight the eie: to the end you may attaine this commendable and well pleasing kinde of proportion in the contriuing of your quarters, you must first cast what is the space and whole contents of your quarter, wherein you mean to draw your proportions, that so according to the said contents, you may fit them with such forme as the place will afford. After that you shall haue in your hand many measures of small cord and yet sufficient strong: many cord-reeles and dibbles, and such other things to finish the proportions which you desire to haue drawn in your quarter.

And thus much concerning the meanes which you shall vse in the finishing vp of a knot with borders. Before you stretch your line to draw and cast the shape of it, you must first take the breadth and length of the border, and that such as the quantity of the ground may conveniently and handfomly beare, and so make it more long and broad, or els long and broad accordingly.

It is true that if you haue ground inough, as about some sixtie foot square, after the measure of a common foote, euerie one containing twelue inches, you may make your border large inough; but and if you haue lesse quantitie of ground, then you must make your border lesse, and the proportions at large: you shall so finish vp your borders, as that in the midst of them you may haue some pretty little knot. When you haue cast your ground, you shall begin to stretch your line with good and firme line-reeles, to take the breadth and length of your borders round about. Then you shall draw your line a crosse from the which crosse, and from about the which said borders, you shall not draw vp your line and line-reeles, vntill you haue marked out all your border, or at the least one side, or halfe of it, because this is the direction, for the whole quarter and border to: this is it, whereby you must be guided and directed for the making of compasses and largenesse of your squares and rounds. Furthermore you may stretch your line in the midst of the border, thereby to take the innt mid't, and that for to direct and guide you. Furthermore you shall haue two lines of the length of the border or quarter, and two foote ouer, and these are called the flying or running lines, for that they serue to cary or remooue from place to place, for the planting of herbes in the saide borders. Again, you shall stretch out a line from corner to corner, because that without such line you cannot make vp your corners. And this is the manner of making your borders. As concerning the knot contained within the borders: to take the measure of the proportion or squares, you must haue two small rods, of the thicknes of a thombe, of willow, or some other straight wood, the one eight foote long, and the other

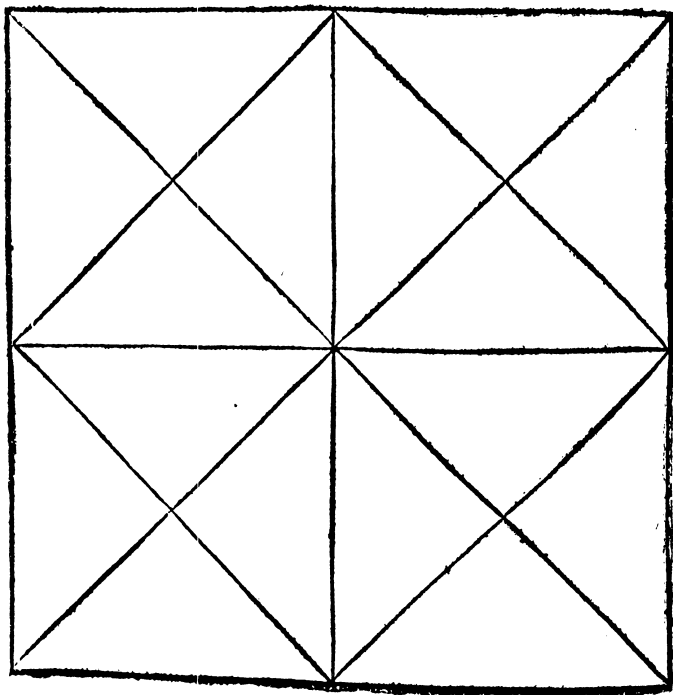
betwixt

betwixt three and fower, the long one to serue for the largest workes, and the short for the smaller: vpon which rods you must marke out your proportions, whereof you meane to make your squares, or any other forme that it shall please you to make. For round workes you must haue an instrument, commonly called of the gardeners Bilboquet, the patterne whereof you shall see heereafter, but giue it what name it pleaseth you, but this is the maner of making of it. You shall take a prop or standard, somewhat thicker then your thombe, you shall put thereto a line of the same thicknes that your gardening lines are, of three or fower foot long, or according to the length & greatnes that you would haue your rounds of. Vpon this line shall you make knots, according to the bignesse or outside of the worke, and then an other knot for the second or inward circle of the round, which shall be eight or nine inches, or lesse if you will; but I tell you before hande that if you make them any lesse, the border will be ouershadowed, and withall will not last and continue so long: and yet I still referre it to your owne discretion. To euerie knot of the said line for to make your rounds withall, you shall make fast, right ouer against the knot, on the backside thereof, a little stick some fower fingers long, more or lesse as you shall most fancy, and of the thicknesse of your little finger. By the meanes of these knots shorter or longer, you shall make your rounds so many, and so big, or so little, as shall seeme good vnto you. If it may not rather stande with your liking to make two Bilboquets, one for your small rounds, and another for your greater. This figure following doth shewe the forme and fashion that must be followed in vsing your lines for the making of your quarters with borders. These draughtes will serue also to make a border to broken quarters, with some small whole and vnbroken proportions in the midst, euen as you doe see a square in the midst, and shall further heereafter see in other portraictures which shall bee set out for your vse. To worke the more surely, you shall let all your lines be stretched out in length, and your standards, props, or dibbles fast in the ground, vntill such time as you haue thoroughly finished the border, that is to say, your crosse lines in the midst, as also those which passe from corner to corner, and thirdly those which make the sides of the borders. All which saide lines are noted with the letter B. The others which are marked with the letter A. are the running or flying lines, which are carried from one place to another to make middle partitions, to the treading of the roundes, and to the squaring of the saide border, and when as one side is downe, they are then to be taken vp, and to be pitcht downe els where. And although that heere be fower, yet two is sufficient at the discretion of the gardener, who according as his number of workefolkes is more or lesse shall stretch and drawe more or fewer lines.

Y 4

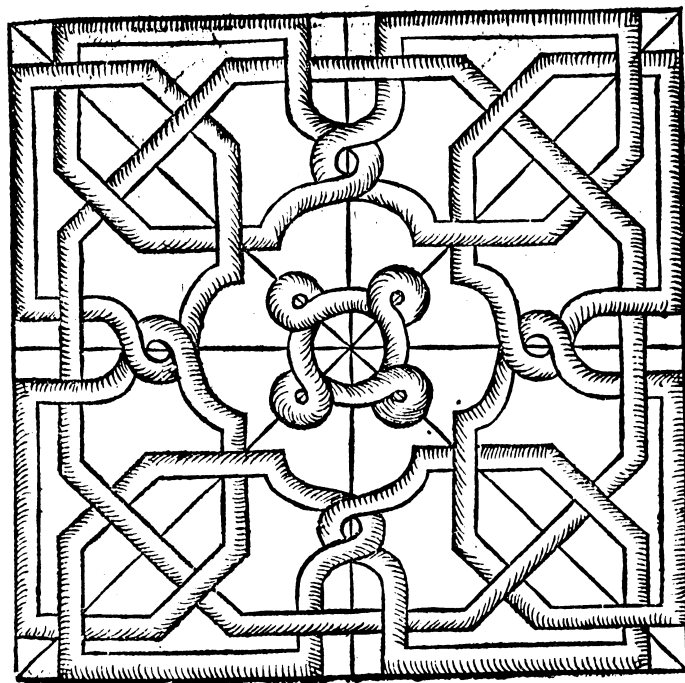
The

The maner of vsing, and platforme, shewing the practise of handling the lines, for the laying out of a simple quarter without any border. And how the lines must be continued and kept strecht till the whole proportion be drawne out and finished.



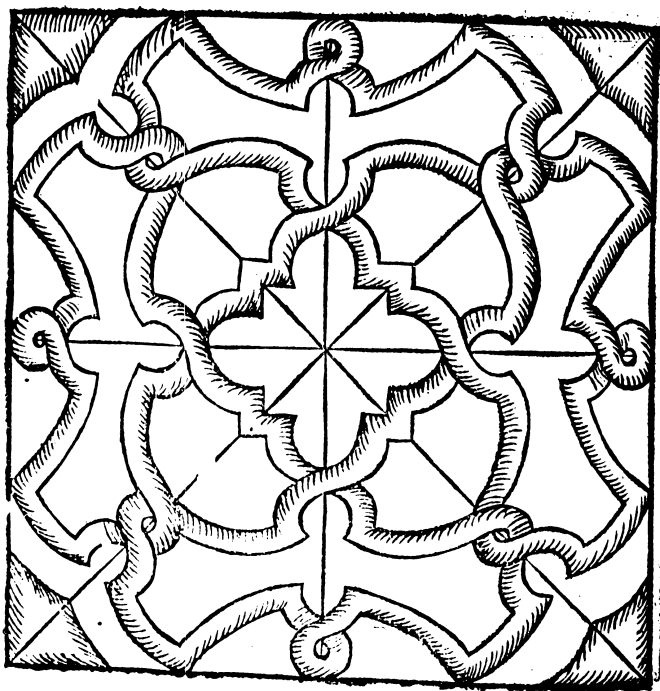
The

The vse and manner of practising by the stretched lines.



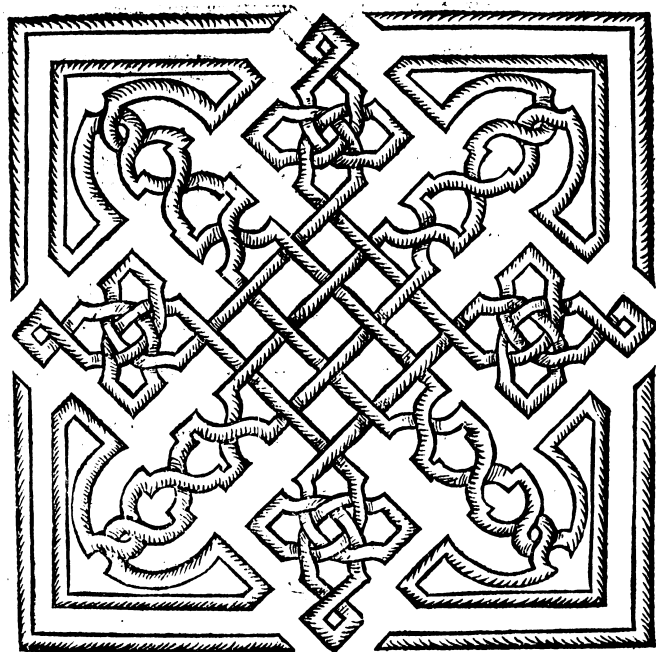
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The vse and manner of practising by the
stretched lines.



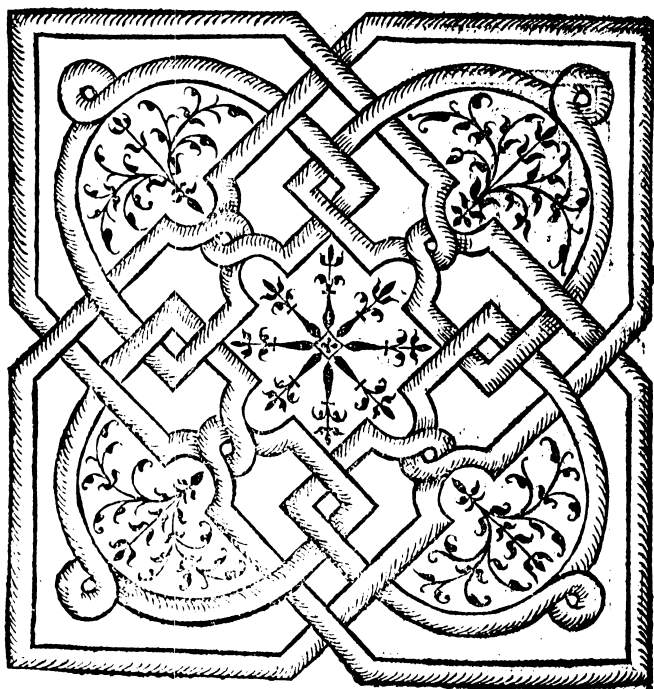
A

A simple proportion or draught
of a knot.



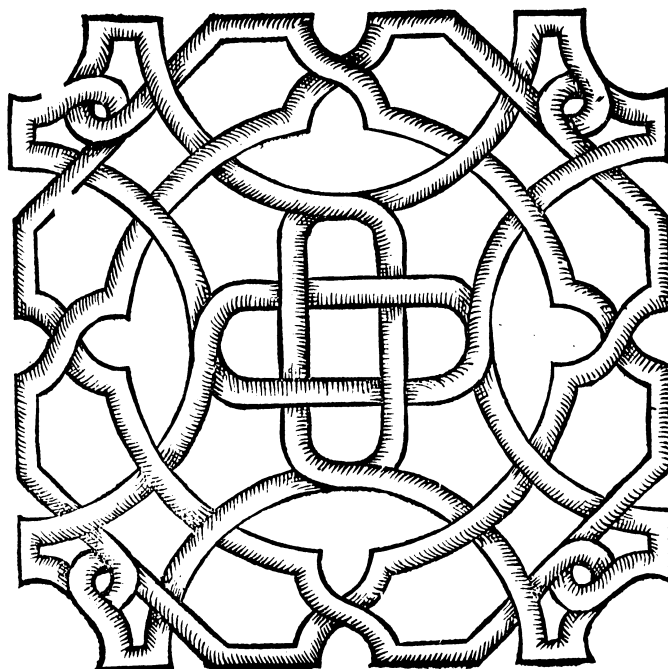
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A simple proportion or draught
of a knot.



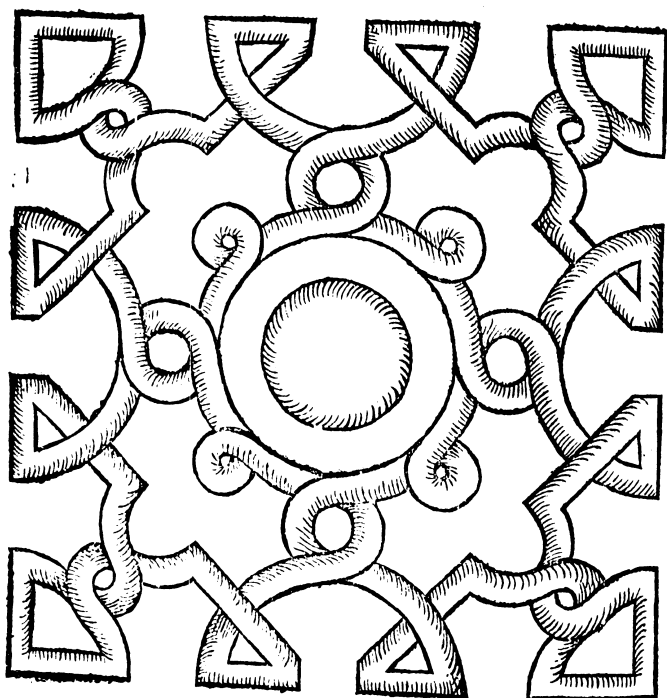
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A simple proportion or draught
of a knot.



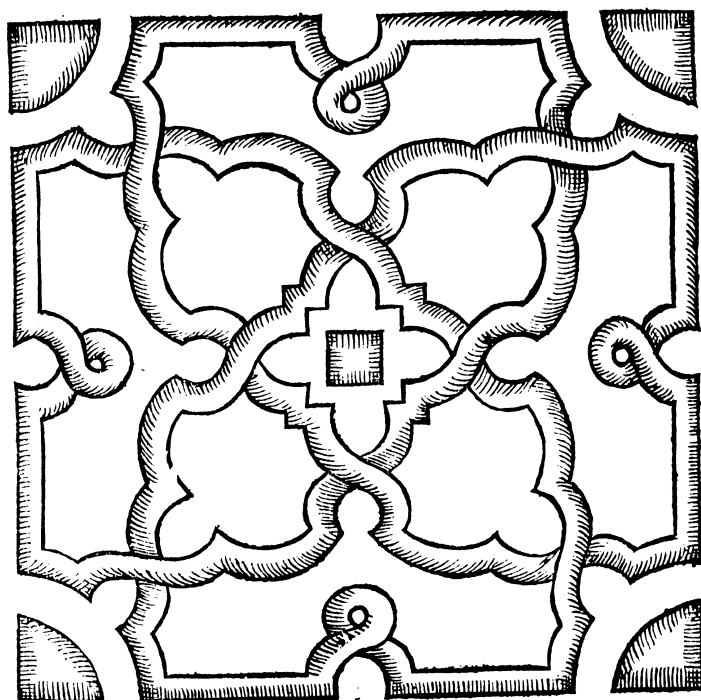
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A simple proportion or draught
of a knot.



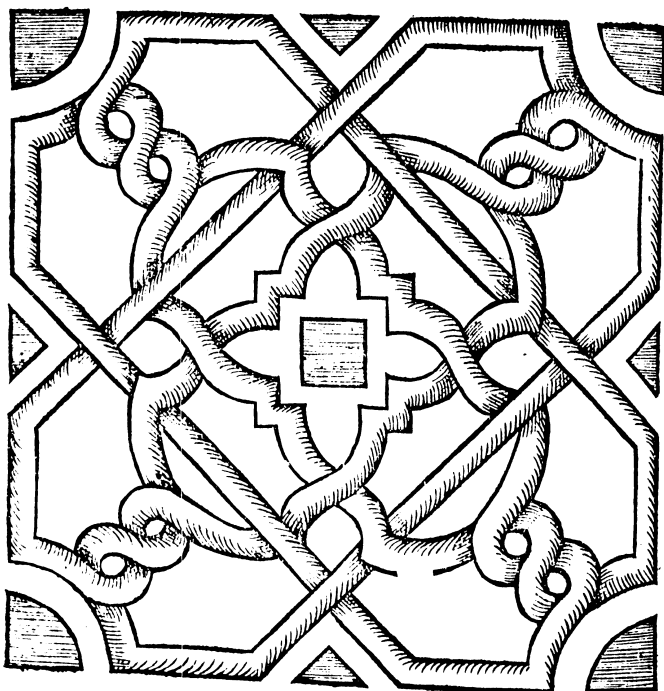
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A simple proportion or draught
of a knot.



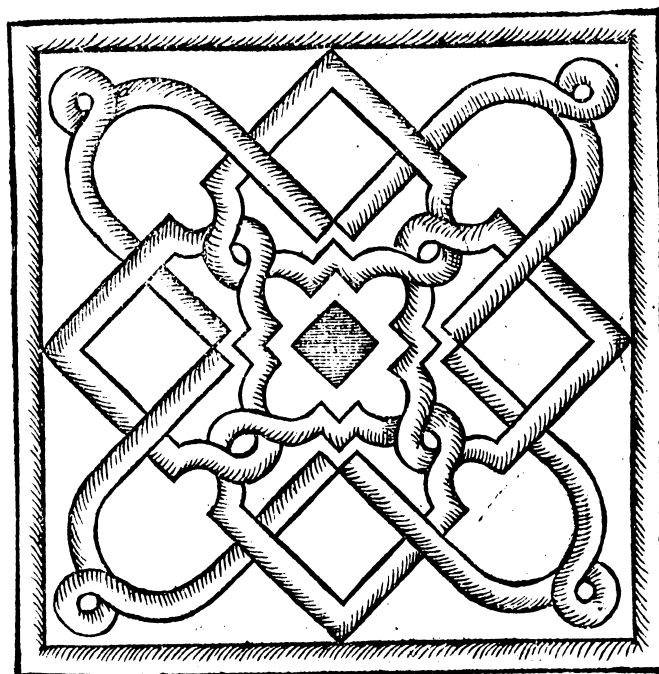
A

A simple proportion or draught
of a knot.



A

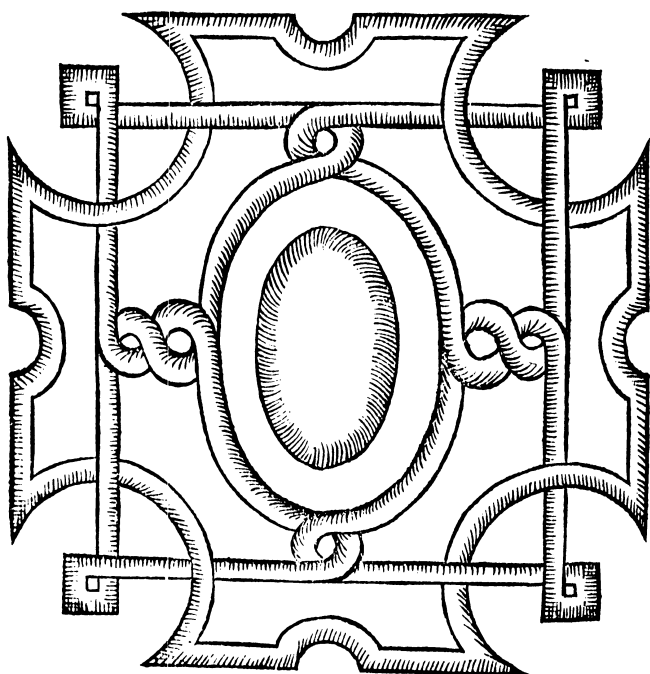
A simple proportion or draught
of a knot.



Z

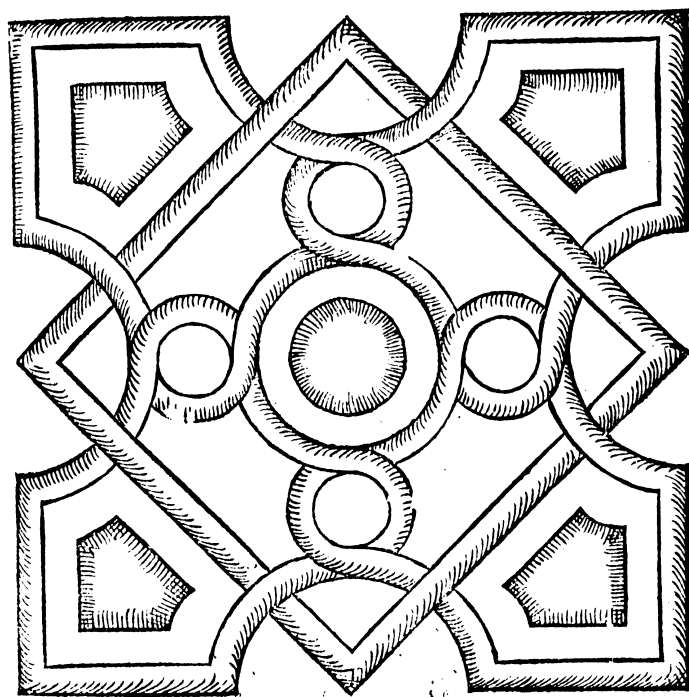
A

A simple proportion or draught
of a knot.



A

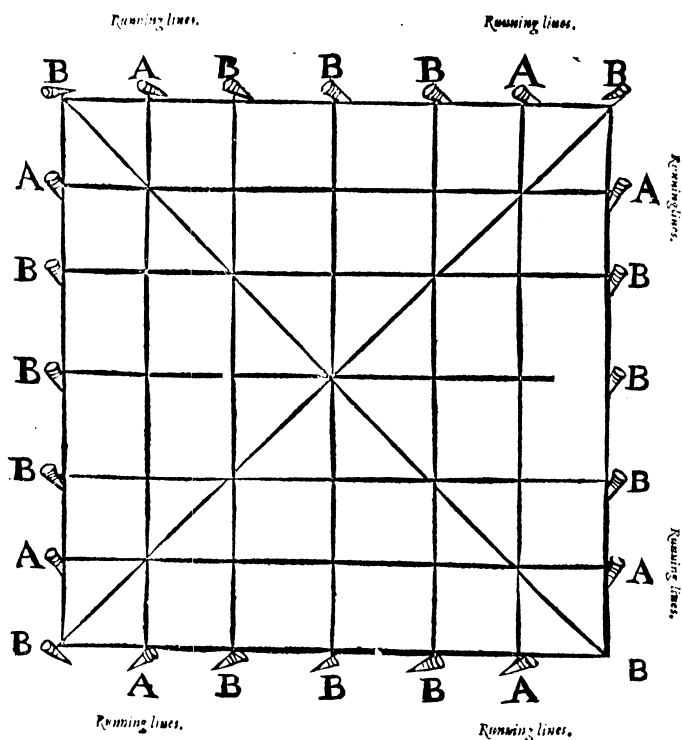
A simple proportion or draught
of a knot.



Z 2

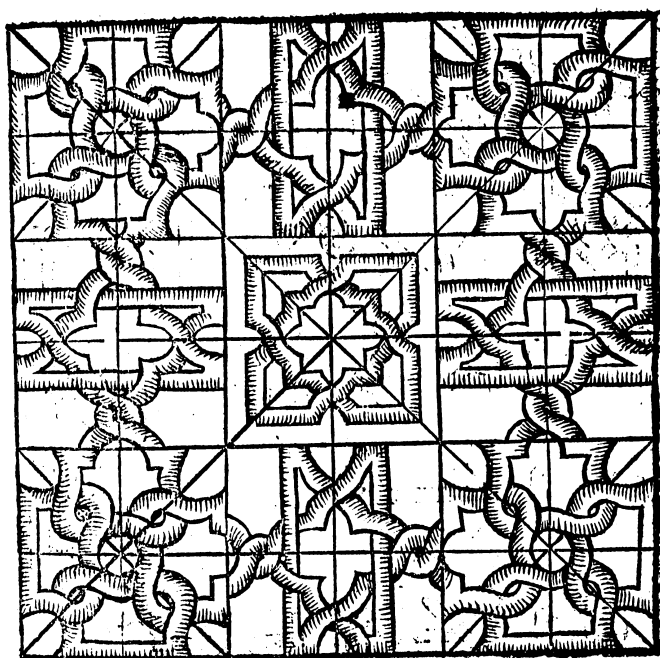
The

The way and maner to stretch the lines, to make a quarter with borders, and to make a border with squares broken and crossed thorow the midst.



The

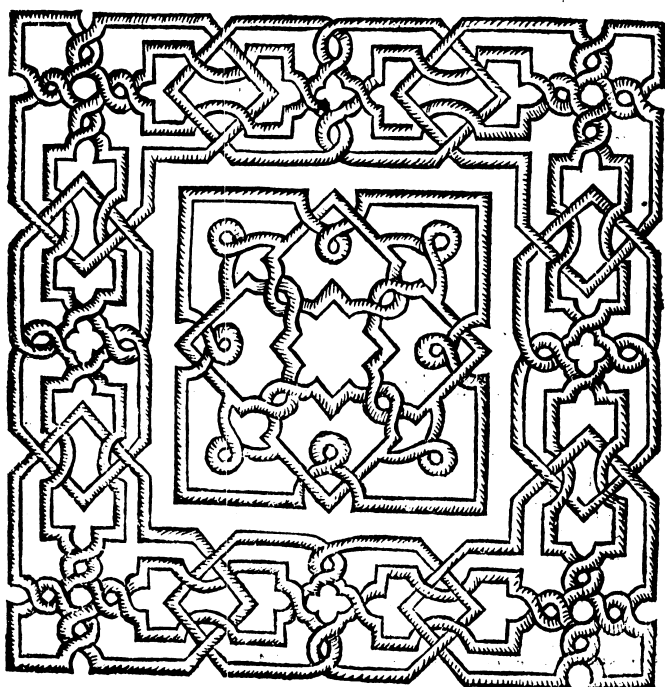
The maner of stretching your lines vpon a border with a seuered knot in the midst.



Z 3

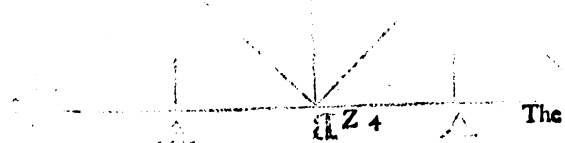
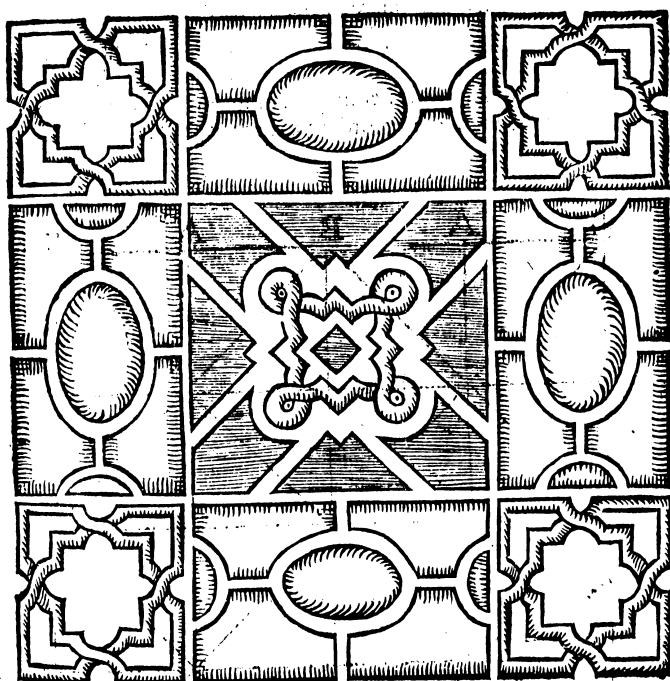
A

A border with his feuerall proportion
in the midft.



A

A border of broken squares, with a middle consisting
of five proportions.

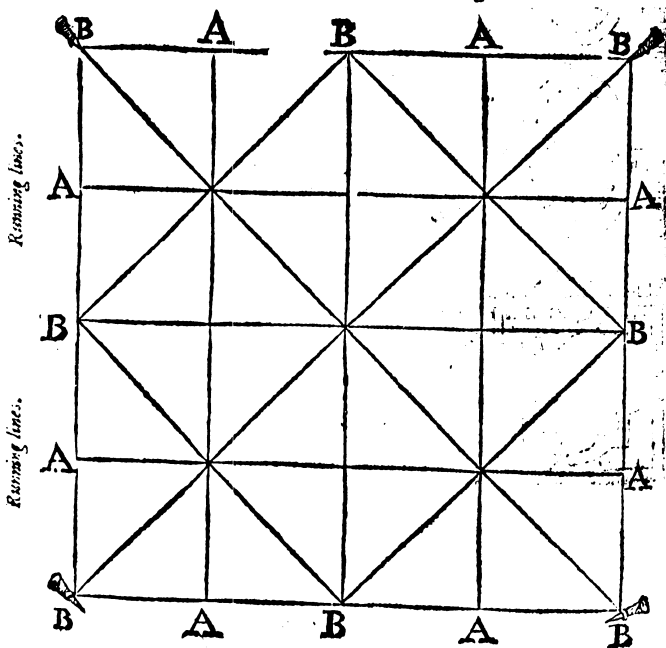


The

The maner to stretch the lines to make a quarter of broken squares. Let rest and abide in their places the lines till you haue finished the proportions. Take the measure of the standards of the croisse and corner lines, whether it be a square or a round, and let there be so many of them and as great as the ground will beare. And if perhaps you would plant any thing in the middlest of the quarter, helpe your selfe with the running lines and their standards, to plant there what you would, without putting downe any other standards, or stretching any other lines than are already: and those you must not flacke, according as hath beene sayd before.

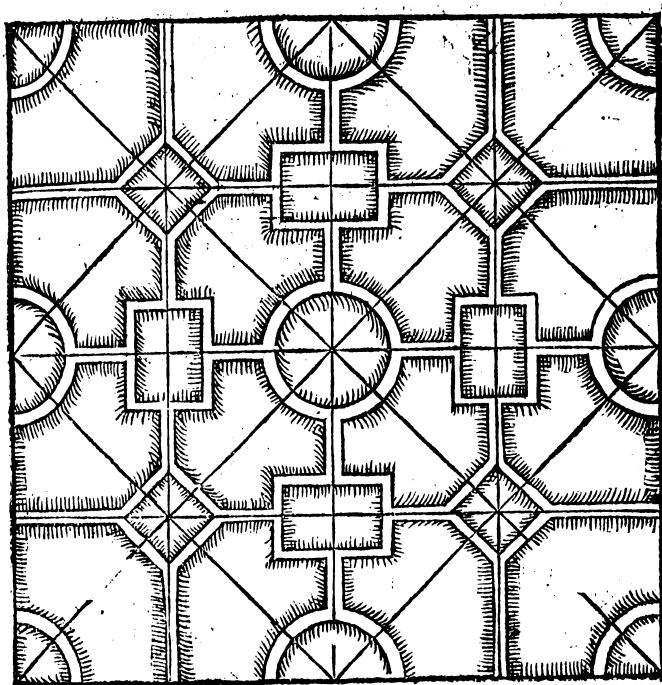
Running lines.

Running lines.



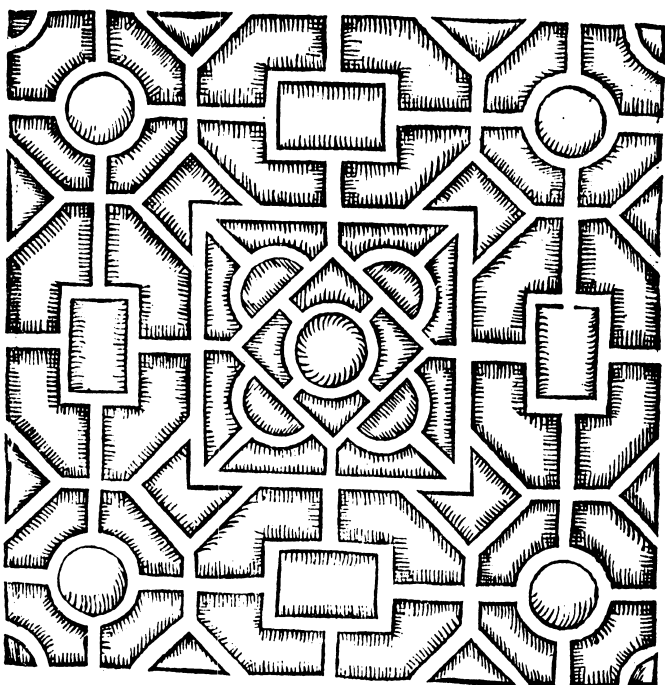
The

The maner of stretching the lines, vpon a quarter of broken squares.



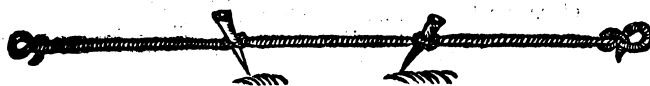
A

A border of broken squares with
the middle.

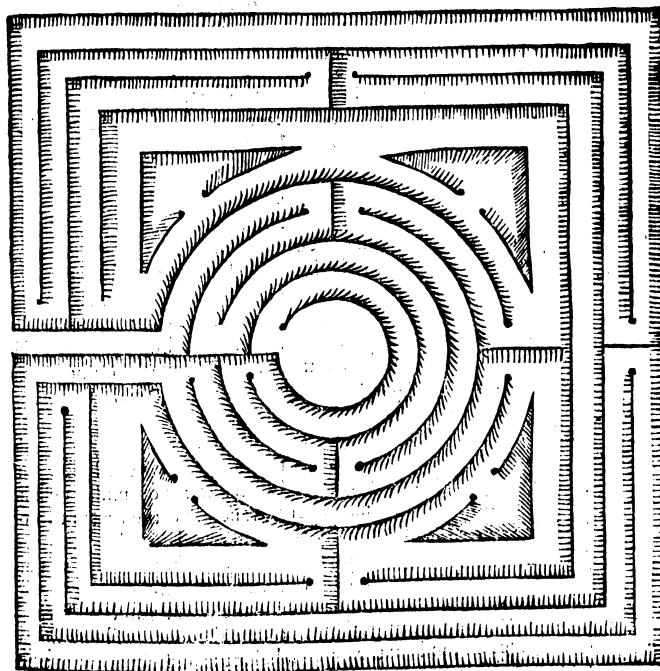


The

The forme and shape of the Bilboquet, which is an instrument
to take the measure of rounds, as we haue
declared before.



The forme of a Labyrinth.



When

When the herbes as well of the borders, as of the quarter are growne vp, if they become too thicke set of leaues, and by their large spreading doe ouershadrow the one the other, couer the small alleies of the proportions; & therewithall spoile and hurt the comelines of the whole quarter, they must be cut. The season to cut them is at all such times as need shall require. It is true that there must especial care be had not to cut them, the time of August being once past, by reason of the great losse that insueth in herbes, which thereby will fall to wither and pme away, and become as things burned with the sunne. To cut them which stand in a right and straight line, you shall stretch a line very tisse, being of the length of the proportion, by the direction whereof you shall cut very neere first the two sides, and then the vpper face thereof. As concerning roundes, you must cut them for the sight of the countrey, as round as euer you can. To cut the border whether it be of lauander, rosemarie, or boxe, you must vie the ordinarie sheeres, which haue handles of wood. To cut other smaller and lesse herbes, you must haue sheeres like those which tailers vse.

The one and fiftieth Chapter.

Of the manner to keepe and preserve herbes, either for the vse of the pot, or of Physicke, or such as are of a sweete smell and sauour.

The preserving of the roote of Elicampane.

THe roote of Elicampane is preserved after this sort. When you haue taken vp the roote in the moneth of October, at such time as it is very ripe, you must first take away all the sand and earth which is about it with a rough linnen cloth, or with a strainer: after that you must scrape it al ouer with a very sharpe knife, and according as the rootes are of bignes, to cleane them in two, three, more or lesse peeces of a fingers length, and boile them in a brasse cauldron with vineger, and that in such sort, as that the slices may not burne within the cauldron. Three daies after they must be dried in the sunne, and put into a new pet well pitched, and cuted wine put vnto them, and that so much, as that they may be couered therewith, and a good deale of sauorie pressed downe vpon them, and then the vessell close shut vp and couered well with leather. Otherwise: You must carefullic looke that the rootes be made very cleane, and then cut in two of three peeces of a fingers length; then afterward for the space of a whole day, you must infuse them in water vpon hot embers, and afterward boile them with twise or thrise as much hony, or sugar.

Conserue of Elicampane roots.

There may likewise conserue be made of the roote of Elicampane after this manner: make very cleane the rootes of Elicampane as we haue said, and cut them in small slices: infuse them a long time vpon hot embers in water, and after to boile them so long as till they be tender sodden: then stampe them and straine them through a linnen

linnen cloth or strainer, and in the end bottie them vp with thrise as much hony or sugar.

You may in like maner preserve and conserue many other roots, as gentian, piony, corne flage, wilde vine, parsneps, Althæa or marsh mallowes, turneps, carets, radishes, nauers, caraway, Iringus, and such other like, all which will be the more pleasant, if you put vnto the conserued or preserved a little cinnamon. Lastly, be it knowen that by this word coniected, preserving or confection is to be vnderstood, the remaining of the roote or other thing (whatsoever it is, that is preserved or confectioned) whole: and by the word conserue or conserued, is to be vnderstood that maner of ordering things, whereby they are stamped and beaten very small.

Preserues and conserues of gentian, piony, corneflag, wilde vine, parsneps, tur. y. and Althæa. The difference betwixt preserving and conseruing.

Purlaine is preserved in this manner: Gather purlaine before it haue cast the seed, take the tenderest stalks thereof, and the fullest of leaves, from these you shall take the roots, and wash them thorowly from the sand and earth that might hang about them, afterward dry them a little, euen so long as till you perceiue them to beginne to wither, afterward put them vp handfomely in some barrell or little vessell of earth, in maner of little beds, euery bed sufficiently couered with salt. When the barrell or vessell shall be full, powre therein to a sufficient quantitie of vineger, or else one part of veruice and two of vineger. This being done, for the vessell in some dry place, and not moist, for feare that the preserve should smell any thing of mustinelle, and looke to it well that the purlaine be continually covered ouer with the pickle. And when you would vse it, wash it first with warme water or wine, afterward make it vp in salades with salade oile. After the same maner sampier, the sprouts of a paragus, harts-horne, trickmadame, broome flowers, the flowers of capers, cucumbers, limons, oranges, plummies, peares, and such like may be preserved.

The preserve of asparagus, harts-horne, trickmadame; &c.

Lettuse is preserved after this sort, they take the stalkes of lettuse cleane picked, and the leanes pulled off, euen from the lowest part of them: vnto where you perceiue the leanes to grow tender, and these stalkes you must salt in a little trough or tray, and so let them continue a day and a night, vntill that they haue turned the salt into brine: after this they must be washed in the same brine of salt, and after that they haue bene sprained, they are layed abroad vpon hurdles, vntill they be well dried: afterward there must bee put vpon them dried dill, fennell, a little rue, and leekes chopped small: after all this the sayd stalkes are put vp in a pot thus dried, and there is powred in vpon them a pickle which is made of two parts of vineger, and one of salt brine: after this, in stead of a double linnen cloth to couer it, there must be thrust in good store of drie fennell vpon them, in such sort as that the pickle may swell vp and ouer-couer them. And euer more

The preserving of lettuse.

more in all confections it must be a speciall great care that they remaine not drie, and to that end to powre in pickle oftentimes, it by turning them aside you see they haue neede. After this fashion may succory, scarole, harts-horne, the tender shutes of brambles, the yooing and tender crops of thyme, sauerie, organic, radishes, be preserved: and such preserves must bee made in the beginning of sommer.

The herbes preserved with salt and vineger are chiefly ordained for salades: but these that are made with sugar and honie, do serue for the vse of physicke: such are those which follow heereafter.

What is meant by the word preserve.
There is but verie seldome any preserves made of the flowers and leaues of herbes, I vnderstand by this preserve taken properly, the preserving of things whole and not stamp and beaten into one bodie: notwithstanding who so is disposed to preserve the flowers or leaues of herbes, may doe it in this fashion: take the leaues or flowers of such herbes as you will preserve, make them vey cleane, afterward without any manner of stamping of them, put them all whole into some vessell wherein you will keepe them: cast vpon them a sufficient compentencie of fine sugar made in powder, and so set them to sunning in the vessell.

Also in this sort, boile them at a small fire with sugar, so long as till the sugar become as thicke as a syrupe, and after put them in a vessell. Otherwise, after that you haue diligently clenfed the leaues or the flowers of the herbes, put them in an earthen pot or glasse, and after powre into them of boyled sugar of the consistence of a syrupe and well clarified. Thus may roses, leaues of mynts, spleenwort, maiden-haire, sorrell, ceterach, buglosse, & such like be preserved: the flowers of marigolds, succorie, violets, broome, sage, and other such like: and such preserves are more acceptable then conserues: because the flowers and leaues doe in better sort retaine and keepe their naturall smell thus, then in conserues: for in conserues they are pounded with sugar, which doth rebate very much the naturall smell of the leaues or flowers.

Preserves are more delight. Some are acceptable then conserues.

Now as concerning making of conserues of leaues or flowers of herbes, you must keepe this courie: take the tendiest parts of the flowers or leaues, and cast away the hardest, such as are the white tales of rose leaues, the stalkes of mynts, spleenwort, maiden-haire and such like: make them very cleane, and bray them afterward in a marble mortar, or of other stone, with a pestill hard & solide enough, and that so long as till they become in manner of a pafte: and then put vnto them twise or thrise as much sugar or honie. And if it fall out that the leaues or flowers so stamped be of themselves somewhat too moist, as the leaues of violets, water lillies, and buglosse be, then put thereto great quantitie of the powder of sugar. When you haue thus done,

done, put them into an earthen vessell, and set them abroad a sunning a whole moneth, that so their superfluous moisture may be spent by the heate of the sunne, but they must be stirred every day: Or if you had rather, do thus: set the vessels vpon hot ashes, to the end they may take a little boile, but this is not so good, as the setting of them in the sunne. After this manner may the flowers of rofemarie, marigolds, betonie, pionie, margerome, balme, scabious, elder tree, mints, fumitorie, ciebright, succorie, of the flowers of the peach tree, sage, broome, oranges, mallowes, hollihocke, and other such like, the tops of thyme, hyssope, and worinwood, the conserue whereof we haue said before to be very soneraigne in the dropsie, as also the conserue of peach tree flowers, and that of broome flowers, for the obstructions of the reines and spleene. And forasmuch as the conserues of violets and roses are in great vse and request, we will speake particularlie of them.

To make conserue of roses, you must take the leaues of roses *Conserue of roses.* white or red, which are not as yet open and blowne, you must make them cleane, and stampe them without being dried before, in a stone mortar, and after put thereto thrise their weight in sugar, and then put it vp in a glasse vessell well covered with parchment, and set in the sunne the space of three moneths, and stirring it al most euery day. If you would make conserues of drie roses, boile in halfe a pound of rose *Conserue of drie roses.* water, one whole pound or thereabout of fine sugar: afterward when you see that all the water is consumed, cast into the sugar an ounce of drie roses made into powder, boile them altogether reasonable, and after with a spatule of woode, you shall make your conserue into morsels or cakes: otherwise, make three infusions of roses in rose water, let the third fettle, the bottome whereof you shall let alone, as being the earthie and grosse part, taking that onely that is aboue, and in it you shall boile fine sugar: and after that, you shall cast thereinto halfe an ounce or thereabout of dried roses in powder, and do in like manner afterward, as hath beene already said.

To make conserues of violets, you must take the fresh and newe *Conserue of violets.* flowers of violets, and take from them their taile, and the little greene cup, by which they hang, and after driethem some small time in the shadow of the sunne, to take from them their superfluous moisture which they haue: after that braie them in a stone mortar, with twise so much sugar, and put them in a glasse vessell, which shall be set to sunne, for the space of three moneths, and stirred very oft during the said time, as hath beene already said of the conserue of roses.

If you would make conserue of drie violets, make one or two in- *Conserue of drie violets.* fusions of violets, and in them boile fine sugar, afterward casting halfe an ounce of powdered violets to one pound of sugar, then boiling them a little together, you shall with a spatule make your conserue into morsels.

morsels or cakes.

For to make mustard, you must pick and cleanse your seed very well, searce it, wash it in colde water, and after leaue it a whole night in the water, then take it out, and when you haue wrung it or pressed it (as neere as you can) dry with your hand, then put it in a new or verie cleane mortar, and bray it with a pebble with strong vinegar, and then after that straine it. Some make a very pleasant mustard in this maner. Take two ounces of the seed of Sennie, halfe an ounce of cinamome, poune them very small, and with hony and vinegar make a paste, and of the paste little loanes, which you shall dry in the sunne or ouen: and when you would vse it, dissolue one or some of one of your loanes in veruice or vinegar, or some other liquor.

Some to take away the great sharpnesse that is in it, doe steepe the seed in new wine, during vntage time, and then make it as we haue sayd already, after they put it in little barrels, such as mustard of Anion is wont to be put in. The people of Dijon make it in small loanes, and when they will vse it they dissolue it in vinegar. The mustard of Dijon hath wont the praise from all other, either because of the seed growing there, which is better than that of other countries, or by reason of the making thereof, which the inhabitants there doe performe more carefully than in other places.

To preserve cucumbers, you must put them in lees of white wine, which are not sowre, and in a pitched vessell, and stop it well. Otherwile, you must put them in salt brine, or els hang them in some vessell wherein is a litle vinegar, but so also the vessell must be verie well stopp.

Some preserve them in an earthen vessell, with salt, vinegar, and margerome: others cast them into sandy pits, and couer them with the seed of sennie bruised with vinegar, and after that put vpon them drie hay and earth.

To preserve gourdes, take them when they are tender, and cut them, then powre vpon them warme water, and let them coole in the open aire for a nights space: after that souce them in strong salt brine, and so you shall preserve them a long time: or els dry them in the sun, and after hang them vp in some smoaky place. In France they are preserved all winter being hangd vp vnder some chamber floore, or set in rowes vpon planks, especially the citruls.

To keepe onions, you must dry them in the sunne, and afterward put them in some dry place and well aired. Some preserve them after this maner: first they dry them in the sunne, and lay Thyme and saorie below in the bottome of a pot, and lay the onions above, putting thereunto pickle, which shall be made of three parts of vinegar, and one of salt brine, and above this againe a bunch or small bundle of saorie, to the end that by the weight of it the onions may be sunke downe

downe into the pickle: and when they are so drencht, as that they haue receiued of the pickle into their owne iuice, then they fill vp the pot with the same pickle. Some doe steepe them onely in water, and afterward preserve them the whole yeere in vinegar.

The two and fiftith Chapter.

A brieue discourse of small and great trees, as well strange as growing in the country, planted or remoued in the garden: and first of such as arbours are made of.

THE Garden of pleasure hauing bene deuised and ordained for the only recreation of the chiefe Lord of the farme (as hath already bene said) and seeing that this his recreation cannot be altogether so great and so sufficient in the onely smell of flowres and sweete herbes, as and if there be withall presented vnto the sight the view of strange and country borne-trees both great and small, which doe not only yeeld a more pleasant smell without comparison, then the herbes; but doe also (the greatest part of them) bring forth fruits of great wonder and admiration, as pomegranate-trees, caper-trees, citron-trees, orange-trees, limon-trees, citron-trees of Assyria, date-trees, fig-trees, oliue-trees, bastard-fene-trees, and others such like. Therefore, to the ende we may leaue nothing out of our garden, whereof the Master of the house may reape any solace, we will speake briefly of handling and husbanding of great and small trees which must be planted in it: of which, some are employed as necessary about arbours, and the garden is to be set about with them: they are the cypres-tree, iuniper-tree, laurin-tree, eedar-tree, rose-tree, box-tree, and others: other some are sown or set, and remoued vnto beds onely proper vnto them, or into vessells and cases, as the bay-tree, mulberrie-tree, date-tree, pine tree, citron-tree, orange-tree, limon-tree, fig-tree, oliue-tree, and such like, which shall be spoken of heere after.

The cypres-tree, as well the male as the female, notwithstanding that in the ile of Creete, it doth grow in great tufts and Forrests without any sowing or planting of his owne accord: notwithstanding in this country it cannot be got to thrive, without the great paines of the gardner, and notable goodnes of the ground: for naturally it delighteth not but in hot countries, where it groweth as one would wish it: it groweth either set or sown in a drie ground far from flouds, riuers, marrishes, dirty and moist places, and on the tops and sides of hills where the sunne shineth, better than in valleies: it abhorreth all manured ground especially and most of all, be it neuer so litle; yea if one doe but fill a trench with dung round about where it is planted, it will

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will die in a short time : notwithstanding it is requisite some certaine time before you plant it , to put some good mould into the pit where you intend to plant it or to sow it . This is as it were a woonder of nature in the seede of this tree , which , though it be so small as that one can scarce see it , yet it bringeth forth so goodly and so tall a tree . When you sow it , you must sow it in furrowes , from after the twentieth of October vntill winter , and neere vnto it some barley : for there is such great familiarity betwixt these two feedes , that they growe as it were in spite one of another ; whereupon it will come to passe , that when it is a great barley yeere , it will be also a great cypres yeere . If you remoue it , doe the like : but be carefull in the meane time not to water it nor to prune it , or to snip off the tops of it , for it cannot endure any wound , be it neuer so little . This tree hath a male and a female : the male groweth more high , hath his branches and boughes more close and straight together , and bringeth forth fruit or nuts , but so doth not the female .

The cypres-tree beareth fruite and flourisheth three seuerall times a yeere , as in January , May , and September : and therefore at these times you must gather the nuts , which you shall drie in the sunne to make them easie to breake , and take out the seede , which you must likewise drie in the sunne , and , if you be desirous to sowe it (the fit time for which is Aprill in very hot countries , and May in temperate ones : and in this country from the twentieth of October vntill winter) you must chuse a drie , faire , and calme day ; and being sown , you shall riddle ouer it with a small riddle , open aboue , some earth in an euen and equall sort about the thickeesse of two or three fingers , and after that so soone as the cypres is put forth of the ground , you must be watchfull ouer the ants , and also besprinkle it with water euerie third day before the sunne rise , or else after the sunne-set , which is much the better : but after that it is growne aboue the earth , you must not water it but very seldome , for often watering of it would make it die : but instead of this , it must be carefully weeded , pruned and digd , but without touching of the roote : neither must you goe vpon it , for treading vpon it with your feete killeth it : and whereas for the first and second yeere it is very tender , you must couer the head of it for that time to keepe it from the burning heat of the sunne by day , and the pinching cold of the frosty nights , euen so as we haue said of melons : the laying of the earth light about it spoken of before , is to be vnderstood of the time of his yoong yeeres , and whiles it is growing : for after it hath once perfected his sciences and bows , it hath no more need either of that or any other labour and helpe . It is woont to be remooued being betwixt fiue and fixe yeeres old , and that in March or in Aprill , and because it scattereth and spreadeth abroad his roots , and pearceth not farre downward with them , the pit whereinto it is

to

to be remooued must be made wide , and that somewhat more then it selfe is broad in the rootes , and in a moist countrey it must be but a little depth , whereas in a drie countrey it may be two foote deepe . The gardiner must be carefull to keepe it from ants , because this little worme loueth cypres about all other things , and causeth it oftentimes to die .

The wood of cypres is better then any other to make coffers , *The vertues.* chests , cabinets , and presses of , because besides the good smell which it yeeldeth , it indureth an infinite long time without corrupting , moulding or rotting any thing at all , and it is such an enemy to all wormes and vermin , as that the leaues and nuts thereof being laide amongst cloathes , doe free them of wormes . The leaues and seede are verie much commended for the killing of wormes in children . The decoction of the nuts in vineger doe allswage the toothach , if the mouth be often washed therewith : the decoction of the leaues worketh the like effect : the ashes of cypres nuts , and the horne of an asses hoofe mixt with oyle of myrtles , keepe the haire from falling . The decoction of new and fresh gathered cypres nuts made in old wine doth exceeding good to them , which haue the falling downe of the fundament , if they drinke thereof euerie day the quantitie of three ounces , but in the meane time they must rub their testicles with the leaues of cypres brayed and beaten : and this is a certaine remedie , such as hath oft bene experimented and tried : the like vertue hath the yoong sciences of the cypres tree , if they be so chewed , as that thereupon their iuice may descend into the bodie .

The rose-tree fitteth it selfe for all manner of aire , whether hot or cold , but in countries that are hot & somewhat moist it groweth more faire , greater , and flourishing a longer time , as may be seene in manie *The rose-tree planted and remooued.* coast townes and places neere the sea in *Spain* , where roses continue and flourish vnto mid-winter . It requireth a fat , substantiall , and reasonable moist ground ; for as for grauelly and sandie grounds they are altogether enemies vnto the rose tree . It must be planted in October , Nouember , and December in hot and drie countries , and in Ianuarie and Februarie in colde and moist countries ; yea and also in March , and such as are planted in the latter season , will put forth roses the same yeere , which will not fall out in those which were made halfe of and planted a great deale sooner : if the earth be good of it selfe the rose will craue no manure , but yeeld a more perfect smell , but and if it be spent and worne out , it must be succoured with dung well rotted .

As for roses there be manie sorts of then , that is to say , the wilde ones , which we call Eglantine , and the red also growing in hedges : dammaske of the colour of scarlet , which we call Prouence roses : and amongst the branches , besides the wilde ones there are , muske-roses ,

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The rose-tree
owar.

roses, common-roses, and roses hauing five leaues onely. The rose-tree groweth either of plants or seed. It is planted of shutes, or little rodde diuided into peeces of the length of fower fingers, and set into a well manured earth a foute deepe. It is good to remooue it, for it will grow the fairer, as also euery yeere, or at the least when it is past five yeeres olde (which is the terme of his approaching age) to cut it, or else to burne the branches of it that are superfluous: for this restor-eth it vnto his young yeeres againe: if you remooue it, remooue it by branches, setting the one fowerfoote distant from the other, in a ground that is not fat or clayie, nor moist, but drie and stonie. The rose-tree fowen groweth slowly: but yet and if you sow it, let it be fowerfoote within ground, and deceiue not your selfe with the seede, for the seede is not that little yellow flower which is in the midst of the rose, but that which is contained and nourished in the little fruite which the rose bringeth forth after vintage, which is knowne to be ripe when it groweth blacke and soft.

Seedes of roses.

For to haue naked roses, you must graft the rose tree vpon it self, or vpon the eglantine, and before the grafting of it to put into the cleft, where the graft is to stand a graine of muske, or else one or two dry leaues of sweeteflowering roses: such roses are pleasant to behold, as being but a little tree, and yet laden with leaues, the flower verie sweete of smell, and such as will neuer faile, but alwaies holde and bring forth in their season: besides that a man may fit the roote and branches thereof, to make a shadow: such roses are nor good to make confers, or distilled water, nor for any vse in Physicke, onely they are good to dry and put amongst linnen and other apparell, because of their good smell: it is true that some say that they loosen the belly. Look further in the thirde booke in the chapter of the speciall properties of grafting and planting.

Verie sweet
smelling roses.
Roses of iustice
and timelic ro-
ses.

To haue roses that shall smell very sweete, you must plant your rose tree in a place that is very drie, or else to set it round about with garlick. The roses will come earely if you make a little trench of some two hands wide round about the rose tree, and therein powre warme water morning and euening, and yet this must not be attempted before it begin to put forth his buds: you shall do the like if you plant your rose tree in baskets, or pots of earth, and order them after the manner of timely gourdes and cucumbers, as hath bene taught before.

Fresh roses.

You may keepe new roses in their liuelines if you put them in the lees of oile, so as that the lees may twim about them: others pull vp greene barly, rootes & all; wherein they wrap roses as yet not blowne, and so put them together in a port that is not pitched. The way to haue greene roses is, if you graft the rose tree vpon an old colewoort stalke, or vpon the body of an oake, but then the roses will haue no smell.

You

To make carnation
roses white.

You may make the carnation rose white, if you perfume it with brimstone at such time as it beginneth to spread.

You may haue roses of a yellow colour, if after you haue planted the rose tree with his naturall earth neere vnto the broome, you bore through the broome stalke with a wimble, and plant in the same hole diuers rootes or shoots of the rose tree, scraped round about so farre as they are to lie in the hole, and after tie and make them fast vnto the broome plant with mortar: and when as you see the hole bored in the stalke to be growne vp againe, you shall cut off the broome stalke about the place where you bored the hole, and shall let the rose tree to put forth his shootes, and so by this meanes you shall haue yellow roses.

The vertues of the roses are sufficiently knowne vnto euery one. Some distill the white and Prouence rose, which, if you will haue it to retaine the full qualitie and vertue of the rose, together with the smell and sauour of the same, you must distill in a glasse vessell, and not in lead, as is ordinarily accustomed. Some make infusions and sirups of carnation roses, which haue force to loosen the belly, and to purge the humours offending in ferous and cholericke matter, as also good for tertian agues, the jaundise, the obstructions of the liuer, and beating of the hart.

The yellow growing within the rose, which is a flower accompanied as it were with small haire, doth staie the white flowers of women: the white end of the leaues of roses, are good in a decoction to stay all manner of fluxes: the cup hath the same force and vertues: the seede and wooll contained within the button of the rose, as also the whole button, dried and made into powder, is singular good to stay womens whites and termes, for the scalding of the water, for the disease called Gonorrhæa, taken the weight of a dram with fowre red wine.

Boxe tree is planted of shootes or boughes, after the twelfth day of Nouember. It delighteth in hilly places and mountaines, and groweth very well in cold, drie, and windie places. It must not be planted neere the place where bees are kept, for the flower killeth them suddenly. Some affirme that it corrupteth the aire by the stinking smell it hath, and for this cause it would be as sparingly planted in the garden as possibly may be.

Boxe tree.

Boxe tree is better to make combes and other durable instruments of, then for to vse in medicine, if it were not that Physicians do holde that the scrapings or rasped powder of boxe and the leanes thereof boiled in lee, doe cause the haire to looke red. Some likewise doe thinke that it hath the like properties that Guaiacum hath in decoctions for the French disease, but herein I referre my selfe rather to experience then to reason.

Bees-horne.
A corrupt aire.

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Broome

Broome. Broome, as well the small as the great is planted of shootes and boughes, in the increase of the moone, about the Calends of March.

To make water. It may likewise be sowed, and it requireth a dry and sandie ground. The flowers as also the seed do prouoke vrine, and breake the stone, as well of the reines, as of the bladder: the flowers prouoke vomite, taken in a drinke: the leaues and crops boild in wine or water, are good for the dropsie and obstructions of the liuer, spleene, and kidneies: some vie the stalks of broome to tie their vines, as also to make ropes and sackes of, and that by ripening it in water as they doe hempe.

Spanish broome. Spanish broome groweth also in drie places: it must be remooued after the first yeere that it is sowed: it is sowed in Februarie, and remooued in March the next yeere after: the flowers in decoctions procure vomite after the manner of white hellebor: the seede alone doth loosen the belly, and forceth downward great store of water.

Furze. Furze grow in vntilled and sandie grounds: the leaues boild in water or wine do stay all manner of fluxes.

The cedar tree. The Cedar tree is very rare in these countries: so that if you will haue it in your garden, you must assigne it a well husbanded ground, and lying open vpon the sunne, notwithstanding the places where it is found most growing, be colde and moist mountaines and full of snow: if you do well you must sowe in pots of earth, and cases or impaled places the small and exceeding litle seed that commeth therof.

The liquor thereof put into the hollow parts of the teeth, doth stay their ach: being annointed it killeth the wormes, and preferueth bodies from rotting. The wood is very pleasant to looke vpon and to smell vnto, whereupon some vse it in steed of perfumes.

Sauin. Sauin is planted as boxe, and groweth much better if it be watered with wine lees, or sprinkled with the dust of tile stones. The leaues as well in decoction as in perfumes, prouoke the termes, and expell the afterbirth and dead childe: they also cause to fall off the warts growing vpon a mans yard.

Iuniper. As concerning Iuniper it affecteth the tops of mountaines, and stonic ground for to grow well in, and by how much it is the more tost of the windes, and pinched with colde, so much the fairer it groweth. The fruite thereof is good for the stomacke, for weake and broken people, and against all sorts of venome, whether it be drunke or taken in a perfume, as also against an euill aire: It is with good successe vied in the decoctions prescribed against the pockes: take sea-uen Iuniper berries, & as many bay berries, halfe a dram of zylocassia, and a dram of cinamome, put all this whole in the belly of a turtle done, roast the saide turtle thus stuffed, and baste her with capons greafe. giue euery second day one of these at supper, to a woman that is readie to be deliuered, and she shall haue an easie deliury: boile

twelue

twelue pound of Iuniper wood cut small, or raspt in a great cauldron, and in a sufficient quantitie of water to the consumption of the thirde part of the water, put this wood and water into a bathing tubbe, and let the partie troubled with the gout, sit in this bath vp vnto the middle; he shall feele incredible reliefe heereby.

Elder tree is fitter to plant in the garden hedge, then to make ar-
bors in quarters: notwithstanding where other sorts of small trees are wanting, there may vse be made of the elder tree. It would be set in the moneth of Nouember vpon sciences and shootes, in a moist and shadowed place, neere to some little riuier or brooke. To cause it to grow well you must take this diligent course: to cast the earth as it were into furrowes of a good halfe foote broad, and a whole foote deepe with a spade, and not with a pickaxe, for there must no earth be taken away: then presently after the feast of saint Martin in winter, plant your elder trees, the great end thereof which shall be put into the earth, shall be cut bias like the foote of a hinde, and thrust downe into the ground thus prepared; a foote or nine inches deepe: and let it stande vp above the ground, at the least a foote and a halfe, or two foote, so as that in all, your plant must be two good foote and a halfe, or three foote long: before you put them into the ground, open it with a dibble, either of iron or wood, so that the rinde of the plant may not be torne, in putting of it into the earth. If you plant it in furrowes, there must be at the least three foote betwixt euery furrowe, and a foote betwixt euery plant. Hauing once thus planted them, you shall neuer neede to take any further paines with them, if you will not your selfe, but to cut it two ioints at the least euery yeere for the space of the two or three first yeeres, to the end the root may grow the greater: and the first two or three yeeres being past, you may cut it from two yeeres to two yeeres to make props for vines: in any case you must lop it euery yeere, and cut away all the euill sciences and shootes which it ill fauouredly putteth forth.

Some distill the water of the flowers, as singular to appease the
headach comming of heate, if the browes or hinder part of the head be rubd therewith. Some likewise doe make verie good vineger with the flowers and iuice of the berries. The iuice pressed from the rinde of the roote, mooueth vomit, and draweth forth the water that is in those that haue the dropsie: the iuice pressed from the leaues and taken with some pottage doth loosen the belly: the dried seed is good against the dropsie, and for fat folke to make them leane, taking of it the quantitie of a dram in white wine, and continuing it a certaine time, and mixing therewith a little cinnamom, because it is a procurer of vomit, and a disquieter of the stomacke.

Rosmarie and Iesamin are likewise fit for the adorning of ar-
bours in quarters, of the ordering whereof we will say nothing in this Iesamin.
place,

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place, because we haue before spoken thereof verie largely.

Iuie as well the great as the small, doth delight to be planted in moist and watrie places, from the moneth of Nouember vntill March, and it flowreth not but in autumnne, neither doth the berrie thereof become ripe but in winter: it groweth not high, if it be not neere vnto some tree, or olde ruine, vnto both which in the ende it worketh ruine and ouerthrow. It will bring forth a goodly fruit, if you straw it with powdred allom, or ashes made of burnt oyster shells. Blacke Iuie will become white, if you water the roote thereof with white earth tempered with water eight daies together continually.

If you take three Iuie berries and tying them vp in a cleane linnen cloth with a thread, giue them to some one: that is troubled with paine and thifnes of his spleene to weare about his necke, the said partie so wearing them three daies together will be whole and cured of his disease. The leaues braied and applied, do heale burnings and scaldings made with hot water: boiled in vineger and applied, they cure the hardnes of the spleene: the gumme thereof killeth lice and nits, and being annointed in any hairie place, causeth the haire to fall away. The vessels made of the wood of iuie are singular to know if there be any water in the wine, for the water will abide in the vessell and the wine will runne out. Seauen iuie berries, with as many peach kernels the skins taken off, boiled in oile and afterward stamp and applied vnto the temples and browes, doe asswage the headach comming from the braine: the iuice of the leaues of iuie drunke with red wine, doth heale the swelling of the spleene: a cap made in forme of a headpiece or skull of the leaues of iuie sowed together, and applied vnto the head of a little childe which hath the falling of the haire called *Tinea*, doth heale it thoroughly: the water or gum which droppeth out of the stocke of an iuie tree the rinde being cut, killeth nits & lice.

Pruet groweth more then a man would wish amongst brambles and bushes, from which places it may be transplanted into the garden for the benefit of arbours. The water of the flowers thereof may be distilled, and it is most singular against all manner of fluxes, whether of the belly, matrix, spetting of blood, and of the eies, as also for all sorts of cankers: the same vertue hath the iuice pressed out of the leaues, especially for the canker growing in the mouth. There is an oile made of the flowers thereof infused in oile in the sun, which is singular good for the headach comming of a hot cause, and also for inflammations.

The three and fiftieth Chapter.

Of herbes for the arbours of the garden.

The wild vine. **F**OR want of trees of low growth (such as haue beene spoken of here before) you may helpe your selfe in the making of your arbours

borders for your garden of pleasure, with certaine herbes which are pliant, and with their leaues apt to make shadow, still provided that they be borne vp by poles of willow or iuniper dressed and ordred in forme and after the maner of arbours. They are such as follow, the wild vine, hops, gourds, cucumbers, the maruellous pease, winter cherries, the maruellous apples, and other such like.

And as concerning the wilde vine, it groweth more plentifully then a man would wish amongst the brambles and bushes: and therefore from hence it may be transplanted and remooued into your garden for the benefit of your arbours. The roote, especially the iuice, doth mightily loosen the belly, prouoke vrine; purge the braine, open the spleene, and take away the hardnes thereof: applied in forme of a pessarie, it bringeth downe the termes, the after-birth and dead-child: stamped with salt and applied, it healeth vlcers: it cleanseth the skinne, and taketh away the red pimples of the face, for which purpose also serueth the water thereof, which you may gather in the moneth of May out of a pit which you shall make in the head of the roote, as it standeth in the ground, according as we haue already said in the Chapter of Violets going before: in a cataplasme it is singular against the sciatica, as also to take away the haire from some place: being mixt and stamp with buls blood, it is of maruellous effects in harde and schirrous swellings, and cankerous tumours.

We haue spoken heeretofore of cucumbers and gourdes: and therefore it is not needfull to make any new repetition. *Cucumbers and gourdes, Hoppes.*

The ordering of hops is like vnto that of the wilde vine, for one and the same ground and dressing will serue both. The flowers, crops, and iuice pressed out, doe take away the obstructions of the liuer and spleene: and the vse thereof is verie conuenient for such as haue the dropisie: therewith beere is made, as we shall further declare hereafter.

Maruellous apples are very fit to ouerspread arbours, as well in respect of their beauty, as for that they are pliant, and winding easily about the poles. They would be sowed in the Spring time, in a fat and well battilled ground: they cannot endure the colde, so soone as their fruite is ripe, which is in Autumnne, they drie away by and by: wherefore you must sow them where the sunne hath full power vpon them, and water them oft in the time of great heat, gathering their fruite in September. These apples resemble little limons, as being sharpe pointed at the ende, great bellied in the midst, rough as wilde cucumbers, Greene at the beginning, but afterward turning red: the first that euer brought them into France, was *Rene du Bellay*, Bishop of *Mans*. They haue also beene found in the gardens of the religious of Saint *Germanes* in the fieldes, and in the Temple garden at *Paris*. They are called of the Greekes Gracious apples, because of their well pleasing

pleasing beautie; and of the Latins, *Viticella*, *Momordica*, and *Bala-*
mista, this last name was given to them by reason of the vertues of
 baulme which they haue: and in French Maruellous apples, because
 of the maruellous vertue that they haue to heale woundes. Some
 take all the seeds out of the apples, putting the said apples into a viol
 of vnripe oile oliue (or instead of oile made of vnripe oliues, which
 is not alwaies readie to be had at *Paris*, some wash common oile very
 well in rose water or common water, or plantaine, or mulberie water)
 and doe afterward set the said viol a long time in the sun when it is in
 his heate, or else they put it in a vessell of hot boiling water: or else
 burie it in the earth or in horse dung, and this oile is singular good
 to assuage inflammations of woundes and of the breasts, and hath no
 lesse vertue then baulme to consolidate or heale woundes either new
 or olde, being a thing tried of many. The fruit soaked in oile of sweet
 almonds, or linseed, adding thereto an ounce of liquide vernish for
 euery pound of oile, maketh the oile verie soueraigne for the paines
 of the hemorrhoides, burnings, prickings of the sinewes, and to take
 away the skarres of woundes. The leaues dried and made into powder,
 and drunke the quantitie of a spoonfull with the decoction of plan-
 taine, doe heale the gripes in the guts, the paine of the colicke, and
 the woundes of the guts. The oile wherein this fruit hath beene soa-
 ked, doth keepe in his place the fundament woont to fall downe in lit-
 tle children, if it be often rubbed therewith: it maketh barren wo-
 men fruitfull, if after they haue bathed in a bathe for the purpose, and
 drunke of the powder of the leaues of this herbe, they annoint their
 secret parts with this oile, dwelling afterwards with their huf-
 bands.

Hemorrhoides,
 Burnings,
 Gripings in the
 bellie,
 Colicke.

The falling
 downe of the
 fundament.

To make wo-
 men fruitfull.

The maruellous
 pease.

The maruellous pease are verie rare in this countrie, resembling
 somewhat winter cherries, as hauing their seed inclosed in a little film
 or skin, like vnto a eich pease; in the midit wherof, there is the shape as
 it were of a heart. They delight in a verie fat, moist and well sunned
 soile, and cannot abide to indure the cold.

Winter Cherries (which the Latins call *Halicacabum*, and the
 Arabians *Alkikengi*,) are delighted in vines: wherefore they which
 would haue it planted in their garden, must picke out for it such a soile
 as would fit the vine. The little cherrie which is inclosed in the blad-
 der, is singular good to prouoke the detained vrine, and to take away
 the sharpnes and scalding thereof, for the iuice thereof mixt with the
 creame or milke of white poppie seede, or with the decoction of the
 seed of melons or gourdes, mallowes, or barley pitane, and drunke,
 doth marueiloullie mitigate the scalding of the vrine: if the roote
 come neere vnto the aspe or lizard it casteth them into a dead sleepe,
 and killeth them: the vse of the cherrie is soueraigne against the
 stone and grauell. Likewise for this disease some make a wine which is
 called

Winter cher-
 ries.

called winter cherrie wine, which is made with the newe pressed li-
 quor of good white wine, wherein hath beene infused a certaine quan-
 titie of these cherries: or with a certaine quantitie of these cherries
 cast with an equall quantitie of white wine grapes all whole into a new
 vessell, the same vessell afterward being sild vp with white wine newe
 from the presse, being afterward scummed and vsed after the mannet
 of other wines: or else this wine may be thus made, these cherries are
 troden amongst ripe grapes, and being suffered to worke together
 certaine daies, they are afterward tunned vp into vessels and ordered
 as other wines: this wine taken the quantitie of fowre ounces in the
 morning three or fowte daies together in the decrease of the moone,
 clenseth the reines, and purgeth out great quantitie of grauell.

The fower and fiftith Chapter.

Of trees both great and small, as well on landish as of the same
 countrie, being planted or sowne either upon beds
 or in vessels, in the garden.

THE Baie-tree will grow in all places, but it is not as easilie pre-
 serued and kept in euery place: for it delighteth especially and
 naturally in a hot or temperate countrie, for in a colde it grow-
 eth not but by contraint: but and if you be disposed to haue it to
 grow in this cold countrie, you must plant it so vpon the sun, as that it
 may thereby shake off and better passe ouer the extremity of the colds,
 and on the contrary in a hot countrie you must plant it so, as that the
 sunne may come but sparingly to it, to wit, even when the shadow will
 be hard at the foote of it: notwithstanding it delighteth much in pla-
 ces neere vnto the sea, in leane and thinne grounds, where the aire is
 warme and temperate of it selfe. It must be planted in Autumne and
 in the spring time, of sets of whole plants, or of branches: & in March
 it is planted very fitly and seasonably, when as the sappe putteth vp
 and commeth to the barbe. It may likewise be sowne after the fowre-
 teenth day of March in a ground that is well manured, one foot with-
 in the ground and fowre berries together: and at the yeeres ende to
 remooue it to some other place. The baie tree feareth the cold aboue
 all other things, and for this cause it must be planted in this countrie
 in a firme and solide ground as hath beene said, to the end that during
 the times of snow, frost, and freeing vpon raine, the roots may be
 defended from colde, which although the boughes and branches
 should be dead, by the colde of winter, would yet continue to bring
 forth new boughes in the spring time: for the fastnes and closenes of
 the ground will haue let, and staied the aire from hauing pierced vnto
 the rootes. And in case the ground where you haue planted your bay
 tree should be sandy, dry, and barren, then it will be your part during
 the time of winter to spread and cast ashes and straw about the rootes
 of

The baie tree.

The bay tree
 cannot indure
 cold.

Two things
causing bay trees
to prosper.

of the baie tree, to preserve the heate of the earth, and so withhold the colde from pearcing vnto the rootes. Then for to procure a flourishing and faire baie tree two things are necessarie, the heate of the aire, and the fastnes of the ground, of which, if the one be wanting, the baie tree will not grow any thing at all; or if it grow, yet it will be but a small and starved thing, as we may easily make triall and prooue in this countrie. The baie tree may be grafted vpon it selfe, as also vpon the dogge tree, the ash tree, and the cherrie tree, as we will declare more largely in the third booke.

The mirtle tree.

The Mirtle tree is of two sorts, the one is a darke greene, the other is a light greene, the one beareth a yellow flowre, and the other a white, but of these the latter is the better: but euery sort of mirtle craueth a hot country, a light, sandy, leane, and brittle kind of ground, & yet notwithstanding this, it groweth well vpon the sea banks, as also vpon the sides of pooles, lakes, & fennes. It is planted either of yong boughes borrowed and cut downe for the excessive ranknes of them, after it is fowre or fife yeeres old, or from the shootes putting forth at the roote thereof, separating them from the maine roote so soone as they be put vp, and from after a yeere of their first planting to remove them: or else of seede, rubd and chafed betwixt your handes, and after thrust into an old band or small corde: the same buried all along according to that length hat it is of in a furrow cast a foote deepe, or thereabout, and well manured with rotten dung, and watering the place. The mirtle tree would be planted in the highest part of the garden, for by his smell it maketh the place most delightful: it may be sowne also after the manner of the baie tree, but then it will not grow vp till after a long time. It will grow high and faire, if you make it cleane and scoure it often round about, and it will bring forth much and great fruit, if you plant rose trees neere vnto it, or else plant it neere vnto oliue trees, in the countrie where they grow: for the mirtle and oliue trees doe helpe one another greatly. It loueth and craueth to be watered with mans vne, but especially with sheepes: or when you can get neither of these, with warme water, wherein it delighteth exceedingly. As sometimes appeered by a mirtle planted neere vnto a bath, which to euery mans sight grew very pleasantie and beautifull, though there were no reckoning or account made thereof. Mirtle berries put in a vessell which is not pitched but well couered, doth keepe a long time greene and fresh: Some hold it better to put them in, hanging vpon their boughes: The mirtle shunneth nothing so much as cold, and taketh delight to be neere vnto poples, brookes, and maritime places. If you water it oft with warme water, it will beare fruit, but without any kernell.

The fruits of
mirtles without
any kernell.

The fruite is called mirtle berries. It must be gathered when it is faire, euen a great while after that the rose is fallen and shaken. It may be

be grafted vpon another of his owne kinde, and the white vpon the blacke, and the blacke vpon the apple tree, medlar tree, and pomegranate tree.

After vintage time in the countrie of *Prouence*, where there is great number of mirtle trees, the birds feede of the fruite of the mirtle tree, and thereby become so fat, and their flesh so pleasant to eate, as that men eate birds so fattened all whole without pulling out of the garbage: in so much as it is growne into a common prouerbe, that the excrement is better then the flesh.

The leaves, baies, or berries of mirtle tree by their astrigent force and facultie do staie all manner of fluxes, whether it be of the belly, or of the termes, or principally of the whites: the iuice and distilled water of mirtle tree are singular good to drink, to keepe vp the falling fundament. The decoction of the seede of mirtle tree, doth blacke the haire, and keepeth it from falling. The berries of the mirtle tree may serue in steed of pepper, the sauce made therewith worketh the like effect, & is singular good to comfort a languishing stomach: mirtle berries eaten do comfort the hart, and cure the beating of the same: the ashes of the drie leaues of mirtle tree burned within a pot of rawe earth, so thoroughly as that they become white, being afterwarde washed, haue one and the same vertue that *Spodium* or *Pompholix* hath.

If you cannot make the mirtle tree to grow in your garden, you must content your selfe with the Mirt-tree, which craueth the same ground and manner of ording that the mirtle tree, (as being a kinde of wilde mirtle tree) and which may be vsed in the steede of mirtle tree when it cannot be come by, as hauing the same or like vertues.

Butchers broome is also a kinde of wilde mirtle, which groweth commonly in forrests and vnderwoodes, from whence it is better to translate it into your garden, then either to sowe or plant it.

He that is desirous to plant Tamariske in his garden, must make choise of the moist and wettest ground, and for want of a sufficient moist ground, to water it oft: It is likewise seene that Tamariske doth grow faire and tall, by ponds, fennes, and other standing waters. It is planted either of rootes or sprouts, and that from the first of October, till the fowre and twentieth of December, yea vntill the beginning of Februarie: but yet it thriue best being set of rootes: there is no frost almost that will hurt it, especially the roote, for when it is once taken, it putteth forth continually branches and boughes along the plant.

The wood is principally commended, for that it astwageth and diminisheth the spleene in such as haue it stoppt too full of melancholike humours: and hence it commeth that many troubled with that disease, do eate and drinke in vessels made of the wood thereof. And some

some likewise doe counsaile to giue swine that are troubled with too much fulnes of the spleene, water to drinke in their troughes, hauing first quenched therein coales made of the wood of Tamarisk. The decoction of the roote with damaske raisons is good for leprous persons, and such as haue their spleene amisse: as also for the pockes.

Bastard sene.

Bastard Sene, (called of the Latins *Colutea*) delighteth in a ground that is fat and well battild with sheepes dong. It groweth not planted, but vpon seede: and it is meere that the seede be steeped first a long time in water, euen vntill it begin to sprout. The time to sowe it, is about the beginning of the moneth of Iune. It must not haue anie of the branches cut off, nor be pruned or touched before the fourth yere. The fruite serueth to good vse for the fittling of sheepe, and maketh them to haue much milke: it is good also to fat chickens, bees, goates, and kine. Some take it to be Sene, but they do greatly deceiue and beguile themselves.

The caper tree.

The Caper tree in many countries groweth without any tilling, in earable ground: but where it wanteth, it it must be sown, it must be in a hot countrie, and a drie stonie, and sandie place, which shall before hande be inclosed with a little ditch, which shall be fild with stone and lime, or else with fat earth, for to be as a fortresse and defence vnto it, that so the roots of the caper tree and thereby all shotts that might grow vp from them, may be kept from breaking forth, and spreading further then this ditch: for if they should not be staied and kept backe from spreading by some such meanes, it would come to passe that within a small time they would ouerrun the whole garden, and plant themselves in euery corner of the same. Notwithstanding the caper tree is not so noisome in that respect (because it may be puld vp) as it is by inuenoming (I knowe not by what venemous humour or iuice) the whole ground, and making of it barren. It hath no neede (except a verie little) to be any way tilled or fashioned: for it groweth well inough (without any thing done vnto it) in fieldes and desert grounds. It may be sown in the spring and Autumne.

The fruite of the caper tree, as well the great as the small, is good in a salade to prouoke appetite, cleanse the flegmatike stomacke, and to take away the obstructions of the liuer, but principally of the spleene: the rinde of the roote and leaues haue the like vertue, but more effectually. Capers both the great and the small whiles they are yet Greene and not salted, do nourish a great deale more, both of them are in request, not so much for that they are fruite, as for their manner of preserving, which is performed either with vineger, or else with salt brine: for capers not pickled are of a very sharpe and vnpleasant taste, but the vineger wherein they are preserved doth make them very acceptable vnto the stomacke: but the great ones because they haue both more iuice and more pulpe, are a great deale better then

then the little ones: though the little ones are more delightfome to the taste then the great ones, because they are fuller of vineger than the greater ones.

Agnus Castus, seeing it commeth very neere to the nature and condition of the willow, and of the same colour with the leaues, disagreeing onely in smell, craueth to be planted in a warrie place, where there is much shadow: or at the least to be oft watered. The leaues, seed, and flowres, are singular good for them which would liue chastly, taken inwardly, or applied outwardly: for some say that the leaues, seed, or flowres, put into little bags, and applied vpon the reines in bed, doe helpe to keepe the chastity of the body, which is the cause that in many countries it is sene planted almost in all the monkeries. The decoction of the leaues is good against the scalding and burning vrine, as well in drinking as in fomenting it, as also against the obstructions of the liuer, spleene, and matrix. If you carry a branch of *Agnus castus* about you, you shall not grow wearie, no not after much travel. The fume thereof taken in at the secret parts of women, doth quench the vnstiable lust and burning desire vnto veneric and carnall copulation.

Agnus Castus.

Chastitie.

Heat of vrine.

The burning heat of the secret parts, Carob or bean tree.

Beane-tree, or saint Iohns-bread (bearing a long, flat, and broad fruite, like vnto that of Cassia) would be planted of newe shootes, in February and Nouember in a drie ground, lying open vpon the sun, and where as there are very deepe ditches made. It may also be grafted into a plum-tree, or almond-tree: in anie case you must neuer thinke vpon the sowing of it, because so it would neuer beare any fruit, but would die very quickly: it must be oft watered.

The cods are good to fat children or swine, but not so fit to feede men: It is true that the fruite doth loosen the belly gently, as it were after the manner of Cassia.

There are many sorts of the date-tree, some beare fruite, and some are barren: and of the fruitfull some beare a reddish fruite, and some a white, and other some a gray: furthermore some are males, and some females: some are high and tall, and some are stouping downe and but low, and therefore called the little or dwarfe date-tree, and some of a middle size betwixt both: but howsoeuer they differ, yet heerein they agree, that they all desire a hot aire, a great deale more than temperate: for in a hot countrie it bringeth forth very faire and ripe fruite, and of it selfe is sufficiently kept and preserved, without any further paine or care, except it be about the watering of it: where in a temperate region it either ripeneth not his fruite, or else beareth none at all. It craueth a sandy, salt, and nitrous ground, for sene that it be somewhat moist, and this is the cause why it prospereth well vpon the sea coast: and if the ground where it be planted be not such, it must be watered with salt water, or salt brine.

The date-tree.

It.

It is planted of small plants, with roots in Aprill and May, the plant being well laid about with fat earth. Some also sowe the newe stones of dates, (and they bring forth their trees in October) two cubites deepe in the ground, and that mingled with ashes and well enriched with goates dung, and the sharpe side of it must be vpward, it must be watered every day, and every yeere there must be salt shed about it, or else which is better, that it be oftentimes watered with water that is somewhat salt: againe, that it may grow high and faire, it gladly accepteth the watering of his rootes with the lees of olde redde wine strained.

Note likewise, that (seeing of one date stone alone there will hardly grow vp any date tree, bearing sufficient bignes in the bole and body, to carry and vndergoe the weight of the head) it will be good to put and ioine together two or three date stones, sowed vp in a linnen cloth, in such sort as that the sharpe sides may behold one another, and so to set them: for by this ioining of two or three together, your tree may come by a body sufficient big to beare the head. Note further that if you would haue the female date tree to beare fruit, that then you must plant it neere vnto a male date tree, and not one onely, but many if it be possible, because the neere standing of the one vnto the other, causeth that the vertue of the male is conueighed and imparted vnto the female, and that by the commixtion made by the wind, from whence ariseth abundance of fruit. But and if you haue not the means to plant many male date trees neere vnto the female, it will be sufficient if you do but touch the male oftentimes with your hand, and then afterward lay the same hand vpon the female: or you must gather of the flowers of the top of the male, or of the moile of the male, and sprinkle the same vpon the female. Eat but as few dates as you can, for they make obstructions in the liuer and spleene, and are also of hard digestion, and cause the headach.

The Pine tree.

The Pine-tree groweth chieflie of a kernell, which must be planted in October or Nouember in warme places: or in colde places in February or in March: or about the fall of the apple, or a litle after, and that in pits well digged, and which haue laine vntill and vnoccupied a good time: the apple must not be broken by force of any iron thing, to get out the kernells, which must lie in steepe three daies before hand, and seuen of them set together, and that five fingers deepe onely, when they are growne vp you must not be too hastie to remooue them, because they take not roote but in long time, and verie hardlie: nay, they cannot abide at all to be transplanted without their great hurt and hinderance: but yet when time may serue to transplant them, in any case beware that you do not hurt their roots, especially the principall and thickest ones. The Pine-tree groweth chiefly and thinnest best, vpon high mountaines, and places that are open
vnto

vnto the winde, still regard being had, that the place where they shall be planted, be as carefully husbanded and tilled, as if it were for to beare and bring forth wheat. It will continue the longer time, if the barke be oft taken from it, because that vnder the barke certaine litle wormes do breede, which fret and destroy the wood.

The distilled water of new Pine kernells, take away the wrinkles of the face, and diminish the brefts that are too great and swagging, if there be laide vnto them linnen clothes dipped in this water as oft as you can: this water also is singular good to draw narrower the secer parts of women being too much distended and enlarged, and to cure them of all manner of rheumes and distillations: but yet their iuice is more effectuall for those matters, than the distilled water.

Pineapples are a meat of very easy nourishment, and for that cause are very good for such as are troubled with the cough, for them which are in a consumption, and such as are sick of an heetick fever, but they must haue bene steeped sometime in rosewater to take away their acrimonie, sharpnesse, and oily substance: it is true that they be hard to digest, and therefore to such as are cold of nature you must giue them with honie; and to those which are hot with sugar to helpe out with the hardnesse of their digestion. They are good for such as haue the palleie, for ache in the sinewes and backe, for heate of the vrine and gnawing of the stomacke taken with the iuice of purllaine.

Figges (being one of the best fruits we haue, according to the ground and plant whereof they come) are either more or lesse sweete and satoury, and this commeth of the aire as it is tempered with heat, cold, or a milder temper: or else in respect of the moisture and drinesse of the grounds, their fatnes or leannes; their roughnes or smoothnes; their strength or gentlenes and easines; their stonnes or being without stones, or their situation amongst some olde ruines and rotten stone wals: for in respect of all these it falleth out that there are great diuersitie of figs, as hauing some great, some small, some round, some sharpe pointed, some white, some blacke, some greene, and some gray. So that this tree loneth to be in places standing open vpon the sunne, and therewithall rockie or clayie, stony or mixt much with lime, neere vnto wals or olde ruines, yea within the very wals being clouen, or halfe fallen downe, especially that which beareth litle figs, very sweete and white ones, such as are those of *Marfeillus*, for such a figge-tree delighteth in a drie and granuelly place: as on the contrary the figge-tree that bringeth forth great, lesse sweete and reddish figs, desireth a fat and well manured ground. It thriveth and prospereth in a hot and temperate aire, so that the ground be somewhat moist: for this tree is very dainty and quickly wronged and iniured by frosts, broken downe by windes, and made thinn and leane by drought, by the which the fig will sooner be ouerthrowne and spoiled

B b

than

than the mulberrie: they are easily hurt by frosts, mists and great cold: wherefore they must be planted in the spring, when frostes are past, vpon the South or East-quarter, in great, deepe, and well digged pits, of shootes and boughes of two yeeres growth, being faire and round ones and full of knots; for these are most fruitfull. And to cause them the better to take roote, you shall take awaie their barke at the neather ende of the stemme about halfe a foote, and yet leauing it notwithstanding fastened therunto, that so the said barke may turne into rootes.

It may in like manner be sowne of figs laid in steepe and bound about with small lines, and then afterward planted in that maner, and watered often and diligently. But it would suite better, if it were grafted vpon a plumtree or almond tree, for so it continueth a great deale longer: but whether it be planted or grafted it must not be much watered: for abundance of water corrupted the naturall beauty of the fig-tree and maketh them verie subiect to rotte: it would be a great deale better to make them grow faire and become fruitfull, to thrust the plant into a wild garlicke, called in Latine *Squilla*, and better in English, Sea onion: or else to steepe it in brine, or to set it round about with oxe dung, or with vnquencht lime. And to keepe and gard them from frosts, they must from the eleuenth of Nouember be covered verie well with straw, or with the stalkes of line, tying these things to the rootes and to the boughes so well and in euery place as that there remaine nothing to be seene of the plant. If you would haue the fig-tree to bring forth a late fruite (which is a thing against his nature) you must take from it his first small figges which begin to grow great, and the figge-tree will put forth an other and second fruite, which will be kept till winter. Likewise it will be fruitfull and bring forth a full fig and of a good verdure, if from the time that it shall put forth his leaues, there be put to his roote red earth beaten and tempered with the seedings of oile oliues and mans dung: or else when it shall begin to spring to cut off the toppes and endes of the branches. Figs will be more forward and early, if there be applied vnto the rootes of the trees pigeons dung, and pepper braied and mixt with oile: or else if when their grosse and vnripe apples shall begin to grow red, you anoint them with the iuice of a great onion, mixt with oile and pepper, or if when as their fruite shall be reasonably great, you pearce them with a needle, and afterward rubbing them with oile, you couer them with oliue-tree leaues: for the heate, being nothing hindred through the great moisture of the figge, doth concoct the fruite and ripen it most easily.

They will be of a diuers colour: that is, white on the one side and red on the other, if you tie together in a linnen cloth the seede of two diuers figge-trees, and so planting them, afterward to transplant them

Late figs.

A fruitfull fig-tree.

Early and timely figs.

Figs of diuers colour.

them. You shall reclaime a wilde fig-tree, if you water him at the rootes with wine and oyle mixt together. Figges will not fall downe from their tree, if you water the bodie ditched round about with sale-brine and water equally mixt together: or if you burie neere vnto the fig-tree the hornes of rams or weathers. You shall keepe them continually green if you put them in a pot full of honie and well stoppt, in such manner as that one of them doe not touch another, nor yet the pot: or else in a gourde euerie one by it selfe, hanging the gourde in a shadowed place, where neither fire nor smoake may come vnto it. Or if you put them in an earthen vessell hauing the mouth well stopped, putting the same vessell afterward into another vessell full of wine: for as long as the wine remaineth vncorrupted, so long the figs will remaine sound and safe. You shall preferue drie figs from rotting or corrupting, if you spread them vpon a hurdle in an ouen, after the bread is drawe, and put them afterward into a new earthen vessell vnpitcht. You shall haue figs that loosen your body & make it soluble, if you put at the roote of the fig-tree when you plant it some blacke hellebor stamp with spurge, or some other such purgatiue.

Furthermore, the fig-tree hath this vertue, that if you haue a wilde and vnruly bull which you cannot tame by any meanes, if you tye him to a fig-tree, by and by he will become gentle forgetting his naturall fawed genes. Furthermore, to make the hard and tough flesh of any beaſt tender by and by, you must hang it to a branch of a fig-tree: as also to make it to be boyled quickly, you must stirre it oftentimes in the pot wherein it boyleth, with a ladle of the wood of a fig-tree: for the fig-tree breatheth forth a certaine kinde of vapour which drieth vehemently and digelith the hardnes of any flesh whatsoever, whether peacocke, birds of the riuier, or other such like. It is true that there is other meanes to make tender the flesh that is tough, as to put it in a heape of corne. We may further note I know not what secret vertue in the fig, for the horses and asses laden with figs doe easily fall downe vnder their burthen, and loose all their strength, which notwithstanding are as easily recovered of their strength and refreshed, if they haue but giuen them a morsell of bread. It is also woonth the noting how that the iuice or milke of the husbanded or tame fig tree (as we haue before shewed in the treatise of the making of cheeses) serueth for the turning of the milke into curds, as well as the renning: figs boild with hyssope, doe heale an olde cough, and amende the diseases of the lungs. The fruit doth soften the belly, nourisheth much, prouoketh sweate: being drie mingled with the flower of linseed and fenugreeke, it killeth or resolueth impostumes, and hard swellings: in decoctions it is good for the cough and difficultie of breath: the flowers are good to eate, notwithstanding that swine auoide and shun them in all they may.

To make a good fig, of a wild.

Green figs.

Soluble figs.

To tame a wild bull.

To make hard flesh tender.

Burden of figs cause horses and asses to faint vnder them.

The plague.

King *Mithridates* made an opiate against all manner of poyson and danger of the plague, which was compounded of figs, walnuts, and rue, as we haue said before in the Chapter of Rue.

For kibed heels.

Figs burnt and made into powder, mingled with a verie little waxe, doe make a verie foueraigne medicine for kibes: the iuice of figs doth heale all roughnes, ill conditioned scabs, small pockes, purples, freckles, ringworms, and other spots and defilements of the bodie and of the face, being annointed thereupon with the flower of parched barley. It cureth also the paine of the teeth, a litle cotton wooll being dipt therein and laid vpon the tooth: it openeth the hemorhoides.

The oliue tree.

This tree is easie to make grow, and delighteth in hot and temperate countries, as in *Languedoc* and *Prouence*, where it may be seene growing as it were in little Forrests, and it is so long liued and of such durableness, as that though the labour due to bee bestowed about it be left off for along time, yet it ceaseth not to beare fruit more or lesse, and comming to it selfe againe, being old, it becommeth yoong againe and getting foote liuely, of drie it becommeth marrowish and fattie, and of barren, fruitfull: In these northren countries it groweth not without great paine and labour, by reason of the coldnes of the aire. Wherefore if you be minded to plant the oliue tree in your garden, choose out a place standing vpon the South or East quarter, raised sufficient high, and open to the western winde, and which hath also rested a good while, consisting of potters clay vnderneath, and aboue mingled with sand & fullers clay, being also a close, moist & not leane ground, and in this you shall plant it about mid-March, not of sprouts putting forth at the foote of the oliue tree, but of scionces, shoots, and branches that are yoong, faire, & fertill, pulled from the boughes of the tree, as thicke as the wrist, and a foote and a halfe long verie round, hauing a sleeke & glistering bark without boughes, & cut down in the new of the moon, raising the thick barke about the length of a fadom, & letting the Greene barke alone which is more fine & thin: and you shall set them in the ground in such manner as they did grow vpon the tree, as the lower end downward, and the vpper end vwarde towards heauen, as when they grew vpon the tree: for if you set them the vpper ende downewarde, they will hardly growe, but and if they grow, yet they will abide barren for euer. You must lay the roote, as also the head all ouer with dung mixt with ashes, and set them on such a depth in the earth, as that there may be aboue them some foure fingers thickness of fine small moulde, and afterward treade all close downe together round about the newe set plant, and so cast still more earth vnto it, as it sinketh with treading, or else you may beate it downe with a hammer of wood. It must not be transplanted till after fve yeeres, but in the meane time you must digge it euery moneth,

moneth, and dung it with goates dung euery yeere in Autumne. You must water it with raine water, rather then with fountaine, riuier, or well water. And sometimes you must prune and cut away the superfluous branches, especially the drie and withered shootes, and the branches putting forth vpon it, if so be that the plant be not become old, feeble and broken, in such sort, as that it standeth in need to be renewed and planted againe, for then it will be requisite to leaue growing, one or two of the fairest, and not to cut them downe before they haue growen eight yeeres, and then at such time as the moone is decreasing, and the season drie and faire. And sometimes euery eight yeere you must moisten the roote of the oliue trees that are lustie and well liking with the lees or grounds of oliues to keepe them from wormes and other vermine, which are oftentimes noisome vnto this plant: you must also defend them from cattle, especially from the brouing of goates, which would make them altogether barren: you must not plant any other plants, neere vnto the oliue tree, except the figge-tree, or the vine, whose companie and neighbourhoode it reioiceth greatly in, and hateth especially the oake, yea euen to be planted in the place where the oake was standing and is puld vp, for there it dieth presently. The oliue-tree may be grafted in the budde, with that kinde of grafting called the scutcheon, and that of the thickest and strongest grafts that may be pickt out of the oliue-tree, as we will further shewe heereafter: but it were but a lost labour to sowe it of his stones and kernels.

The oliue-tree is lesse subiect to vermine then any other, because of his strong saour, insomuch that it is as good as a shilde vnto all other herbes that are about it: as also by his bitternes it killeth colewoorts, lettuses, and other moist herbes which are sown in the same ground with it. Some holde (which is a marvelous thing) that the oliue-tree groweth more fruitfull and abundant in increase, if it be planted and looked vnto by such as are virgins, and haue not vnlawfully abused their bodies and other mens beds, or otherwise: and that therefore in some countries the planting of it is committed vnto such youtnes as are certainly knowne to be chaste, as also the ordering and gouerning of them, and that there they grow faire, and bring forth much fruit.

You must gather them with your hand, when you are got vp into the tree by a ladder, you must not hurt the branches, for that might make the oliue-tree barren: it must be done in November when they begin to change their colour and are very blacke: this time must be faire and not rainie: yea, and if it haue rained sometime before your gathering, you must see that it be dried vp againe verie throughlie. Some gather their oliues after another fashion: they beate them downe with long slender poles, or peaches of reed, not of wood, and

*A marvelous thing about the oliue tree.**Virginities chastitie.**The gathering of oliues*

are carefull not to strike against them for feare of beating down some of the branches together with the fruit: but such manner of gathering oliues is not good, because the oliues beaten downe or stroken, do wither incontinently, and do not yeeld so much oile; put also vnto this discommodity, that other, which is, that the tree is brused, & many of his branches broken, which is a great hindrance in the yeeres following. Furthermore, oliues are gathered for two ends, either to make oiles, or to serue as dishes at banquets, to the end that they may prouoke appetite: notwithstanding we must not thinke that all sorts of oliues indifferently do serue for these two vses: for the greatest for the most part are better for banquets, and the lesse to draw oile out of. But those which are intended to be reserved for banquets, must be carefully preserved with salt brine or salt vinegar, or oile, or the groundes of oile, or with cute, or the drosse of grapes, or honie, or veruice, in manner as followeth.

Oliues serue to make oile of, and to serue at table.

The gathering of oliues to serue in banquets.

They must be gathered with the hande, hauing got vp into the tree with a ladder, in faire weather when they begin to be blacke, and are not as yet thoroughly ripe: then afterward to spread them vpon a hardell of oziars, and there pick and cull them out at your pleasure, putting aside all such as are spotted, corrupted, or very small, and reseruing only those which are grosse and great, fashioned like an egge, full, salt, hauing a long and slender stone, a close pulpe or flesh, and in good quantitie. This done, they must be clouen in fower places, or without any such cleauing, be put whole into an earthen pot, and salt brine or veruice powred vpon them, or else honie with vinegar and salt, or oile, with salt beaten small, or else with wine new from the presse, or such other liquor, as hath bene already spoken of. Some put in the bottome of the earthen pot vnder the oliues, or into their pickle, the leaues or ribs of penniroiall, mints, anise, masticketree, oile tree, smallage, rue, parillie, fennell, and baie-tree leaues, and the seeds of fennell, anise, and rue. Finally, you must keepe the vessell well stopp'd, and put it in some cellar to keepe: but he that would keepe oliues a long time, must change his salt brine every quarter of a yeere.

The gathering of oliues to make oile of.

As concerning oliues to make oile of, they must be gathered when they are somewhat more ripe then those which are to be preserved, and when as there are many of them become already blacke, but yet not so many as are white: in other respects they must be gathered in such manner as we haue said that the others should be gathered, that is to say, with the hande, and when it is faire weather, except it be those oliues which by tempests and windes haue bene blowne to the earth, and such as must needs be gathered, as well because of wilde as tame, and house beasts. There must no more be gathered at one time, then may be made into oile that night and the day following, for all the fruit that is gathered in a day must presently

ly be put vpon the milles, and so into the presses, but before that they be put into the presse, they must first be spread vpon hurdles, and picked and culled: as likewise that their lees and waterish liquor may runne out a litle and spend it selfe, for it is a great enemy vnto the oile, in so much as that if it remaine, abide, and stand with the oile, it spoileth the taste and sauer of it. And therefore in this respect, when sometimes the quantity of oliues is so great, as that there want presses and workmen to dispatch them, you must haue a high and well railed floore, where you must prouide partitions to keep asunder every daies gathering, and these partitions in the bottome, must be paved with stone, or with tiles, or squares made somewhat sloping, that so the moistnes of the oliues may conueigh it selfe along the channels which shall bee there prouided. And thus much concerning the preparing of oliues to make oile of: it remaineth now to speake of the making of oile, but we will reserue that for the end of the third booke, where we will make a large discourse of the making of oiles.

Finally there is a very astringent and binding faculty in the oliue tree: for the decoction of the leaues in a clyster doth stay the fluxe of the bellie: the iuice pressed from the leaues with white wine and raine water, doth stay all manner of fluxes of bloud: the liquor which dropeth from the greene wood of the oliue tree when it is burning, doth heale the itch, ringwormes and scabs. Oliues yet greene and vnripe, do stirre vp and prouoke an appetite being eaten, and cause a good stomacke, but they make the body costieue, and are hard of digestion. Ripe oliues doe ouerturne the stomacke, and make boilings therein: they cause also headach, and hurt the eies. As concerning the vertues of oile, we will speake of them in his place. See more of the oliue-tree in the third booke.

Fluxe of the bellie.

Fluxe of bloud.

itch.

Ring wormes.

Scabs.

Pittates require as great toile and diligence about them as the oliue tree, and would be sown about the first day of Aprill, as well the male as the female both jointly together, or at the least one very neere vnto the other, the male hauing the backe turned to the West: for being thus ioined or neere neighbours one vnto the other, they beare better and greater store of fruit, especially if they be sown in a fat ground and well aired, and there you may graft them at the same time vpon themselves, or vpon the turpentine tree, notwithstanding that some do graft them on the almond-tree. They may in like manner be sown of plants, and the manner of planting them is thus. You must make pits sufficient deepe in some place where the sunne shineth verie hot, and choose new shoots of the tree which are in very good liking, and these bound together, put into the pits the second day of the moneth of Aprill, afterward binde them together from the earth vp to the boughes, and cover the rooves with good dung, watering them continually for the space of eight daies. And after the body of the

tree is three yeeres old, you must lay open the pit neere vnto the roots, and set the body somewhat deeper in, and then couer it againe with good dung, to the end that when the tree shall be growen great, it may not be ouerblowne with great windes.

This tree was rare and hard to be come by in this countrey, before the most reuerend Lords Cardinal *du Bellay*, and *René du Bellay* bishop of Mants, brethren, and men woorthie of eternall memory for their incomparable knowledge, alone and before all other Frenchmen, had brought into this Countrey the knowledge, not onelie of names which were altogether vnknown vnto vs, but also the ordering and figures of strange herbes, and trees; the fruites whereof we are greatly in loue withall, and do highly commend: notwithstanding that as yet we do scarce know themselues. But surely heerein this whole nation is bounde to acknowledge an euerlasting dutie vnto them for the same.

The fruites of Pistaces (as *Auicenne* saith verie well, not sticking at the scruple and doubt which *Galen* casteth in the way) do comfort the stomacke, and nourish much: and this is the cause why they are prescribed them, which are leane and worne away with sicknesse, and which desire to bee strong and mightie in performing the acte of venerie.

Citron-trees, Orange-trees, Limon-trees, and Citron-trees of Assyria, require the like manner of ordering, by reason of their like nature, whereunto, in respect of their great tenderneesse and incredible daintinesse, it is needfull to giue great heed: for otherwise there is no hope of reaping any profite or pleasure of them. And forasmuch as they are best dealt withall and found to prosper most, when they are gotten already growne great from some other place, (it being so difficult a thing and exceeding toile, to make them breake the earth and growe vpon the seedes in this countrey,) I will make a brieue discourse, concerning whatsoeuer is requisite for the preserving, planting, remoouing, and gouerning of them in our country and grounds. And therefore to speake (in the first place) of the manner of transporting of them, we must thinke that these trees get no good, by changing their place, but that they would doe a great deale better in their natural and native soile and ground, where they were first planted, sown or grafted, than to be remooued else whither. Notwithstanding if it please the Lord of the Farme, to procure them from far, he must do it in the spring time rather than in Autumne: because euen as in Autumne the wood thereof groweth hard and solide being ripe, and for that the sap ceaseth to comfort it with his warme moisture, by reason of the approaching cold: so in the spring time on the contrarie, they begin to bud, by and by after that they are set and planted, and bring forth leaues, yea and flowres, if the plants be great and strong enough.

Citron-trees,
Limon-trees,
Orange-trees,
Citron-trees
of Assyria.

The manner of
transporting
Citron-trees
&c.

inough. The way to transport them is in such sort to fit the roots with clothes or strawe, as that you maie binde therein vnto them so much of the earth from which they were taken, as may defend them from being hurt, either by the winde or sunne; and hauing thus done to fit them further with barreles or scare clothes, the better to keep them from all the iniuries of the aire, as also from the raine, and to cause them to be conueighed vpon horses, carts, or waggons, so soone, euen the same night that they shall come to the place where you would set them, you must well aduise and consider if they be altered, (which will be knowne by the change of the leaues and barke) and then to provide for that accordingly: for in such case you must take away the earth, and temper it soft anew, water them, cut them and take away the blasted or withered, vntill such time as the pits where you intend to set them, be seasoned in such sort and manner as shall be said hereafter.

You shall in the day time view well your ground, and see that it be a good substantiall blacke, open, tender, sweete, light, fat, and cleane earth, without any manner of stone whatsoeuer, neere vnto the sea coast if it be possible, where moisture aboundeth, and furthermore, that it be easie to be stirred, to the end it may drinke in the water in abundance, where you mean to set these trees. For these trees crauing much watering, if the water should stand about the earth and not sinke downe, the rootes would become sicke, discoloured, and by little and little would looke the deadly colour of pale, blacke, or blew. If the earth be not easie to be stirred, you must couer it with horse dung very well rotted, or else with oxen or sheepes dung: and by this meanes it will become easie to be pced or stirred. The place where they are to be planted must be open vpon the sunne, a high place, and sheltered from all the quarters, from whence frosty winds do blow, but principally the northren wind, which is alwaies most contrary vnto those plants, it must be also open vpon the south (because contrary to the nature of all trees they feed vpon this wind, and starue through that of the north) and a little vpon the West, in such sort, as that they may be garded on the backpart and both sides, but specially the citron tree, which is the most tender of all the other. For which considerations it will not be amisse to set them neere vnto some wall, of a conuenient height, to the end they may haue a rampart against the Northren parts: and for the more certaintie to make them a hooe and flankers of bay trees, for the encrease both of the beautifullnesse, as also of the profite of the same: for some holde that the companie of the bay tree doth keepe the orange tree from frost. These baie trees shall be planted in double chesse, that so the thinnest places of the first may be amended by the thickest places of the second: but and if you haue not bay trees to doe it withall, then you may take Cyprus trees.

Taken out of
the remem-
brances of
Monsieur D'ice
sent from Por-
tugal vnto Q.
mother and to
the Cardinall of
Lorraine.

Ground fit for
these trees.

trees. And heere you must learne that orange-trees loue not the companie of any other tree but of the forenamed, and of the myrtle-tree. The best of all, and most assured for profite, were to plant the said orange-trees, citron-trees, and other such like trees in halfe barreles or vessels of earth made for the purpose, (they being the chiefe pleasures of Princes and great Lordes) or else in cases that are wide belowe, and narrow aboue, builded of clouen boordes, very well ioined and fitted together in such sort, as that no shootes may grow through them, for the earth by reason of the oft watering of it, doth not cease continually to cause them to put forth and breake out, one way or other: But that such watering may be conueighed in best sort for their growth, it must be provided and brought by some low conduct and passage, and the surplussage carried away by some such cocke as is vsed in lee tubbes: and such or the like vessels must be made to carrie into any place whatsoever a man will: for seeing that these plants doe die, if they be touched neuer so little with frost, as beeing most tender, and dainty of their naturall inclination, it must be looked vnto in Winter, after that they are well couered and compassed about with straw, or the stalkes of gourdes, (for by a naturall contrariety they are given to let and hinder the frost from hurting them) that they be conueighed vpon small wheele-barrowes into vaulted caues, and when sommer is come to returne and bring them backe againe into the full and open sunne, to be nourished and refreshed by the heat thereof. Then hauing found out such a place in the garden (as we haue spoken of) there shall pits be cast with distances betwixt: and whereas the orange-tree doth shoote out his rootes deepe into the earth, you must cast the saide pits a good fadome deepe, and a fadome and a halfe in compass, which shall be well broken and made soft, that so the root may rest and spread it selfe at pleasure, which pits shall grow narrower by little and little towards their top: and where they are to embrace and close in the foote of the tree. These pits to do well should be kept open a yere or thereabout if it were possible, for the well seasoning of them, which by many sunne-shines, and many raines would be effected: but there may more speed be made with them, either by couering the places of the said pits with well rotted dung and new ashes, which neuer were wet, and watering it with a little water if the time and season be not rainy, or by filling vp the saide pits with wheat straw, or with small vine branches, burning it all, and afterward watering the ashes which shall remaine, if the season be drie and without raine, for within eight or ten daies after this preparing of it, the said pits will be well seasoned. About the end of the same time you must againe break and soften the earth of the seat of the said trees, and the sides thereof, and lay into them a finger thicknes of dung, and againe vpon this dung the like thicknes of good mould, and then

Holes or pits.

vpon

vpon it to set the tree, in the very same aspect of the sunne (if it be possible) that it stood in before the taking vp: that is to say, that euerie part of the tree stande vpon the same quarters of the heauens that it did before, for otherwise it would not serue, if the side beholding the north before should now behold & stand vpon the east or west. And this obseruation is of great moment, forasmuch as they which faile in this do oftentimes see their trees dead, or else (notwithstanding whatsoever other meanes vsed) bringing forth very late & vntimely fruit, with like vntimely growth and blossoming, which they would not haue fallen into, if they had bene set againe after the manner they stood, before they put forth any budde or branch out of the earth. And this disauantage likewise hapneth to them which hauing planted their trees in pots or cases, vse to carrie them into houses; and vnder roofes in the winter time, and out againe at the spring, without any regard to set them after the same situation and state of standing wherein they stood the yeeres before.

Thus the tree being seated vpon the ground in the like aspect of the sunne that it was, you must dresse it about the foot with a leuelled bed of good earth, of the thicknes of halfe a foote, and trample it downe, and againe vpon this to make a bed of the same thicknes of good made earth, and for want thereof, with earth newly mixt with good dung, and to tread and trample it downe, and thus by courses of the one and the other to continue till the pit be filled vp even with the greene swarth, and then to water it. All these said and seuerall workes shall be ended before the full of the moone, and the better if it be in the increase of the day, that is to saie, about nine or tenne a clocke in the morning. For some hold that if these things be done in the full moone, that then there would growe wormes and ants, betwixt the bodie and barke of the orange-tree. Being thus planted, you shall order and gouerne them, both in sommer and winter in manner as followeth. In sommer they shall be watered euerie three daies morning and euening, and oftener too, if the greatnes of the heate do require it. For the orange-tree aboue all things doth require water, and standeth in need of two buckets of water at the least vnto euery foote of tree roote, and therefore the gardners are happie in this case, which in their gardens, or not far off haue water at comandement, because commonly they reape both more fruit, and that also more beautiful & faire & better seasoned. Such as water them must beware of touching the stocks or trunks of the tree, or else the foot therewith, but rather that they cast it a prettie way off, and that round about, that so it may sucke in and sinke downe equally vnto and vpon the rootes: and to this end you shall make a little furrow digd some three fingers deepe round about, and into this you shall powre your water, and when it is suncke, you shall fill vp the furrow againe. In winter the care and labour is the greater

greater in keeping them from being tainted of the frost, and therefore, so soone as the frost shall begin, you shall couer them in good time about the first of october, with good store of boughes held vp with props, or else to make for euerie one of them a lodging of mats, with a doore in it open vnto the South. Some vie to couer them with corke, and it is a verie good couering for them: some, as hath been said before, remooue them into vaultes vnder the earth, carried thither vpon little wheele barrowes, and fitted of barrells or cases. But which of these courses soeuer it shall be that you shall take, you must alwaies see that their tops and outsidcs be at libertie and not pinched of due roome by that which couereth them, and that this couer be not taken away till winter be past. It is true that before you couer them, or let them in vaulted caues, you must see that they be not wet any manner of way, for if the cold should sease vpon them in that pickle, both the tree and the fruite would be easily spoiled by the frost: besides that this wetnes would cause the flowers and fruits to corrupt and rot when they were vnder their couert; but good and wise gardeners before they couer these fruites, doe take from the cit-on-trees (being the least able to indure cold of all the rest) all the flowers, buds, and tender boughes of the same. You must beware that it raine not into their lodging or place of couert, especially vpon the thaw of snow, because snow water is more hurtfull vnto them then any other. Likewise if any drift of snow or sleete come thwart their lodging, or that any trade winde doe bring it vnto them, you must shake it off from their branches and take it from the foote of them, for it would scorche them: and therefore to meete with these inconveniences, if there be any cleft or hole in the couering, you must make it vp close, and stop it well with dung or wispes, so as they may be taken out when it is afaire and cleere weather, and that the sunne shall cast forth his beames, that so it may shine vpon the plants, and dispell the ill, corrupt, and infected aire, and take away and drie vp the infecting moisture rising of the continued shadow: and then againe when the sunne goeth downe and falleth off, you must stop them vp againe, that so the colde may not take hold vpon them. It will not likewise be amisse to make a fire there during the extreame cold times of good dry wood or cole, because the heate thereof would be great and continue well, without working any annoyance vnto the plants, either by his flame or smoak, & this to be most chiefly performed in the behalfe of the cit-on-trees, which are most subiect vnto the cold of all other, the cause being for that they haue in them greatest store of iuice and substance; as on the contrarie they are least subiect to cold which haue least iuice & substance in them. Again, you may not be too hasty in vncouering of them, vpon some shew and promise of gentle, meeke, and faire weather, because the cold oftentimes fauning it selfe to be gone, returneth

turneth againe in more vehement manner then before, threatening the killing of them, onely it will be the best and safest to open some boord or window of their lodging, that so the trees may inioy the present heat of the sunn for certaine howres. In the time of the couering of these new translated trees, you must not forget to renew them at the foote a cubit heighth with good earth, enriched with good rotten dung, and that to lye round about the said foote the breadth of a good fadome. And this will serue and stand instead, in case that by extremitie of cold the bodie of the tree should be frozen, to refresh and repaire it againe from below, where the frost shall not haue pearced it, notwithstanding if in such extraordinarie cold seasons, you couer and lay ouer their former couering with other dung well rotted you shall preserve the said orange trees. Their grafts (whereof we are to speake hereafter) are a great deale more tender and more easie to be broken by the cold and frost, and therefore they must be couered at the foote and laid high with earth, and as it were cloaked or hooded and double couered and cloathed as hath bene said, and that a great deale higher, that so it may not be pinched in the place of the setting in of the graft. But and if the cleft or other receit made for the setting in of the graft be so high that the said prouision and defence cannot conveniently be applied vnto it, you must then couer such chafe with thicke new cloath being well woolled; or else with straw, and to tye the one or the other fast to, by wreathing it about with one of the breadths of a mat, and stay it vp with a prop if neede be. In hot countreies as *Spaine* and *Portingall* it is held as an approoued opinion, that by how much the more orange trees are watered in winter, so much the lesse subiect are they to frost, because their water is either out of the well, or fresh drawne from some fountaine, or of water broken out of the earth, and made warme with the sunne, or with the fire, and for that it is drunke vp all into the earth: but I feare me that it would not fall out for well done, if so be that in this cold countrey one should take that course: notwithstanding if you will vse the same order, you shall doe it either by the helpe of the foresaid sunne beames, or by a pipe of lead, laid good and deepe in the earth a farre off from the roote of the tree, powring of the said water into it, that so it may descend and reach vnto the rootcs: but so soone as you haue thus powred in your water, you must stop verie well and couer the said pipe with earth & dung: that so the cold aire, may not runne along it vnto the roots, for so they would be frozen. They must be vnder digged and cast at the foote from moneth to moneth if the season will suffer it, and the earth made light and soft, mingling it with dung, and watering it as hath bene said. And for the better preserving of the branches of these plants, and keeping of them in their strength and force, they must be cut euerie yeere more or lesse according as the good and expert gardiner shall iudge

iudge it necessarie : in as much as these trees , being both daintie and pretious, doe require a verie carefull regard to be vsed in this cutting : it must not furthermore be forgotten to take from them continually all manner of superfluitie, filth, and grasse growing at their foote or elsewhere; and likewise thornes or pricks, and that with the hands or some other cutting yron : and if any branch through frost or otherwise grow drie, pale, or blacke, you must cut off the dead part at the spring in the decrease of the moone, in faire weather, and calme and temperate, and vpon the putting of it forth againe, and this must be done with a garden sickle or knife well sharpened, and the cut must be well closed together and covered ouer, that so it may put forth branches againe : you must also bow the boughes as shall be necessa-
 ric, and to raise some higher and pull some lower as occasion shall require : cut the endes and sprouts which put forth at the toppes of the tree : take away those that growe too high, to the end they may be proportionable in an equall measure of growth : for these trees especially the citron tree, growing in any great height, and hauing anie great store of boughes, doe neither bring forth so much nor so good fruits, as when they are otherwise fitted, and freed from their vnnecessary boughes : and further if need require, to set some store of poles to hold vp the boughes. If notwithstanding all the pame and preseruation spoken of before, they fall now and then into milkinges and diseases, then you must burie at their foot some sheepes hornes: for some are of opinion that by these they are maintained in sound estate and good plight.

The setting of
Citron and O-
range trees of
plants.

And thus much as concerning the ordering of these trees, when they be brought out of other countreys; but as for those which we procure to growe and spring out of the earth here in this countrey, we must know that they growe either of shoots, boughs, grafts, or seeds: but to speake of these particularly, the orange tree groweth not, but verie hardly, either vpon shoots or grafts, for hauing a verie hard wood, it hardly taketh roote : It is true that some vse to prepare a plant of it in such maner. They picke and prune from an orangetree bough his sprigs and sciencies, plant it the small end downward, wrapt in a linnen cloth, hauing within it calues dung that is very newe; and of such plants haue beene seene to grow orange trees, growing indeed lower than the other, but hauing a well spread and large head. But yet it is better to sowe it, so that it be in a good soile, notwithstanding it be long before it bring forth fruit, but hee that will helpe that, and caule it to hasten to bearing, must graft it. The manner of sowing all these sorts of trees, is, first to prepare and manure the ground verie well with horse dung, about the moneth of May, or else with oxen or sheepes dung, and to mixe therewith some wood ashes, or which were better, some cucumber ashes, then making pits in the sayd ground of the

To sow orange
trees.

the breadth of halfe a foote to put three seedes together, and the sharp end vpward, and the higher part of the seede toward the earth : after this they must be oft watered with warme water, or with sheeps milke, for so they will grow better and sooner. And yet forget not before you sow them to lay them in steep in cowes milke that is warme, and if you desire to haue them sweet fruite, put to the liquor wherein you keepe them, some sugar candy.

You shall plant their shootes after the same manner, in a well husbanded and digd ground, as also their boughes and graftes, about mid-May, setting the great endes vpward, and filling the pittes with ashes made of cucumbers. These bring forth fruite, and the middle part of the apple will be sweet, if the body of the tree be pearced with a pearcer in the moneth of February, and that there be made therein an oblique and sloping hole, which must not go through, and from out of this the sap is let ditill, vntill such time as the apples come to be formed, and then you must stop vp the said hole with porters clay or mortar : or else giue a slit in the thickest branch of the tree, and in the place where you haue giuen the slit, make a hollownelle of the depth of a good foote, which you shall fill with hony and stop vp with mortar for feare of raine, and of the heate of the sunne : when as the tree hath drunke in all the hony, you shall put in more, and water the roote with vrine. In the ende you shall cut off all the little shootes which shall put forth of the tree, letting those alone which shall grow vpon the slit branch.

At the same time Orange-trees may be grafted chiefly vpon the To graft o-
pome-Adam-tree, for vpon this they thrue maruellously (especially range grafts.
the orange-tree) both in goodnes, greatnes, beauty, and thickenes of such fruites as they bring forth, in respect and comparisn of those which they bring forth when they are grafted one vpon another, that is to saie, The orange vpon the citron: or, The citron vpon the orange-tree : they may be grafted likewise vpon themselues as the citron tree vpon the citron tree : and sometimes vpon the pomegranate, pearce, apple, and mulberrie-tree, but seldome betwixt the barke and the wood, but vpon the head of the trunk or body of the tree, cut off nere vnto the roote. In the grafting of them, you must make choice of the fairest grafts which may be had, as to graft a good citron-tree vpon a better : the limon grafted vpon the citron doth beare fairer fruite, than the citron grafted vpon the limon : because the citron-tree is a great deale more sappie and full of iuice for to make nourishment of than the limon-tree : citrons and limons grafted vpon an orange-tree, doe beare more fruit than vpon their owne stumpe and body, and are not so subiect vnto the colde, because they inioy and participate so largely of the orange-tree his properties and qualities, which consist of a hard wood without sap, doth resist the cold

cold a great deale the more. The chiefe way to graft them is by cleauing the stocke, and then it must be done in Aprill or in March: or by way of crowning, and that must be done in May: or by cutting a round hole in the barke of the tree, and this must be done in Iuly: when they be grafted into the barke of the tree, you must cut away whatsoeuer is superfluous or more than needeth of buds or sprouts which are not grafted, and withal take away all the shoots which grow thereupon afterward. When they are planted, you shall not suffer any weedes to grow there about them, except it be the gourd, whereof they are refreshd if it grow neere vnto them, as being much succoured by them and protected from the cold, as also for that the ashes thereof sown and cast about the roots of citrons, do make them more faire and fruitfull: and seeing that the citron-tree is verie fruitfull, and beareth a heauy fruit, after such time as it hath brought forth his fruit, you must gather the greater part and leaue but a few remaining, and so the remainder will prouue very faire ones and a great deale the better.

The orange-tree will neuer freeze, nor die with a cold wind, nor yet with the froit if it be grafted vpon hollie, being an approoued thing: but then indeed the fruit will not be so natural as that of the others.

Gourds a friend vnto the citron.
Citrons, oranges, limons and Syrian citrons, must be gathered in the night with their leaues in the change of the moon, nor before they be ripe, but when the orange is of a golden colour all ouer, if you purpose to keepe them long: and you must not tarric till they be become pale before you gather them. You may keep them fresh and vncorrupt all the yeere, if you hide them in heapes of barley or miller: or else if you annoint them ouer with plaister well tempered: or if you close them vp in vessels euery one by it selfe. You must not in any case lay citrons neere vnto hot bread, for it would make them rot.

To keepe citrons long.
Oranges of a thicke nature.
To haue oranges of a mixt nature, and as it were halfe oranges, halfe citrons, you must about the beginning of March, cut a science or branch of the citron-tree whiles it is yet yoong, of the thickenesse of three fingers, and plant the same in a convenient time, giving it all his orders and best helpes of growing: at the ende of two yeeres or thereabout when it is well growing, and betwixt March and Aprill you shall sow it of a finger within the earth, and closing the cut fast, you shall graft by way of cleft, a graft of a yoong orange-tree thereupon, as of some two yeeres olde, proportionable and suitable vnto the citron-tree in thickenesse: afterward you shall rub and annoint the saide cut, and chafe or cleft for the receipt of the graft, with the root of the herbe called Aron: and you shall couer it well with a good cappe, after the manner of other graites, putting therewithall vnto the foote thereof well rotted dung or the ashes of gourdes: after that you shall lay it about

about with good earth, a reasonable height, and vnderprop it till such time as it shall grow great and strong: but know that the graft must be taken of that side of the orange-tree which standeth towards the East, and it must be done in the increase of the moone and day: for so it will prosper more effectually.

The citron will be red and sweete, if it be grafted vpon a mulber-tree-tree, and will grow in such forme and after such manner as a man will haue it, if before it be grown to his bignes any way it be closed vp in a frame or mould cut after the shape you would haue it of, that so it may grow forth his iust quantitie therein. By the same meanes, if it be put into a vessell of earth or glasse, before it be fully grown, it will beare the fashion of the vessell, and become as great as the vessell; but in the meane time to let it haue aire, you must make some small holes in the vessell.

The fruites of these trees are alike differing, both in colour, disposition, taste, and vse: for oranges haue a more yellow and golden rinde, a sower or sweete taste, or both sower and sweete together, being round as an apple, and fitter for the kitchin then for medicine. The limon hath a longer shape, a paler rinde, a sower taste, and is good for the kitchin, and in Physicke, to coole, cut, and penetrate. The citron is long after the fashion of an egge: the rinde thicke, yellow without, sower, good for cordiall and preseruatiue medicines. Syrian citrons are twice so great as limons, being fashioned like cucumbers, and the rinde an inch thicke.

The leaues of the citron-tree doe cause a good smell amongst cloathes, and keepe them from the fretting of moathes. The rinde, iuice, and seede of citrons, are all of them verie soueraine against all manner of poyson and danger of the plague: as is also that of the limon. And for this cause there may a whole citron and limon be boyled in rose-water and sugar, vntill such time as all be consumed away to the iuice: and after to vse euerie morning to the quantitie of one or two spoonefulls of this decoction in the time of the plague. The rinde and iuice of citrons doe procure a sweete breath: the rinde preferred heateth the stomacke, and helpeth digestion. The iuice pressed from the rinde of an orange is quickly set on fire: it pearceth also through his great subtilnes through the glasse, euen into the wine that is contained therein. The iuice of limons killeth scabs, itch freckles; and taketh away the spots of inke out of cloath: the same distilled through a lembecke, maketh womens countenances smooth and beautifull: taketh away all filthines from all the parts of the bodie: being given to children to drinke, it killeth the wormes which are in their bodies. If one bring the limon neere vnto the fire, the thinne iuice that will come forth, doth cleanse the faces of yoong girles, and taketh away red pimples in the same, as also other manner of spots like vnto them.

Likewise the iuice of limons distilled in a limbecke, besides that it helpeth and polisheth the countenances of women, is furthermore good to take away out of the face & other parts of the body, all white spots, warts, and other such like things. The iuice of a limon is of such vertue, that if you straine it twise or thrise, and then wash in it whole pearles, and afterward steepe them in it, and after lay them in the sunne, within fiue or six daies they wil become so soft as hony, so that you may make any shape with them that you will. Furthermore, the iuice of limons is so corrasive, as that if you steepe it in a piece of gold some certaine howres, you shall find it diminished and become light: and asmuch will fall out if you sticke a piece of gold in a limon. See more of this matter in the third Booke.

The flowres of oranges are preferred with hony or sugar, and those are very cordiall: therewith likewise is made a very precious water of rare and singular sweetnesse, which is called the water of Nafe.

Pomegranate-trees craue a hot or temperate aire, for they cannot beare fruite in a cold countrie, and albeit their fruite be of one of these three tastes, as sweete, sowre, or both sweete and sowre, notwithstanding all manner of pomegranates do craue one and the same aire, ground, and manner of ordering. They maintaine themselves in good state in all manner of ground, whether it be fat or strong, or grauellie, or claye, or sandy, for soeene that the sand be somewhat grosse & moist. They refuse not the situation of any ground, be it hill, valley or plain, yea, they refuse not to grow well in stony, dry, and rough grounds: for a little nourishment doth content them: and for these causes they need not to be so carefully husbanded as the former, and the rather because they will grow if they be but prickt downe, and do well beare either to be planted or grafted: further if you will take the paines to picke and prune them whiles they are yoong and in due time, the fruite will be a great deale the bigger, and of a better fashion, but it must be looked to, that they be planted vpon the South sunne, but neuer vpon the east, nor yet vpon the west, for this quarter doth most hurte them, as well as the vine. Note notwithstanding, that the yoong branches which you shall cut off from them, must be taken when the tree hath put forth his buds, and not before (which is contrary to the branches of other trees) as also that the sciences with barke and all be of the thicknesse of the holue of a knife. And before that you plant them you must make sure and close both endes of them, and annoint them with swines dung, which is more familiar vnto them than any other, and then lay them ouerthwart or crosse in the earth. They delight in a ground that is not leane nor moist, but indifferent fat: and they grow the more easily and faire, if there be planted and set by them the sea onion, or especially some mulberrie-tree. The time to plant them, is from after March, vntill May: betwixt the same times it is good to graft

Water.

To soften
pearles.To diminish
gold.The water
of Nafe.

graft them vpon themselves, but to better successe vpon the mirtle-tree, wherein they delight greatly. The citron-tree, the willow, and the mulberrie-tree are not so good: howsoeuer that sometimes they may be grafted vpon them.

The maner of grafting them is to put into the body of the tree the graft of the pomegranate-tree, so soone as euer it shall be cut off from it, and after to powre vpon it some oile, and ro plaster and couer it with earth, and as concerning the graft it must be taken from the pomegranate tree after it hath budded, after the same manner that we haue said of the branches. Furthermore they craue to be often watered when the sunne is in Libra.

Pomegranate-trees by mighty rains, excessive dewes, and great fogs, do easilie loose their flowres and fruites before it be ripe: but to prevent this mischiefe, they would be planted neere vnto some wall, and haue their boughes bowed downward, to the end they may not so easily take wet, which is so noisome vnto them. They endure clefts and chaps in their bodies, without any danger, and therein they are like vnto the fig-tree and vine. If the pomegranate-tree bring forth sowre or scarce sweet fruit, you must water the roots thereof with swines dung, and mans dung, mixt with old vrine: or temper a little Beniamine with wine, and therewith to bathe and wash the top of the tree, or to spread vpon the rootes asles dung, and after to couer them and water them with mans vrine.

The seeds of the pomegranate will be white, if the roots of the tree be compassed about with potters and fullers clay, and one fourth part of plaister, for the space of three yceres: the barren pomegranate-tree will become fruitfull, if the body thereof be often washed with ashes and lees: the pomegranates will become red if the roots of the pomegranate-trees be often watered with lee, or couered with the ashes of acornes.

The pomegranate will grow grosse and thicke, if you put much swines dung at the foote of the tree: againe, looke how much more of this dung you put there, by so much the more sweet will the great sowre ones become: pomegranates will haue no seedes, if you take away the greater part of the sap of the boughes of the tree, and laie them in the ground all shiuered, and after that they haue taken, cut that part of the plant which spreadeth furthest, and hath already put forth his buds: pomegranate-trees will be fruitfull if you stampe purllaine and spurge together, and therewith annoint the bodie of the tree.

Pomegranates will not breake nor open vpon the tree, if there be three stones put at the roote of the tree when it is planted: but and if the tree be already planted, then neere vnto the tree rootes you must plant the sea onion: but indeed all these helpes and such other

To graft pome-
granates.Pomegranat
trees loosing
their flowers.Sweete pome-
granates.White pome-
granate seeds.A fruitfull
pomegranate
tree.Red pomegra-
nates.Thick pomegra-
nates.Pomegranats
without anie
kernels.Open pomegra-
nates.

*Pomegranate
flowers.*

*The way to
keepe pome-
granats.*

do but little preuaile, and therefore it were better to plant or graft them onely which will not bring forth a fruit that will breake when it commeth to ripenesse. The pomegranate tree will not fall his flowers, if the roots be watered euery yeere thrise with olde vrine mixt with as much water.

Pomegranats will keepe and continue, if you dip them in faire warme water, and take them out againe by and by: or else if you put them apart in dry sand, or in a heape of corne in the shadow, so long as till they become wrinkled: but yet better, if when they be ripe, and yet hanging vpon the tree, you writhe the small bough a little and the start by which the pomegranate hangeth: or else lay pomegranates in Fullers clay tempered with water, and after dry them in the Sunne. It is good likewise to lay them in dust, or scrapings, or sawings of the poplar tree, the holme tree, or the oake, in a new earthen pot, and within it to set them in order in manner of a bed, and then afterward to couer the pot and lute it very well. But whatsoeuer way you take the principall end must be to keepe oranges in a colde and dry place, and that they be gathered with their stalkes, as also with their little branches, if possibly it may be done without hurting the tree, for this helpeth much to keepe them long. They must likewise be gathered in the olde of the Moone, so that they be then ripe and very drie, and not being wet from aboue, and then after that to keepe them a day or two in the Sunne, their flowers lying downeward: then after that to clofe them vp in a pot very well stoppt, and well pitch or seared, that the aire may not get in. Some doe couer them and worke them ouer very thicke with potters earth very well beaten and tempered, and when it is dry, then they hang them in a cold place, and when they will eat them, they steepe them in water, and take away the earth. Others doe wrap euery one of them alone by it selfe in hay or in straw within cases. The boughes of pomegranate trees do driue away venomous beasts, and this was the cause why men in ancient time were wont to put the boughes of pomegranate trees both vnder and aboue them in their beds.

*The Plane
tree.*

The Plane tree is more commended for the beautie of his leaues and shadow, then for his fruit, it groweth of shootes and sciences drawn and taken from the tree, and planted in a very moist ground, and such as is neere vnto some fountaine or riuer: and yet besides this, it delighteth to be watered often times with neat wine, and sometimes with mens vrine to helpe it to shoot vp and grow high, and to put forth large and ample branches, and long leaues for to make the better shade: in this countrey we cannot see many faire ones. I remember that I haue seene one at Basill in Saint Peters place, betwixt the height of fiftene or sixteene cubits, vnder the shield and shadow whereof, the people betooke themselues for their refreshment, during the

the time of great and scorching heat. Some make dishes of planettree wood, to allwage paine & wringings in the belly, being applied therevnto. You must beware of the dust which hangeth vpon the leaues, for being taken into the body by drawing in of your breath, it hurteth the rough arterie and voice: and in like manner the sight and hearing, if it fall into the eyes or eares.

The nettle tree is well enough knowen in Languedoc and Provence, especially in a borough neere vnto Mompelier called Bontonnet, it groweth in a fat ground well manured and toiled, open to the South or East sunne: the wood is good to make flutes, cornets, and other instruments of musike: it is good also to make handles for knives and swordes. The fruit is very much desired at the tables of great states for his great sweetnesse and most pleasant and delightful smell, which they finde in it that doe eat or smell to it: likewise some doe presse a wine out of this fruit being stamped and beaten, which is very sweet, and seemeth like vnto other new pressed sweet wines, but it lasteth not aboue ten or twelue dayes.

The masticke tree delighteth in moist places, and is planted after the first day of Februarie: it beareth fruit thrise a yeere. The leaues, barke, and wood in decoctions haue power to restraine, strengthen and comfort. And this is the cause why it is vied to make toothpicks thereof.

The turpentine tree delighteth in a low and moist ground, and withall in a hot and warme aire open vpon the sun. The leaues, barke and wood, haue the like vertue that the masticke tree.

The Iuiube tree and others aswel forraine as growing in our owne countries, are further to be seene and read of in the third booke.

The five and fiftieth Chapter.

Of the two particular gardens situate or lying at the end of the kitchen garden, and of the garden of pleasure.

THe kitchen garden and the other of pleasure being of the largenesse aboue declared may haue referued out of them, two or three akers, for the profit of the lord of the farme, as for madder, woad, tasell, lyne and hempe. And we may also adde vnto these, saffron, albeir that all these things, euen as well as pulse, if it be a free and kind ground, do well deserue to haue euerie one his leuerall field by it selfe, and to be tilled and husbanded after the maner of corne and pulse.

For madder therefore, it is meet that there should be appointed out foure or fiue akers of ground in a place by it selfe, which must not lie far from the water, but in a free and not in a strong mould, and yet

not too light : which hath had his three or fowre arders with the plough, or (as indeede is best) digged and sifted : notwithstanding that the sifting of it be a longer piece of worke and of greater cost, it being vsed to be cast and tilled with thicker raisings of the earth, and smaller clouds than is wont to be in the casting or digging of a newe vineyard. For this plant hath his proper and particular seasons to be dressed and planted in, as well as the vine : but in this they differ very manifestly, that the one is an herbe and the other a shrub, and as it were a knot of many trees : the one dieth yeerely (and there is nothing of it in request but the roots for to make good colors of) but the other lasteth and continueth at the least twelue yeeres in good liking and liuelihood : of which, the first fixe is for growth, and a little for bringing forth of fruit, and the latter six, for whole, ample, and intire profit, the danger of haile, washing away of the grapes, when the vines be in flowre by much raine and frost, being excepted; vnto which in like manner madder is subiect, and oftentimes more than the vine because of his tendernes. This prehemencie it hath, that the vine being frozen, cannot be recovered, but madder may be either set or sown againe, as also woad, the speciall husbandrie of such as dwell in Prouence, and the wealth and commodity of Diers of cloth or wool, with what colour soeuer it be. It may be sown or planted; but indeed being sown it yeeldeth scarce at any time any great store of increase; but if you will sowe it then bellow the like quantitie of the seed thereof vpon an aker as you are wont to doe of hempe, and that in the moneth of March, vpon the tops of hills well battild and manured : thus the seed being cast into the ground, and the same well incorporated with harrowes or rakes, there is no neede of any other labour, but keeping of it cleane from hurtfull weedcs, vntill such time as the said madder be readie to be gathered in September for to take the seed of it.

The choise of the rootcs which you intend to set and plant must be out of the countrie of high Prouence, being more Easterly and coole, and as for the sight & taste of them, they must be more yellow, thick & stringed, comming neere vnto the colour of the true Prouence orange tree, very bitter in taste, and in seething (for the triall of it) more red and full of iuice, that is to say, not so drie and withered. The time to plant is from March be ended vnto mid-May, and as for the best and most profite to be expected from it, it is not to be attained or come by, till after the two first yeeres, after the first planting of it : and withall, you must make a sure defence about your ground against the comming in of cattell : for there can no greater hurt happen vnto it : In Italy they vse not to take vp the rootcs of madder, till after they haue continued ten yeeres in the ground, either set or sown : but they cut the boughes of it euery yeere to haue the seede, and after they co-

The difference
betwixt the
vine and the
madder.

uer the rootcs one after another, laying two fingers depth of earth vpon euery one, the measure being taken from his kniffe and principall, to the end the frost may not hurt them, and that so also the rootcs may grow the thicker : after the eight or tenth yeere they will vp the rootcs, drying them in the sunne, and afterward when they would grinde or presse them, they do further drie them in a great oven made for the purpose, and so presse them vnder a millstone, and this is called the fine madder. Thus they haue found by experience, that looke how much the longer they delay the gathering of the rootcs, so much the more madder haue they euery yeere, and that fine, which is more then if they should take vp the rootcs euery yeere. You may both sow it and plant it in the same place, where you haue taken it vp, or which is better, sow that place for the next two or three yeeres following with wheate, because it will beare verie faire and great store thereof : in as much as the field wherein madder hath bene sowne, is made much fatter and better thereby, as whereof it may be said this ground hath rested it selfe, seeing the roote hath done nothing but brought forth boughes, for seed, and that the leaues falling from them, doe as much feede the ground as the ground doth the roots and boughes.

But Autumne being come, and when you see that the herbe be- ginneth to looke yellow, and to loose his naturall colour, you shall drawe it out or pull it vp with the spade or pickaxe, and shall strip the roots from their leaues, which you shall cast vpon small heapes to dry for the space of three or fower daies, if the weather be such as it should, or else fixe or eight daies in a rainy and moist weather : then you shall cause them to be taken vp, dusted and scraped, that so there may haue none of their hairie strings at them : and when they are thus made cleane, you shall keepe them whole, or ground into powder either grosse and great or more fine and small, either for your own vse or for the sale.

Madder is in this one thing much to be marvelled at, in that it *To colour the* colourcth his vrine that shall but hold it in his hands : and which is *vrine.* more it maketh the bones and flesh of those cattell red, which haue bene fed with it some certaine time : some say that the powder of it is so penetratiue, and so taketh vp the nostrils, as that it enuenometh and killeth many in a few yeeres. The decoction procureth vrine and the termes of women, and colourcth eggs red that shall be boyled *To procure the* with it. The leaues because they are rough and stiffe are good to scower *teines.* brasse vessell.

The sixe and fiftith Chapter.

Of woad.

AS concerning woad it is tilled in a felde and requireth much labour, euen as the naues or turneps, though there be no part of it

in request but the vppermost, and that which is furthest off from flowers & stalkes: it doth not feare frost, raine or extraordinary cold. Indeed it doth not craue any long rested far ground, but a strong ground and such as may be saide to be in good plight, rather then an indifferent and light: it groweth better also in grounds, which haue laid fallow three or fower yeeres before, or which haue been meadow ground two yeeres before, then in grounds which haue bin well tilled; which is cleane contrarie vnto madder, which craueth as much helpe, as the ground appointed for wheat or vines: yea and it craueth the rest of soile and fer from one yeere to one: for otherwise the rootes when they are set doe degenerate oftentimes and miscarrie, loosing their force and goodnes. And whereas madder doth set the ground, wood doth make it leane, and therefore it must not be sown in a leane ground, where it euermore groweth but little, and where it proueth almost nothing woorth; but rather in a ground that is well manured before it be sown, as also renewed with dung at such time, as it is forthwith to be sown. Being sown of seed it must be diligētly harrowed, to the end it may be well couered & incorporate with the earth, and when the plantes haue put forth their leaues the height of two fingers, you must dig it about mid-Aprill or somewhat later, according as the time hath bene faire or raine: then shortly afterward you must gather the leaues: and they being gathered you must dig the feete of the said rootes so left void of their leaues: and this must be continued euery moneth, that is to say, Iune, Iuly, August, and September: in such sort that euen as the leaues are gathered from foote to foote five times, so they must be digd and the earth cast as off, and that so soone as the gathering of the leaues is past: and this labour of digging is ordinarily to be seuen times gone ouer, that is to say, the five times now spoken of, and the two first, which are before any gathering of the leaues doe fall. The manner of gathering them is in this sort: when the leaues begin to be coloured about the edges and not in the midst, you must take them from plant to plant in your hand and breake them off in such manner from the roote, as that it may seeme and shew as though one had cut them away with a hooke, and after that to lay them in order in the shadow, that so the sunne may not harne or iniurie them.

To make
woade.

The manner of making woade. You must put the said leaues vnder a millstone drawne about with a horse, and turning round within a vessel somewhat more compassed then the gate thereof, when it rowleth and turneth about, by which turning about of the stone, all that part of stiffe within the vessel being brused, the horse is caused to stae, and the stiffe or leaues turned ouer which haue now already been thus far forward ground vpon the one side, that so the iuice thereby pressed out, may incline vnto that part in the midst which is

lowest

lowest, where it being let out, and the floore or bottome of the vessel well dried, the turned leaues are put againe vnder the millstone to grinde the other side, which once done, they are to be made vp in round pellets or bals, euery one waighing twenty or fowre and twentie ounces, and these being dried either in the sunne or in the oven if it be rainy weather, they are laid vp in some garner, vnto the eleuenth of Nouember, at which time they are to be ground for the last and altogether into powder, and laid vpon heapes: and when vpon this laying together vpon heapes it shall begin to take heate, it must be turned, and in turning watered, vntill it be sufficiently moistned: for as too much water drowneth it, so too much heate in the heapes doth burne it: thereupon you must pile it vpon heapes not high but long ones, and stirre it euery second day, so long as till it become cold, and yet after this to put it abroad euery fourth or sixth day, while it bee thoroughly cooled indeed. And this worke must be very carefully performed, for otherwise the woade would roast it selfe, and prooue not any thing worth, which being so trimmed and ordered as it shoulde, it is left in some cold and paved place, vntill the time of the selling of it, and looke how much the longer it lieth in heapes in this case, by so much it becometh the better & finer. The country men of *Tholose*, in whose countrie there groweth great store of woade, doe not grind their woade balles into powder, but gather it together by great vessels full, and put vnder the millstone to presse out the waterish parts of it, & then they make vp the remaining substance into lumps like loaves, which they drie and rot afterward, by laying them in the great heat of the sunne in sommer time, and then they cast these lumps into their fats, where they put their wooll to be died, a blew, blacke, or other colour, as it best pleaseth the Diers. The leaues thereof made into a plaister, do resolue impostumes, and heale wounds new made, they stay fluxes of bloud, heale the wilde fire, and the vlcers which runne ouer the whole body.

The seuen and fiftieth Chapter.

Of the tasell.

THe tasell (called also *Venus* her bathing tub, because it keepeth som drops of water (being by nature as all the other thistles are, hot and drie) in the lower part of the leaues, close by the stalks, to refresh and water it selfe withall) serueth greatly (in respect of his head) for the vse of cloth-workers, both to lay the wooll of their new clothes so much as is fast, as also to draw forth so much as lieth loose out of order amongst the rest: and it is as seruiceable or more vnto cap-makers, after that the cap is spinnne, wouen, filled, and scoured with sope, walkers earth, or other scouring earth: Now he that will

reape

reape profite by this herbe, must make choise of a good fat ground, well manured and tilled with two, three, or foure arders, and well harrowed; and then afterward sowe it with the best seede that possiblie may be found, and that very thicke, and when it hath shot out of the earth as in the beginning of May, then to make it cleane and weede it with the hand, and in Iune and Iuly to digge it, if need be, in the end of September you must gather the heads that haue flowered the first yeere, leauing the rest to grow for to be gathered the yeere following; at such times as they shall be in flowre. The heads cut off, the plants may be planted anew in a well tilled ground, putting all the roote into holes, from one to another (which is all one with the ordering of the radish) and trampling the ground vpon them very orderly and duely; and furthermore to digge them when they begin to pricke and put forth branches, in March, Aprill, and May: and to cut them which are cankered or rotten and so vaprofitable; that so the iuice of the earth may be fed vpon by those onely which are good and seruiceable. And whereas at the time of their flowering they begin to flowre on high on the head, and so downward till the whole head be flowered, the flowre being once fallen you must cut off the head either euening or morning giuing halfe a foote of stalke thereunto. Furthermore you must not forget, that they must be set or sowed in furrowes, that so water may haue an orderly course to fall to the foot of them, and giue them a continuall refreshment, and not to sowe them in anie other place but such as is reasonably warrie: for too much moisture maketh the thistle or the head thereof (which is the thing of most importance) more lowe and short, and of lesse commodiousnesse. You must not gather or binde them vp in bundels, but in a drie season, towards the moneth of October at the furthest, and not any sooner or earlier, than the latter ende of September. Some gathering it doe leane it at the barne to drie in some place by it selfe, because it is subiect vnto fleas or lice, and other small vermine, which causeth the small foote that should hold vp the head to fall downe: others do put ten or twelue of them in little faggots together, and so hang them vp standing one a prettie deale from the other in the shade or winde, and not in the sun, or in any moist place. Some drie them in the South sunne, turning them twise or thrise, and after hanging them by paires in order vpon poles.

The tasell is to be commended in this point, for that in the midst of the head thereof, after it is well dried, there is found a little worme, which being hung about the necke or applied vnto the wrests, doth heale the scauer quartaine: it asswageth likewise the great ache of impostumes, which grow about the nailes being applied thereunto.

The

The eight and fiftieth Chapter.

Of Saffron.

THe best Farmers, and such as are most cunning in the ordering of plants, doe make verie much and highly esteeme of the saffron which is called bastard saffron, and of the common people parrat-seed, being the same that old writers call *Caribamus*: the plant is of no vse, the seed excepted, which purgeth flegmaticke humours, or else feedeth parrats, which are dainty and fine mouthed. This plant when it is growen vp being well husbanded and ordered, beareth certaine little thicke heads, like the heads of garlecke, and in the midst of it a flower which one would say were saffron. This good it doth, namely, that it enricheth and maketh fat the ground where it groweth: likewise it craueth no great food or maintenance, neither leaueth it any root in the earth after it is gathered that may put forth or take any acknowledgement of, or doe any harme vnto the soile wherein it grew. There is enerie way as much profit in tilling of this herbe, as there is in anise or fennell: when all is sayd, a good Farmer will make profit of euery thing, and there is not (as we say) so much as the garlecke and onion, which he will not raise gaine of, by selling them at faires, most fitting for their time and season, and so helpe himselfe thereof and fill his purse with money.

The ordinarie saffron, seruing for sauces, painting and making of colours, is a thing of toile and of profit, as may be learned and easily vnderstood by the inhabitants of *Turraigne*, *Pronence*, and *Parsingall*, which grow the same exceeding abundantly: It is planted like camomill in the spring, vpon heads, foure fingers off one from another: but it must be in a free and well battild ground, not verie fat, nor verie leane, but open to the sunne: it must be well troden downe with the feet, when it shall let fall his flower; but when it buddeth and putteth forth, it must be left alone to natures worke. At the time of the gathering of it you must haue linnen cloathes to draw it out of his bell euening and morning: and after drie it well in the shadow of the sunne, and couer it with cleane linnens, make it cleane: and taking away his white, purge it, that so it may be free from all filth, and fit to be kept in a drie place well couered, or in some vessel close stoppt: and leauing in the earth the onions or heads of the saffron, with a good quantitie of grapes, or of the drosse thereof as it cometh from the presse put vnto them, you shall take them vp in the moneth of March when they haue brought forth, fruit three yeeres, and drie them in the Sunne, keeping them after in some place that is not moist, that so you may plant them againe in some other place & ground that is well tilled, as hath already bene deliuered at large in the sixe and thirtieth Chapter.

*Saffron a speciall
all venome of
the heart.*

Chapter. Some are of iudgement that it is naught for a man to vse saffron much, and that it is a speciall venome vnto the heart: but howsoever this be true, the profit of it is great: and therefore commodious and requisite for the Farmer, which would not that his ground should be vnprofitable vnto him. See more aboue in the place aforesaid concerning Saffron.

The nine and fiftieth Chapter.

A brieft and short reuiew concerning pulse.

I Will say nothing of the name, nor of the two kindes of turneps, of which, the great and round one is for them that dwell in *Limosin*, *Aruernia*, and *Prouence*; and the long one (which they call radish) for Fraunce and other places: as in like manner I will make no mention of mustard seed, millet, pannicke and cummin; neither yet of great wild tares, lupines, lentils and fenugreke: which notwithstanding are all pulse and seed of profit and commoditie for the householde, as hauing referued them for the pulle-garden, planted at the end of the kitchen-garden: I will content my selfe in this place to admonish the good Farmer, that for the bringing of the ground into some kinde of occupation during the time of his rest, and after that it hath bene imployed in bringing forth better corne, it will not be amisse to sowe therein either nauets or turneps, foreseene that the seed, after the pulling vp of the plants, be so well and thorowly gathered and carried away, as that the ground may be quite rid and void of the same, for otherwise in time there would be nothing to be found amongst this seed, but wild coleworts, danewort, and other noisome weeds: and indeed pulse doth make as much for good husbandrie, as the corne that is good for to make bread: seeing pottage is in continuall request for the householde, in what house soeuer it be. Some make a craft of making bread of millet, as is to be seene in some places of *Galconie*, but it is not but when great necessitie driueth them to it. But howsoeuer it be, beanes, peason, ciches, and fetches, are not of lesse request or inferior in taste vnto great wild tare, lupines, cummin, fenugreke and lentils: and for the prooffe hereof I will call to witnesse the people of *Aruernia*, *Lymosin*, *Sauoie*, and *Dauphinie*, for the tilling whereof (not to speake further in this place of any other thing whatsoever, that may be as it were superfluous) we will referre you to learne the whole sum in the treatise of tilling of seeds and pulse in arable grounds.

The sixtieth Chapter.

*Of remedying of accidents that may happen
vnto herbes.*

Herbes

HErbes either sown or planted in the gardens before spoken *Hurtfull beasts.* of, are not hurt onely by haile, lightning, thunder, frosts, fogs, blastings and other harmes hapning by the courtes of seasons, but also they are annoied, by reason of waite and destruction brought vpon them by little beastes, as grasshoppers, weazles, caterpillers, house and field rats, cats, moules, pismires, flies, gnats, bats, wall-lice, fleas, greene-flies, horse-leaches, frogs, snailles, adders and such like, which mischiefes you must be very carefull to meete withall, that so you may not loole your labour about your garden, and be frustrated both of the profit and pleasure that might rise and come thereby. And to speake generally of the preuenting of all these inconueniences, it is good, according to the counsell of *Columella*, to steepe the seedes for a certaine time in the iuice of trick-madame, or to mingle with the sayd seede some soote, or else to water them with water wherein soote hath bene tempered: but it is better to speake of these things particularly.

Generally against all such beasts as do hurt gardens, it is good to burie in such place of the garden as where you thinke these beasts doe most abound and keepe, the paunch of a sheepe full of dung as it commeth out of the sheepes belly, and to couer it with a little earth, and within two dayes you shall finde all these beasts gathered together into this place: before you haue done thus twise or thrise, you shall be prouided of the means to kill and root out all these vermine: know then in a word, what be the necessarie remedies for the auoiding of such accidents.

Against haile, ancient men were wont to set the whole compasse of their ground about with white wilde vine, or else to fasten vnto the top of a high post, an owle hauing her wings spread. *Against light-*

The lightnings and thundring will do no harme, if there be buried in the midit of the garden a kinde of toad called a hedge toad, closed vp in a pot of earth. Others doe hang in the midit of the garden, at the foure corners thereof the feathers of an eagle, or the skin of a scale. Others plant many bay trees round about the garden. It is true that to breake or dissolue the thunder accompanied with a great thick cloud threatning haile, there is nothing better than to ring the belles, as is vsed to be done in hot countries, and to send forth the roaring sounds of the canons, as is wont to be done at sea: or else to set on fire some heaps of weeds or stinking and rotten seeds. *Against light-*

There is nothing more hurtfull or dangerous for herbes than frost, *Frost.* which commeth when snow and ice are thawing. And for to preferue your herbes from this inconuenience of colde, you must spread all ouer the ground great store of strawe, and ashes withall about that: for by this means the heat of the earth will be preferued, and the frost hindered

dred that it cannot enter.

Against mists
and fogs.

If you conceiue that your herbes are like to be hurt by mists or fogs, you must get together in diuers places of your gardens diuers heapes of tender twigs and strawe, or of weedes and shrubs pulled vp in the same place, and after to set them on fire: for the smoke thereof doth correct and cleere the dusky and cloudie aire.

Against blasting.

Against blasting, which is a corruption hapning to herbes and trees by some euill constellation, there is nothing better than to burne with the dung, the right horne of an oxe, in such sort, as that there may on euery side be caused a very great smoke: for this smoke will drine away and resolue the euill quality of the aire which is the carrier of this maligne influence: or else it will be good to plant in diuers places of the gardens, diuers bay-tree-boughes, for the blasting will fall all vp-on them.

Against birds.

To preserve seeds from being eaten of birds, you must scatter round about your gardens wheate or barley sod in wine, mingled with hellebor: or else, water and steepe the seed in the decoction of cray fishes, boiled in fresh water, assuring your selfe, that looke what groweth of such seeds, will be free from all danger of these fowles: or else water your seed with water and the lee of wine: or else scatter throughout the gardens, some boiled leekes, for so soone as they shall haue swallowed them they will be easily taken vp with your hand. Some put ten cray fishes in a vessell full of water, which they couer and set out in the sun for the space of ten daies, afterward they water the seeds they woulde sowe with this water twice; once before they be sown, and the other time eight daies after that they are sown. By this meanes the seedes will not only be kept safe from birds, but also from all other manner of beasts.

Against little
beastes.

To take away all harme which may come by little beastes, it will be good to drie vpon the skin of a tortoise, all such seeds as you intend to sow in your gardens: or else to plant in diuers places of your gardens some mintes, especially amongst your coolworts: or else to sowe amongst your pothebs some cich-pease, or rocket, or to fill the ground of your kitchin garden with goose-dung tempered with salt brine, or else to sow the seeds in the first quarter of the moone.

Against snails

New oile lees, or the soote of the chimney sown all about in your gardens, is good against snails.

Against ca-
terpillers.

To keepe away caterpillers, you must water your herbes with water wherein haue beene steeped the ashes of the young shootes of vmes: or perfume your herbes and trees with quicke brimstone. Some steep the seedes in the lee of fig-tree ashes, and to kill the caterpillers, do cast vpon them the ashes themselves: others like it better to plant a great onion called Squilla, or else to burne roadstooles that grow out of the nut-tree: or else some great store of garlick without any

any head, to the end that by the strong smell which shall rise thereof, they may die.

Columella maketh mention of a certaine and approoued remedie in this case of caterpillers, which is that when they will not be driuen away by other meanes, to procure a woman bare footed, hauing her termes, her bosome open, and haire about her eares to walke, three times about the quarters and alleies of the hedges, or walles of the garden. This done, you shall see the caterpillers fall vpon the earth, from the herbes & trees bearing fruite, neither more nor lesse, then & if by shaking you beate downe the raine or water from a tree: but in the mean time there must be care had that this be not done at sun rise, because that then euery thing in the garden would wither & paine away.

If you water the fleas or lice with strong vinegar, mingled with the iuice of henbane, wherein the water of hemlock shall haue boiled, or with water wherein nigella hath beene steeped: or with the decoction of the seede of mustard: they will die by and by.

Gnats will be killed if you lay rue in steepe and sprinkle the water about the garden: or if you make a perfume of galbanum, or of brimstone, or of cumin, or of oxe dung. If you would driue awaie flies, make a perfume of coloquintida, or water the place with water where in it hath steeped.

To gather together all the palmar wormes and other like beasts into one place, to the end you may kil them, you must spread in the place especially where they abound, the guts and intrails of some sheepe newlie killed, the same made nothing cleane, but still full of filth and dung: then two daies after you shall find them all come together vnto the entrails.

For to kill weasels you must steepe sal ammoniack and wheat together, and sow them neere the place where the weasels haunt, for by this they will either be kild or caused to run away if they eat it: Some say that if you catch a weasel and cut off her taile and coddles, and let her goe againe aliue, that afterward there will be no more seene in that place.

Ants will flie awaie if you burne those which you take, or if you anoint the barke of the tree which they vse, with oxegall; or with the decoction of lupines: or else if you burne in the garden wilde cucumbers: or if one clay ouer with white or red clay the tree where they are: or if there be put at the mouth of their hole some organic and brimstone together.

You shall kil wormes, if you perfume their holes with the smoke of oxe dung, or if you water them with pure lee. You shall make them come out of the ground if you water the place with the decoction of the leaues and seede of hempe: or if you sowe lupines in the ground where you see great store of wormes: it is true also that you shall rid your

your groundes of them, if you care your groundes during the time of great heate, for then you shall finde them in great numbers vpon the face and vppermost part of the earth, and so you may gather them into bowles to giue them to your hens, which thereby will become fat, and lay great store of egges.

Against snailles. You shall kill snailles if you sprinkle them with the new lees of oile, or with the soote of the chimney.

Against grasshoppers. Grasshoppers will do no great hurt vnto herbes, if they be watered with water wherein wormewood or leekes, or centaurie hath bene stamped: Also to kill them you must boile bitter lupines, or wilde cucumbers in salt brine, and sprinkle them therewith, or else burne a great sort of grasshoppers in the place from whence you would driue them, for the smell of the smoke doth kill them: but and if you would banish them altogether out of your gardens, you must hang vp some bats vpon your highest trees.

Against field rats. You shall driue away field rats, if you cast in the canicular or dog-daies the seede of hemlocke into their holes, together with hellebor and barley meale: or else if you shut the mouthes of their holes with bay-tree leaues, to the end that when they would come forth they may be forced to take those leaues in their teeth, and so by the only touching of them they are killed. Or if you mingle amongst their meate such as you know them to be delighted in, quicke-silver, tinne, or burnt lead, blacke hellebor, or the scum of iron: or if you make a perfume of the bodies of their kindes: or if you boile beanes in any poisoned water, and so lay the saide beanes at the mouthes of their holes, which vpon the smell thereof will quickly run vnto them.

Against rats and mice. You shall also kill rats and mice with paste made of hony, coperas, and stamped glaile mixt together and laid in places where they haunt most.

Against moules. Moules will neuer cast in those gardens where the herb called *Palma Christi* doth grow either of it owne accord, or purposely sown: likewise you shall either kill them or driue them away, if you lay at their holes mouthes a walnut filled with chaffe, brimstone and perrosin, and there set it on fire; for by the smoke that will come of this nut, the moules will be killed, or else run away: or if you lay in diuers furrowes about the garden a small ball of hempseede, it will be a let to keepe that there come not any into those grounds: or of other, and withall will driue away those which are there alreadie. There are three waies to take them: the first is to stand as it were vpon your watch about sunnerise, neere vnto the place where they haue lately cast vp the earth; for this is ordinarily the verie hower that they cast in according to their custome, and thus may you throw them verie easilie out of their holes with a pickaxe or spade. The second way is by causing water to runne into the hole where they haue newly digged:

ged; for when as they once feele the water they will not stay to come forth and saue themselves vpon some green turffe or other, and there you may either take them alieue or kill them. The third way: take a liue one in March, when they are a bucking, and put the same into a verie deepe and hollow bason at night after sunne set: burie the saide bason in the earth vp to the brims, that so the moules may easilie tumble into it, when they heare the captiue crie in the night time; for all such as shall heare her (and this kind of cattell is of a verie light hearing) coming neer to their food, they will into the bason one after another; and by how many moe go in, by so much will they make the greater noise (not one being able to get out againe) because the bason within is smooth, slike, and slipperie. Some lay garlicke about their holes, or onions, or leekes, and these make such a smell as that they either driue them away or kill them.

All maner of serpents are driuen away with the perfume of *Galbanum*, or of harts-horn, or of the root of lillies, or of the horn of a goats claw, or of hyssope, or brimstone, or pellitorie, or an old shoe sole. It is good also to plant in some part of the gardens an elder-tree or an ash-tree: for the flowres of elder-trees by their stinking smell do driue away serpents: and the shade of the ashe doth kill them: In like sort it fareth with the pomegranat-tree, whose shade (as we haue said before) driue away serpents: It is good likewise to plant some one or other bough of ferne in the garden, because the onely smell thereof doth driue them away.

You shall driue away scorpions, if you burne some of them in the place whence you would banish them: or if you make a perfume of veriuice mixt with *Galbanum*, or the fatte of a goat: or if you plant in your garden some little nut-tree.

The perfume of iuie will cause the reremouse to abstaine flying in your garden.

Frogs will hold their peace and not crie any more, if you set a lantern with a candle light, vpon the side of the water or riuer, which compasseth the garden. If you burie in any corner of your garden the gall of a goat, all the frogs will gather thither, and to you may easilie kill them.

The threescore and first Chapter.

Of the hony-bee, the profit rising thereof, and of chusing a place to set them in.

IF the greatest part of the profit of a farme, depend and hang of the keeping of cattell, I dare be bold to affirme, that the fruitfulest thing that can be kept about a country house is Bees. Indeed there is some paines and care to be taken in chusing, gathering together,

cher, holding, feeding, watching and keeping of them cleane in their hiues: but withall, what so great, rare and singular a commodity haue we as the waxe which we inioy by the Bees: yea what say you to honie it selfe, that their admirable worke, and no lesse profitable and pleasant for the vse of man? Let it not then seeme strange vnto you, if we aduise the housholder to giue eare and be carefull to keepe Bees about his farme, and therewithall teach him in a few wordes, what should be the ordering and gouerning of them and their hiues, and withall at what time and howe it is good to gather hony and waxe.

The housholder therefore shall first make choise for the keeping of his bees of some fit and secret place in his garden of pleasure, in the bottome of some valley if it be possible, to the end they may the more easily rise on high to flie abroad to get their food, as also for that when they be laden, they descend the more easily downward with their load. But let vs see to it especially that the place be open to the South sun, and yet notwithstanding, neither exceeding in heat nor in cold, but temperate: and that the same by hill, wall, or some other rampart be defended from windes and tempests, and so also as that they may flie their sundrie and seuerall waies for to get diuersitie of pastures, and so againe may returne to their little cottages laden with their composition of hony: and againe in such a place, as wherein there is great quantitie of thyme, organie, sauorie, iuie, winter sauorie, wild thyme, rosemary, sage, cornelag or gladdon, gilliflowres, violets, white lillies, roses, flowre-gentill, basil, saffron, beanes, poppie, mellor, milfoile and other sweet herbs and flowres, wherein there is no bitternesse: and in like maner sufficient good store of trees of good smell; as cypresse trees, cedar-trees, date-trees, pine-trees, turpentine-trees, iuie-trees, masticke-trees; and also fruit-trees, as almond-trees, peach-trees, pear-trees, apple-trees, cherrie-trees, and other such like: besides all this, marvellous great store of herbes, and those of the rarest & least known, and withall such as grow in well tilled grounds and pastures, for these cause them to grow rich in good wax, as the wild radish, the wild bell flowre, wild succorie, and blacke pionie: and besides these wilde parsneps and garden parsneps and carrots. Broome and the strawberrie-tree are not altogether good for to make hony: the elme-tree causeth them to haue the fluxe of the bellie, as also the tithymales or spurge. Boxe maketh honie of a bad smell, and which troubleth their braines that eat it, and yet notwithstanding profitable for them which haue the falling sicknesse.

The place must be closed in with a very strong hedge, or else with good wals, for feare both of beasts and theues: for kine and sheep do eate vp their flowres, and beate the dew off from the flowres, whereof the bees should loade them, and which is so well beloued of the little prettie birds, yea and that also, which falleth downe at the breake

of

of the day in faire weather, and is purified on the leaues and flowers of the plants, herbes, and wilde trees: but of all home and tame beasts, there is none that doth so damnifie these little pretie wretches, as swine and goates: for the goates waste their foode, and iumpe against their houses, yea and oftentimes beate them downe: the swine besides the wasting and eating vp of their foode; rubbing themselues against the hiues, doe ouerturne them and the seates whereon they be set: sheepe in like manner loosing some of their locks of wooll vpon the hedges, are cause that the sillie poore bees now and then become intangled therein, when they labour to get their foode, and so leaue their carcases for a pledge: hens likewise haue a gluttonous appetite towards them: serpents also doe sometimes take vp their Innes in their hiues: but to take away this casualtie at once and for euer, you must plant rue round about them in good quantitie, in as much as venomous beasts cannot abide this herbe. Their place also must be far off from the dunghill, common draughtes or issues, bathes, marshes, fennes, dropping, dirtie and mirie places, which might hurt them with ill smells, and for that these pretie beasts are deadlie enemies to all filthines and vncleannes: but rather let their place of abode be neere some small brooke of water naturally and of it selfe continually running, or else by art in some pipe or chanell, that will conuey along the water drawne out of some well or fountaine, and this rundle must haue by the edges stones or boughes of trees for the bees to light vpon.

But whatsoeuer the place is, whether in the garden of pleasure or elsewhere (albeit we haue assigned this to be one of the fruites of pleasure to bee gathered in the garden of pleasure) it must not bee hemde in with high wals on euery side: and yet if for feare of theues, you were disposed to raise them the higher, then you must pearse the wall some three feete from the ground, and worke it with small holes, for the bees to flie through at, and some twentie or thirtie paces off to build some little house, if you be so disposed, for him to dwell in who hath the charge of looking to them, and therein also to put his tooles.

The threescore and second Chapter.

Of the fashion of the hiues, and manner of setting them for bees,

THE place and standing for bees being thus appointed, the next thing is according to that fashion which may be most conuenient for the countrie to make hiues. The best are those which are made of quarters of sawen boords, wide inough, but not very long: others you must haue long and narrow, that so you may haue two sortes of hiues, that is to say, great and small ones: the great

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ones

ones for such as are to be imployed in making honie, and the little ones for such as are to swarme and cast: the said boordes being fitted together with nailes, but yet so as that one or two of the boordes may be lifted vp when the honie is to bee taken, or the said hives to bee made cleane: the hives which are best and most conuenient next vnto these, are those which are made of barke, of corke: and next vnto them those that are made of palme-tree and fallowes, such as we see in this countrie: the worst are those which are made of baked earth, for they scalde with heate in sommer, and freeze with cold in winter. I finde those nothing conuenient which are made of dressed straw, or of bricke: for the one is very subiect to the fire, and the other cannot be translated or carried from one place to another, if neede should require. They must be wide beneath and narrow aboue, they must be a cubite wide, and two cubits high, drawne ouer and drest on the outside with lime and oxe dung mingled together, that so they may continue the longer. They must be set vpon boords fitted for the purpose, and that neere vnto some wall, but not close to it, that so there may be space for one to goe about them and make them cleane: or else vpon some vault of stone or of bricke, to the height of three foot and as much in bredth, laid ouer with mortar on euery side, and planed, that so the lizards and serpents, and other noisome cattell may not get vp and clime thither for to hurt them. The hives shall be so set, as that there may be a certaine distance betwixt the one and the other, to the end that when neede shall require, to looke vnto any one for the making of it cleane, or any other thing, there may not any occasion be giuen to shake or rogge vpon the other, nor yet disturbe the adioyning bees: who doe greatly feare when they are touched, least their workmanship of waxe (which is very weake and easie to be spoiled) should be stirred or broken. The forepart where they goe in must be hanging somewhat forward, that so there may not any water or dew fall into it, and when as any by hap shall fall in, that then it may not stay, but finde that as a readie waie out, and for this cause the hives must be covered with small coverings and shelter, besides the shade of leaues and boughes made fast thereto with mortar of earth for a band: and this will serue against the cold, snow, raine and heate: although heate doe not so much hurt vnto bees as colde. And therefore behinde the bees as they stand, there must be some building, or else at the least a wall, which may be vnto them in steed of a sunnie banke against the north winde, and withall may keepe the hives in a moderate warmth. And furthermore hives though they be thus defended and covered from the cold by this building, yet they must be turned vpon the east in winter rather then vpon the south (because if they were turned toward the south, they would be laid sore vpon by excessive heate in sommer) to the end that in the morning the bees for their earlier

The setting of
hives

comming forth may haue the sunne hot vpon them, for their better wakening: whereas otherwise the colde would make them heauie and slothfull; and therefore the holes by which they passe and repasse, must be verie little, that so they may not giue place for the entrance of much cold, and they will be sufficient great, if so be there may but one Bee passe: againe by this meanes it will be provided for, that neither the venomous stellion, nor the villanous beetle, neither yet the butterflies shall possibly enter to rob the hives and honie combes. And moreover according to the quantitie of bees in the hive, you must make in the same hatch two or three holes, one somewhat distant from another, that they may passe in therby, as also for the deceiuing of the lizards, which would by reason of their watch, kill them as they came forth, if they had but one hole in all. It is further meete that the shelter vnder which the hives shall stand, be well appointed for little open windowes, which you shall stop in winter with paper windowes or tiles, and that in such order as that they may be easily opened when the sunne shineth, and shut after that the bees are returned home into their hives: and yet there must be holes in the saide paper lights, that so they may passe forth along at their pleasure whither they are disposed.

The threescore and third Chapter.

Of what qualities and conditions the bees must be.

I Will say nothing in this place of the ingendring of bees, as whether it be by the coupling of males and females together, as we see in other kinde of creatures, or by the corruption and rotting of the belly and entrailes of the bodie of a yong bullocke, (whereof Virgil speaketh) but I will describe them as they are already ingendred, as what be the properties of such as are fit and like to make good hony. There are many sortes of bees: for some are of a golden colour, cleere, shining & bright: others blackish, rough, & hairie; some great; some small; some thick & round: & others spare & long: some wild, & some tame. But and if you would buy or gather together swarmes out of the forest to take their honie from them, looke, and take good heede that they haue the markes following, as, that they be little ones somewhat long not hairie, neare, golden coloured, shining and sparkling as gold, spotted aboue, gentle and louing, for the greater and longer that bees be, the worse they are, and if they be cruel, they are nothing woorth: notwithstanding that their choler and malice is easily helped, if that otherwise they be well marked and fruitfull, by seeing them oft, for in your oft going to them, they become tame. But because one cannot learne to perceiue and know, if they haue all these markes aforelaide, if he see them not; if you buy them, before you cope for them, you must

That bees are
made of the rot-
tennes of some
bodie.

The carefull
choise that is
to be made in
buying of bees.

must open the hives, and see whether they be well replenished or not, and if you cannot looke vp higher into them, then you must go by gesse and aime, and consider if there be good store at the mouth, and whether you heare a great noise and huzzing within, and further if they be all retired and at rest: in putting your mouth to the hives mouth, and blowing a good blast into it, you may perceiue whether there be many or fewe, by the noise which they will presently make when they fee the breath. It is good to buy them as neere vnto your abode as you can, and not in other countries farre off from your dwelling place: for the change of their pastures, aire, and countrie, doth altonish and amale them; besides also, the further they are caried, the more they are pained in their hives: but and if they cannot be got, but by seeking farre for them, you must conuey them betwixt place and place, some other way then by high waies, and that the rather in the spring then in winter, as also verie softly, for feare of shaking them. It will be good to take them before day, and to carrie them away at night vpon his necke, or rather it is better that two men should beare them: for in the daier time they must be let rest, and haue given vnto them some sweete liquor, that so they may haue to feede vpon though they be kept within. And when they are brought to the place of their abode, you must not open them vntill the next day at night, to the end, that after they haue rested all night, they may be the fitter to come forth peaceably in the morning: although yet it were better not to alter or change any thing about them for the space of three daies, but to stop vp the mouth with some thinne cloth vntill the sun haue shone, and the euenng after to open them. There is no such carefull heed taken in the chusing of those which are giuen, nor yet of those which haue beene taken or gathered in the fields or forrests, although I could aduise men to the contrarie, seeing the charges and paines are as great about the bad as the good: notwithstanding when one gathereth the, it is not possible to make such choise as he would; and therefore he must be content with that which cometh next to hand, and yet not to be negligent to purchase & get the best that may become by, and to take good heede not to mingle the good & the bad together: for so the bad would dishonour the good, and there would be a great deale lesse hony, because of the bad & slothfull ones which are mingled amongst them. The gathering of them shall be after this fashion. When you haue found any place, by which great numbers of bees do passe (which is commonly in woods and forrests where herbes do abound, and trees of sweete smell, neere vnto some small riuer or fountaine) you shall vse all diligence to finde out the place of their rest and abode, which you may easily learne after their hauing beene at water, whether it be neere or farre off, by the place whither they turne: then afterward in the beginning of the spring, you must take

*Choise of bees
which are gathered in the
forrests*

balme and thyme bruised, with other such like herbes which bees loue, and therewith annoint your higg so throughlie, as that the smell and iuice thereof may stay behinde: after that you shall make the higg cleane, and sprinkle it with a little hony, and hauing thus handled it, you shall set it downe in the woods or forrests, neere vnto the springs, and when it is full of bees, you shall carrie it home. And thus much of gathering swarmes of bees.

The three score and fourth Chapter.

Of the manner of gouerning garden bees.

THe Lord of the farme or farmer, hauing provided feeding grounds, hives, and fit places for bees, as also hauing bought or gathered good store of swarmes to replenish his hives, shall be carefull to affoorde them a more diligent and attentive kinde of gouernment and ordering, than any ouerfeer or gouernour of other cattell, doth allow vnto the said cattell vnder his charge: the cause is, for that the bee is more discret and industrious than any other kinde of liuing creature: yea, seeing she hath a kinde of wisdom, comming neere vnto the vnderstanding of man, therefore she looketh for a more carefull manner of vsage and cariage towards her from them that are her gouernours, and therefore cannot abide them to be mockers, sluttish, or negligent, for they cannot abide to be niggardly or filthily intreated. It must therefore be his condition that shall haue the charge of them, to consider their manners, and manner of liuing, and accordingly to frame himselfe thereunto in the best sort that may of bees. They haue a king whom they obey as their soueraigne in all things, accomplishing and fulfilling whatsoever he shall giue them in charge, whether it be to go forth, or to return home, or to stay within, and they attend him alwaies in companies wheresoeuer he be, they comfort him if at any time he be sicke, and do keepe about him if he cannot flie: nor one of them is negligent and slothfull, but euery one ready and quick to any kinde of worke: some of them gather the roses, and bring home what they get of flowres and sweete smelling leaues, vnto those which stay within the higg making hony: others are busie in making combs, and building of little cabbins, some lay to their hands to the soltning of waxe, and temper it so well, as that making thinne leaues thereof they therewith build vp and frame them celles and cloisters, others with great labour do funder the grosse and drolle substance, and make ready a place for euery sort of hony: some of them with their paine and diligence do keepe cleane the hives, which notwithstanding are neuer defiled by any of their owne dung, for alwaies in flying abroad they avoid their excrements in flying:

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some there are which ordinarily doe nothing but keepe watch and ward, to the end, that to the vntermost of their power they may withstand whatsoeuer thing may annoie and hurt them. They carrie out such as die within the hiues, but when their king is dead they stir him not from his place, but crouding one vpon anothers backe about him; it seemeth that they lament and mourne, as they make shewe by their noise and humming, and that so vehemently, as that if their keeper do not looke vnto it, and take him from vnder them, they will suffer themselues rather to die for hunger, than they will forsake him. To be brieue, euerie one of them is so diligent at his worke, as that they cannot beare it that any one should be in their company that shoulde not be occupied in doing something: and this is the cause why they driue away the drone, which will neuer worke, neither is good to any thing else but to waste the hony and deuoure it. They hate about all things euill sent, they neuer flie against the light, nor vnto any flesh, or bloud, or fat, but content themselues with leaues and flowres only, which haue a sweete smelling iuice. They take delight in pleasant and goodly songs, whereon it commeth to passe, that if they be scattered abroad, they will be called together at the delightfull ringing of some bason, or small bells, or in hitting the hands in a soft and easie sort one against another. To be brieue, their fashion and maner of liuing is as it were wonderfull in nature: but giuing ouer all further describing of them, I will content my selfe in delinering the conditions and duties required about their ordering and gouerning.

The threescore and fifth Chapter.

The order of gouerning bees all the yeere long.

HE therefore that hath the charge and ouersight of the bees, must be carefull, first of their pastures (whereof we haue made mention before) then he shal diligently looke vnto their hiues twice or thrise a moneth, beginning at the spring, & continuing till Nouember: for there is not that time in the yeere wherein they stand not in need of something; and, if they be well ordered, they will continue ten yeeres: they must be opened about the moneth of March, and the hony combs made cleane with a very strong and solide feather, when as they cannot be come by with the hande, that so, whatsoeuer filth is gathered there in the time of winter, may be cast out, and the spider webs which spoile all the combs, may be taken away: afterward he shall smoke them all with oxe dung burnt: for this dung by a certaine affinitie is gratefull and well liked of bees. But in the meane time before he handle the hiues, he shall be well aduised that the day before he haue not had to deale with his wife, that he haue not bene drunken, and that for the present he come not neere vnto them, with-
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out being washed, made cleane, and well apparelled: in like manner he must abstaine from all meates that are of a strong smell, as are all salt meates, and soufed meates, and all things being strong of sent, as garlick, or onions, or such like things: and contrariwise, let him carrie in his mouth some thing that hath a good smell, for by this meanes they wil loue him so wel, as that he may handle their hiues at his pleasure, and the little prettie birdes will neuer hurt or annoy him. At the same time (in asmuch as then they begin to multiplie and increase, and to cast their swarmes, which so soone as they can flie desire nothing more than to flie awaie, and not to abide with the olde ones, and much lesse to become subiect vnto them,) it will be meete to keepe watch very diligently, and that from after the morning tide is past, till two howres after noon, that so they may not flie vnto some other place. Wherefore if you can discern and spie out their kings, ^{Kings} it will be good to take their wings from them, if they make shewe of ^{of bees.} themselues oftentimes, and seeme as though they would flie together with their company, as also to cast dust vpon them, or else water, for by these meanes they will be kept from going away; so that then they will no go out of their owne yard, nor out of the limits of their owne kingdome, neither will they suffer their troupe to go farre from them; or else it will be good, after that they are come forth, to astonish and occupie their mindes with the founding of basons, or of the shearde of broken pots, ringing forth softly, in asmuch as by howe much you sound the stronglier, by so much they mount the higher into the aire, and stray the further off: but and if it be a gentle and lowe sound, they in like manner do stay and keepe themselues neere at hand and below. And if they proceede to fasten themselues vpon the next branch of the tree, as a cluster of grapes doe hang vpon their branch, you must gather them with your hand, or with a trowell into a basket annointed with iuice of sweete balme, or some drops of hony, and after set it on the row with the other baskets: or else to make a shorter dispatch, he may cut the bough or branch of the tree, and put it very softly into all these bees, which are within the dressed basket or hiue, the mouth of the same hauing bene first sprinkled with wine: then after this, it must be set vpon a board vpon the ground all an end, the vpper part being kept so close, as that the bees may go in no where but at the place which is open vnderneath. But and if this swarme of bees or little birds be got into any hole, or cleft of the bole and body of a tree, then carriethither a hiue well annointed in euery place, as also at the hole or mouth, with very sweet smelling herbes, and draw it ouer this hole and entrance of hollownes, to the end you may inuite them to a banquet with the delightfullnes of this smell, and with the better contentment to goe in to abide and dwell there: if they rest themselues in a place where you cannot come to them with your
hand

hand, and such a one as is withall some what vneacie to be dealt with, then take a pole and tie to the ende of it a hiue sprinkled with good wine, and hold it neere vnto this clew of bees, and thus they will not faile to goe into it: then carrie them neere vnto the hiues, for no doubt but they will goe vp and settle themselves in a short time. Or else which is the best, he shall hold all ready a new hiue to receiue them, when he seeth that the yoong kings shall be come forth with their yoong traine, which within a day or two will all be come together at the mouth of the old stock, and shew by sufficient signes and tokens that they are desirous of some place of their owne, and peculiar to themselves, for then if he do giue them one, they will rest contented therewith, and abide therein.

It is to be knowne when this yong host will come abroad, by the noise and humming which they will make in the hiue three daies before that they purpose to come abroad, as if a campe of warlike men would rise vp and remooue: and for to knowe when they make this noise, he must lay his eare at euening to euery hiue, that so he may heare the noise and humming when they make any.

Warres among
bees.

To kill the king
of the bees.

The markes and
signes of the
king of the
bees.

And yet indeede this noise and humming is sometimes a signe and token of some fight or strife raised betwixt them and some other swarme, which must be well preuented, for otherwise by such ciuill warres and deadly fights, all the whole troupe and companie will quickly be ouerthrowne and brought to nothing. This intended combat is taken vp with a bowle of cure or boiled wine set vnto them, or else some honied wine, or other such liquor which by his sweetenes is familiar to bees, for these will appease their furie. But yet and if you perceiue that these skirmishes are not thus ended, you must make haste to kill the kings of the bees, which are the cause of such seditions and tumults. The manner to kill them is to obserue, when the whole troupe commeth out of the hiue, and is alreadie settled vpon some bough of some tree, and then to make if the whole swarme of bees doe hang after the manner of a cluster of grapes vpon the branch, for and if they be so, it is a signe that there is but one king: or and if that there be more, that yet they agree amongst themselves, and therefore you shal let them alone till they be in their hiues. But and if the whole troupe be diuided into many clewes, or round bunches, you need not then doubt but that there are many kings, and that they do not agree together. And then where you shall see them gathered most on a heap, and in greatest troopes, there you may search and looke for the king, anointing your hand with the iuice of sweete balm, or with hony, that so they may not flie away when you shall touch them, and seeke thus amongst them vntill you haue found the king, which is the author of all this warre: you must kill and cast him out. And thus you may discerne and finde out the kings from the commons, the kings are somewhat

somewhat greater and longer, their legs more straight and high, their wings lesse, but of a faire colour and neate, smooth and polished without haire and stings, except perhaps you will say, that a certaine grosse and thicke haire which they haue vpon their bellies is their sting, wherewith notwithstanding they neuer sting to do any harme. Some kings are found to be blacke and hairie, ghastly to beholde, and these are of the woorst sort of kings, and must therefore be killed, notwithstanding that they mooue no warre, nor stirre vp any coales amongst the yoong swarmed broode. Thus you see there is no cause to be so befotted and enraged with loue towards their king, that for to defend him, they willingly cast and expose their owne liues into open hazard against all his enemies, which come to assaile him, besides other incredible obeisance, which they let not continually to yeeld vnto him.

The hiues that shall be made ready to receiue the new swarmes, must be rubbed with the herbes before named, and sprinkled with droppes of hony, the more easily to cause them to keepe therein. At this time of the spring it likewise sometimes commeth to passe, that by reason of the hardnes of the winter past, or of some disease & sicknes, there is great want and scarcitie of bees in olde stockes, and this must be remedied by putting a newe swarme into that hiue, killing the yoong king, that so his subiects may content themselves to liue peaceably vnder the old. But & if you haue not a swarme, then the next way is to put the troupes of two or three such diminished stocks into one, bedewing or sprinkling the same before with some sweete liquor, and after to shut them vp in the same hiue, and set something within it for them to eat, vntill they be well woooned vnto it, and so to keepe them three daies closed vp, giving them onely a little fresh aire at some small and little holes. And if it come to passe that the king of the olde hiue, which we shall haue left alive do die, then you must choose them another king from out of the other hiues (where there be many) and giue them him to gouerne. And in case that meanes to do this doe faile, or that there bee not any purpose or inclination to take newe swarmes from other hiues, you must then breake downe all the little chambers and lodgings of their yoong kings, to the ende that the yoong swarmes which shal be together in the old hiue, may not betake themselves to their first haunt, but still abide and continue vnder the old, but their new king and captaine, and this they must of necessitie do, being compelled through want of their naturall and chiefe gouernours, and by keeping themselves with their ancients.

In rainy weather continuing long, bees not being able to go out of their hiues to seeke pastures, and to bring home foode vnto their yoong broode, you must not faile to helpe them with some provision

of

of hony, vntill such time as they shal be able to flie abroad to get their owne liuing, and to worke their hony combe of: for otherwise you shall quickly make an end of them, as it hath bene oftentimes seene to come to passe.

All the Sommer they must gather honie (whereof we will speake hereafter) and at the same time euerie ten daies their hives must be opened, and smoked with oxedung: and afterward be cooled, by watering the emptie partes of the hieue, and casting thereinto coole water: and likewise be made cleane, and all grubs taken out of them if any be therein: and after this let them rowle and tumble themselves vpon the flowers, and then you must not take any thing from them, that so you may not annoy and become tedious vnto them too oft, and so cause them to flie awaie in despaire. In some faire day, about the end of Autumne, you must make cleane their hives, looking that it be hot also and calme: and if at this time there be found euer a combe vngathered and not pluckt away, which sometime was leane and thin, you must not therefore kill the bees, as many doe; but rather to saue them you must sprinkle it with a bruth, dipt in honied water or in milke, hauing driuen them together on a heape with the smoke; keeping them close and shut vp after this in their hieue: for all the winter you may not open nor touch them, but keepe them close within till the Sunne beames breake forth againe for their comfort, and that well couered, stopping without whatsoeuer clits and holes, with mortar and neates dung mingled together, in such sort that there be nothing left open, but onely a way for them to passe in and out: and also, though their hives stand vnder couert, that further they be couered againe with stubble and boughes, and so much as possible may be kept from cold and windes, which they feare and abhor more then any other thing: to foresee likewise that raine and snowe may not hurt them, to make prouision of store of the iuice of sweete balme, honied water, sugred water, milke, or other liquor which may be fit and conuenient for them, in which liquor you must iteepe pure and cleane wooll, whereupon the bee sitting may sucke out the iuice or liquor that is therein. And to the end that they may not endure hunger in the winter, and that they may not neede to eate the honie vp that they haue made, and which is left vtaken from them, it will be good to giue them at the doores of their hives, in little pipes or troughes made of reedes, elder, iron, or lead, so prepared as that the Bees may not drowne themselves when they goe about to drinke, some drie figs, stampd or tempered in water or boiled wine. It will be good likewise to giue them some raisons out of the fraile stamped and sprinkled with water: or else some corans stampd with verie good wine and boild together: or else some drie abricots stamped with honie and mixt with boild water, or of pancakes made of very ripe corans,

rans, of the best figs and boiled wine mixt together: or else to cast them in at the doore of the hieue some sweete liquors with siringes, as milke and specially goates milke as the best of all the rest, to beate out the scarcitie and poorenes of the time vntill the spring.

In the combs there are found drones like vnto bees, but greater, which (although they be vnprofitable, because they gather no food or sustenance, but eat vp that which others bring in) yet do serue for some thing, for they hatch the young brood, whereupon come the small bees: and therefore you must not kill them all, but keepe a certaine number, to the end that the bees may not grow slothfull and idle.

The threescore and sixth Chapter.

Of the remedies of the diseases that bees are subiect vnto.

THE Bee is subiect vnto the plague, in which case there is no more soueraigne a medicine for them, then to carrie them far off. Again, they are troubled with the fluxe of the belly, in the beginning of the spring when the spourges are in the flower and the elme-trees bring forth their seed, where they are giuen to feed greedily and with great stomackes as hauing fasted all winter, and they be so desirous to eate of these new and young flowers, as some folke are to eate of new apples, and thereupon they die quickly, if it be not speedily foreseene, in such sort as that in some places of Italy, where the elmes do grow vpon plants the Bees cannot continue or indure long. For this cause you must quickly helpe this fluxe of the belly, with the rindes or seedes of pomegranates pounded and searced, and afterward mixt with honie and sprinkled with good sweete wine; or else with dammaske or Languedoc raisons dried, pounded, and mixt with good sweete wine, or with honied water wherein hath bene boiled rose-marie, or else with *Marcellis* figges, which haue bene boiled a long time in water, all these giue them in pots or pipes of wood, to the end they may eate and drinke thereof.

Bees are sometimes sicke, when as euery yeere continually there is great store of flowers, for the bees thereupon labour rather to make great store of hony then any young bees, and so it cometh to passe that many die of excessive toile and trauaile, and further because those which remaine are not supplied with young and new store, they likewise die all of them. Wherefore when in the spring time the meddowes and fieldes are filld with flowers, it will be good euery third day to stop vp the places whereat they go in and out of their hives, leauing onely a few little holes, but such as the bees cannot get out at, that so they may be turned from making of hony, and that so also

when

when they perceiue that they cannot fill vp all their waxen chambers with honie, they may applie themselues to fill them with yong Bees.

Lyce and grubs

If lice or grubs, which are ingendred of the filth in their hives, do trouble them, you must smoake them with a bough of the pomegranate or wilde figge-tree.

Heat or cold.

They fall into a consumption and become all dried away after hauing indured a very great heate or cold. And it is evidently perceived, for it is often seene that one beareth out of the hive the bodie of another that is dead, and that some of those that are within and alive, become all pensive and sad, after the manner of a generall mourning: which when it happeth to them, they must haue meate made of honie boild and beate with galles, or dry roses.

Fighting betwixt swarms.

You shall staie the brawles betwixt swarms, if you cast vpon them some small dust, or boyled wine, or honied wine, or other like liquor, which by his sweetnesse is common and familiar vnto Bees.

Cruel and fierce bees.

The bees that are cruell and rigorous, will become tame and gentle, if you vse to go amongst them oftentimes.

Corrupted combs.

Sometimes there is such store of honie combs made, as that for want of bees they stande emptye, whereupon it cometh that they rotte, and destroy the honie by their rottennes, and the spoile of the honie causeth the bees to die. For to remedie this, you must put two swarms into one hive, or else cut away the putrified combs with a very sharpe and well whetted tooke.

Against butterflies.

The butterflies which vse sometimes to hide themselves in the hives, and do kill the bees, will themselves be killed, if when mallows are in flower, and they abounding in great quantitie, there be set amongst the hives in the night season a high and narrow mouthed tinne pot, with a burning light in the bottome of it, for presently all the butterflies will hasten and flie thither vnto the light, and flying about it will burne themselves, for they cannot easilie from a narrow bottome flie right vp, neither yet shunne and auoid the light in getting themselves farre off from it, seeing they are forcible kept within a narrow scantling, the pot it selfe being not wide but narrow.

Against drones.

To kill drones, which doing no good deuoure the honie: when it shall be neere night water the coverings of some vessell which you shall set neere vnto the hives with water, the drones will all of them flie vnto those coverings to coole themselves and quench their thirst, which they haue gotten by eating too much honie: and then it will be an easie thing to kill them, and as for stinging of you, you neede not feare it, for they haue no sting at all,

The

The three score and seuenth Chapter.

Of the manner of gathering honie.

THE gathering of honie, for which there is so much labour taken all the yeere long, is chiefly effected at three seuerall times, as shortly after the spring, all the sommer, and in the beginning of autumn. But there cannot any prefixed day or certaine time be appointed for the same, seeing it dependeth of the finishing of the combs: for and if you draw them out before they be thoroughly wrought, the bees grow male contented, and cease to worke any more, by no reason of the thirst which they indure. The time of gathering honie is knowne, by the bees their no more making of a great noise, but turning the same into a soft and low buzzing, as also if the holes which are aboue in the vessels be stoppt with waxe, if the bees driue out the drones which are like vnto heces, but a greater beast, and altogether vnprofitable and without taking of any paine, for they gather no food, but eate vp that which others bring in. The howe of taking the combs is commonly the morning, for it is not good to disquiet and trouble them in the heate of the day, and this must be done with two iron instruments or kniues: the one whereof must be long and narrow for the cutting away of the combs; and the other for the scraping away and pulling out of the filth that shall be fallen into them. It will do well to moisten these two tooles oftentimes in water that so the waxe may not stick vnto them, and that the bees which shall be abiding within may not be hurt. The vessels may not altogether be emptied, and so all the fruite taken out, but there must be left remaining as it were the tenth part, or (as others say) the fifth part as well in the spring, as in sommer: but in autumn two parts must be left, and the third onelie taken: for by this meanes you shall not much discontent them, and with all you shall leaue abundantly behinde for them to eate and feede vpon. The gathering of honie most commonly vsed, and most reasonable is but to take the most ripe combs and those which are best perfected, and with all of them but two thirds. If the hive be halfe full of honie, then there is but the halfe of that to be taken away: and if it be vnder halfe full, then there must be taken from it with discretion proportionably. Furthermore, you must make them come forth with the smoake of neates dung, or of a wolfs bladder or galbanum, or wilde mallows, and with the iuice of this herbe must he be annoiued which shall gather the honie to keepe him that he be not stung: or to make him bolde let him take a maske with a paire of spectacles set in it to giue him light to see; and let him also haue a linnen cloath close writhed about his necke and head, and gloves vpon his hands for to geld and handle them to his good

good contentment: or, which is better, let him haue a linnen hood to compasse and go ouer his whole face, made of a most fine and close wrought kall, like vnto networke: for by this meanes a man shall see at his pleasure that which he goeth about to doe, and yet be free from the danger of the Bees stinging. But notwithstanding that you take from the Bees their worke of hony and waxe, yet you must not kill them, nor drue them far away, if it be possible, but to keepe them for to draw yet more profit out of them afterward; and when as yet there is no hope of good of them by reason of their oldnesse, euen then you must not vse any ingratefull cruelty in steed of recompence, and murderously massacre them. In the countrie of *Tuscany* in remembrance of the bountifullnesse of this poore cattell, it is forbidden vpon a great penaltie to kill Bees, so long as possible by any meanes they may be kept aliue. It will be good therefore for their safegard, at such times as their combes are to be gelded, to smoke them in such sort, as that they may withdraw themselues safely into some corner toward the midst of the couering of their hieue, and not to come forth: or else you shall make them come forth the couering of their hieue taken awaie, and a sacke tied to the mouth of the hieue; and after smoking the Bees from vnderneath, for so they will betake themselues into the said sacke, which must be fast tied and laid vpon the ground; until that the hony be taken away at leasure. After this the hieue or vessel must be set to the mouth of the sack and the couering put vpon it againe that so the bees may returne and enter into their house againe to begin their worke anew: or else set neere vnto the hieue which you meane to geld and her empty hieue, which shall be perfumed and hung about with sweet smelling herbes, and it shall haue a hole in the corner as bigge as ones hand made round, to the end that Bees may go in at it, hauing made an end of the building of their combes euen to the top, and downward more than the halfe part of the hieue, by this meanes you shall take away at ease such hony as is in the hieue, and not loose any part of it, seeing that it may be taken forth at any howe that you are disposed, without hurting of the combes, and without molesting or troubling of the Bees in smoaking of them, to cause them to gather together vpon heaps into some corner, or else by contraining them to flee some whither else. The combes being taken away, shall be carried to the place where you meane to make the hony, and stopping the windowes of this place preuent the coming of Bees thercinto: for they will busily seeke the treasure that they haue lost, and if they find it, waite and consume it: and therefore to cut off all meanes of entrance for them into this place, you must there raise a smoke which may drue away them that shall aslaie to come in.

The

The three score and eighth Chapter.

Of the making of hony and waxe.

YOU must make your hony the same day that you haue taken out your combes, although they be warme and somewhat hot. And for the doing hereof, the combes must be set one against another in a willow or ozier basket, wrought verie cleare, and fashioned like an hypocras bag, after that you haue once clenfed away from the combes the seed of yoong brood, and all manner of other filth: and when the hony shall be run thorow the basket into a bason, that shall be set vnder it, you must put it into an earthen vessell, which must for some small time be left open, till it haue done boiling and casting forth of his froth by staying in the same: this done the pieces and lumpes of combes shall be taken out of the basket and pressed, and there will hony come out of them, but not so good as the former, which must be put by it selfe, that so the pure and that which is indeed very excellent may not be corrupted thereby. After that the remainder of the combes is thorowly pressed out, and washt in sweet water, they shall be cast into a copper vessell with some water, and so set vpon a soft fire to melt. This wax thus melted, shall be strained, letting it run out into water, and then being melted againe, with water you shall make it vp into what forme you will.

To make hony and waxe.

The three score and ninth Chapter.

Of the marks of good hony.

THE good Farmer maketh gaine of every thing, and by whatsoever he can perceiue necessarie for the inhabiting of his house. Now I dare boldly affirme that there are few things found about a countrey house, which are of greater increase and aduantage than hony. Againc we see what trafficke the Spaniards make with it, who through the barrennesse of their country, hauing no other means to enrich themselues, do keepe a great number of bees to make much hony of them: in like manner doe the inhabitants about *Narbone*, who send amongst vs great quantities of white hony, which we make serue for our vse: but I would aduise such as make a trafficke hereof, that they would not gather any hony but that which is good: for the labour and cost is no lesse to nourish and keepe bad bees, than those which are good.

The marks therefore of good hony are, that the hony be of a yellow colour, pleasant smell, pure, neat, and shining in euery part, sweet and verie pleasant to the taste: and yet notwithstanding this, hauing a certain kind of acrimony or sharpnesse, of an indifferent consistence

The marks of good hony.

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To make honie and waxe.

The threescore and ninth Chapter.

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The markes of good honie.

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sistence betwixt thicke and thinne, hanging together in it selfe, in such sort as that being lifted vp with the fingers end, it keepeth together in maner of a direct line, without any breaking asunder, for it should argue it selfe to be either too thicke or too thinne, if it should not hang together but breake, or else to haue some other vnequall mixture: it must not be long in boiling, and yeelding but small store of scumme, when it doth boile: aboue all it may not exceedingly smell of thyme, though some (as I my selfe doe know) doe greatly esteeme of such. And that which is gathered in the Spring or Summer, is much better than that which is gathered in Winter. White honie is not of lesse goodnesse than that which is of a golden yellow, so that there accompany it the other marks of goodnesse, such as that is which the Spaniards and men about *Narbona* doe send vnto vs being very white, and sufficient firme and hard, and therefore better without all comparison than any other sort of honie.

White honie.

New honie.
Olde wine.

Honie is best at
the bottome.

The vertues of
honie.

The tearme of
the bees life.

The distilled
water of honie.

Honie the newer it is, the better it is, cleane contrarie to wine, which is more commended when it is olde than when it is new. This also is to be marked in honie, that as wine is best at the mid-caske, and oile in the top, so honie is best towards the bottome: for by how much honie is more firme and heauie; so much it is the better as being the sweeter.

The vse of honie serueth for manie things: it prolongeth life in olde folks, and in them which are of colde complexion: that it is so, we see that the Bee which is but a little creature, feeble and weak, liueth nine or tenne yeeres by her feeding vpon honie. The nature of honie is to resist corruption and putrefaction: and this is the cause why gargarismes to cleanse and mundifie the vlcers of the mouth are made therewith. Some make a distilled water of honie, which causeth the haire that is fallen away to growe againe in what part of the bodie soeuer it be.

The seuentieth Chapter.

The maner of preparing diuers sorts and diuers compositions of honie.

Hony of violets,
roses, &c.

Honie hath such vertue, as that it preserveth & defendeth things from putrefaction and corruption, which is the cause that when any are disposed to keepe roots, fruits, hearbs, and especially iuices, it is ordinarily accustomed to conferue them in honie, wherevpon it cometh that we vse these names, honie of violets, roses, rosemarie-flowers, damaske-raisons, myrtles, anacardie, bugloile, and such like, which are made with iuice and honie, of which only we will speake in this place.

The honie of violets, roses, bugloile, mercurie and rosemarie flowers,

ers, are all prepared after one sort: Take of the iuice of new roses a pound, of pure white hony, first boild and scummed, ten pounds, boile them all together in a cauldron vpon a cleere fire: when these boile, adde vnto them of new roses yet greene, cut in sunder with cisors or sheares, fower pound; boile them all vntill the iuice be wasted, stirring them often with a stick. This being done straine them, and put them in a earthen vessell for to be kept, for it is better and better after some time. Otherwise and better, and oft vied: Stampe in a mortar new roses, adde like quantitie of honie, and set them in the sunne the space of three monethes, afterward straine them, and boile the licour strained out to the thicknes of honie. Otherwise, Take equall partes of honie and of the manifold infusion of new roses, boile them all to the consistence of a syrupe; looke how manie times the more double the infusion of the roses is, by so much the honie of roses will be the better: and this same is the most fit to be taken at the mouth, as the first and second are for clysters. Or else take new rawe honie before it euer boile, or hauing but lightly boild, and put thereto some quantitie of sweete water, red roses that are new and newlie dried in the shadowe, their white taken away, and a third part of honie, put them all together in a glasse vessell, or earthen one well glazed, which being close stopped shall be set in the sunne, and stirred euerie third day: and thus you may fitly prepare honie of roses and rosemarie flowers a great deale better then after any of the former waies.

Honie of myrtles, is made with a pound of the iuice of myrtle-tree, and two pound of honie, all boild together vpon a small fire.

The honie of damaske raisons is thus made: Take damaske raisons cleansed from their stoncs, steepe them fower and twentie howers in warme water, and after boile them to perfection: when they haue thus boild straine them through a strainer verie strongly, and after that boile them againe to the thicknes of honie.

Mel anacardinum is thus made; stampe a certaine number of the fruite Anacardie, and after let them lie to steepe for the space of seuen daies in vineger, on the eight boile them to the consumption of the one halfe, afterward straine them through a linnen cloth: the iuice that is strained out must be boild with like quantitie of honie.

The manner of making honied water: Take one part of honie, and fixe partes of raine water, put all together in a little barrell, well pitcht and stopt aboue, that so no aire at all may enter in at it: afterward let it out in the hottestt weather that is, as in Iulie, but out of all raine, and leaue it so about fortie daies, but with such proviso as that you turn the barrell euerie eight daies, to the end that the sunne may worke on all sides of it. To make it more effectuell and of greater vertue, it will be good in quince time, to mixe therewith the iuice of quinces, in such quantitie as that there may be for euery pound of honie,

honic, a quarter of a pound of iuice of quinces. Some before they put the hony and water together into the barrell, boile them together vpon a cleere fire, or vpon coales without smoke, they scum the hony and boile it to perfection, which they gather by casting an egge into it, which if it swim aboue, then the hony is sufficiently boiled, but and if it sinke, then it is not boiled inough.

*A wine made
of hony and
water.*

The Polonians, Muscouites and Englishmen do make a drink hauing the forme of a honied water, which is far more pleasant and more wholesome than many mighty wines, and it is called Mede. They take one part of hony, and sixe parts of raine, riuer, or fountaine water, they boile them together, and in boiling them take off the scum very diligently, and continue the boiling till the halfe of the whole be consumed: being cooled, they put it vp in a wine vessell, and after adde vnto it six ounces of the barme of ale or beere, to make it purge and boile vp, and withall they hang in the vessell a nodule or knot full of cinnamon, pepper, ginger, graines of paradise and cloues: also they cast into the vessell a handfull of elder tree flowres: they set the vessell in the sunne in summer time, for the space of fortie daies, or in winter they set it in some caue vnder the ground. This kinde of honied water is very soueraigne against quartaine agues, ill dispositions of the bodie, diseases of the braine, as the falling sicknesse, apoplexie, and palsey, in which cases wine is forbidden.

*Marchpaines
of hony.*

The countrie men of *Prövence* and the Italians do make marchpaines of hony and almonds after this maner. Take white hony three pound, and three whites of eggs, beat all together with a wooden pestill in a basen, till it grow vnto the colour of milke: afterward set the basen vpon a fire of coales, stirring all together very carefully with the pestill, till such time as it become somewhat thicke: then put thereto sweet almonds stamped and fried, such quantitie as shall be needfull for the making of it of some good consistence: being yet hot, powre it out vpon some marble, or polished table: make vp your marchpaine thereof, and it will be singular good for them to cate which are in a consumption, as also to procure spetting.

The seuenty and first Chapter.

*Of the markes of good wax, and the manner of preparing
diuers sorts of waxe.*

*The signes of
good waxe.*

GOOD wax must be of a very yellow colour, smelling sweete, fat, light, pure, firme, close, neat and purified from all filth. It is the ground of other waxes called artificiall, as being by art made into diuers colours, as blacke, red, greene, and white wax.

*Blacke wax,
Greene wax,
Red wax.*

Blacke wax is made with althes of burnt paper; greene by putting virdegreene vnto it; red by putting of the roote of *Alkanet* vnto common

common wax, or the powder of Cinnabrium; but white wax is made ^{white wax.} many waies, but for the moit part, after this sort and manner. Melt wax in some vessell fit for the purpose, afterward straine it from all manner of superfluities through a strainer; being thus strained set it vpon a soft coale fire, in a great skillet or vessell of copper, to keepe it liquid and in heate: close there-by you shall haue one or two great barrels, made after the manner of lee-tubs, full of water newly drawn out of the well, in which you shall wet two boords that are round, flat, and halfe finger thicke, fashioned like round couers or lids of pots, and in the midst they shall be made fast to a little sticke or wooden pinne in manner of a graspe, by which one may handle them: you shall dip these same (first well wet in water) in the vessell where the wax shall be melted, and presently after you shall pull them out full of wax; and put them in the water tubs, where the wax will abide, that shall haue cleaued vnto them: you shall gather this wax together, and spread euery piece by it selfe vpon hurdles couered with linnen cloth, in the greatest heat of the sunne, in the moneth of Iulie, and vpon these you shall leaue it till it become white. In the meane time, while it shall thus lie in the sunne, if it happen that the heate of the sunne be so vehement, that it melteth the wax so spread vpon the hurdles, you must water and sprinkle it often with coole water, and by the same meanes also defend it from the bees, which will flie thither from all corners to get out the honic. Otherwise, boile the waxe in water so oft, as vntill that you see it white: howbeit this manner of whitening wax is not so sure, nor of so easie charges as the first, for the often melting of the wax, doth waste it very much: but the drying of it in the sunne, bringeth no great losse, as you shall best finde after prooffe and triall made.

To make searing candle: Take two pound of new wax, a pound of good rosen, and a quarter of a pound of turpentine; mix them and make searing wax.

The end of the second Booke.

The third Booke of
THE THIRD BOOKE
 OF THE COVNTRE
 FARME.

The Orchard, or greene plot.

The first Chapter.

Of the differences of Orchards or greene plots, and the inclosing of the fruite garden.



Here are three sortes of Orchards or greene plots, the one (otherwise called an harbour) contriued with greene bankes, and this is pointed out and provided in a field couered with green grasse, and a fountaine in the midit of it, and wrought into diuers plaine and euen plots and branches, consisting of loftes, which are sustained and borne vp with carpentrie or frames of timber, vnder which a great number of people may sit couered ouer head. Of this sort I haue seene at Basill and manie other places in Germany: and, to fit a place for this manner of greene plot, it is requisite that it be clenfed from all maner of stoncs and weedcs, not so much as the rootcs left vndelstroied; and for the better accomplishing heereof, there must boiling water be powred vpon such endcs of rootcs as staying behind in the ground cannot be well pulled vp, and afterward the floore must be bearen and troden downe mightily then after this, there must be cast great quantity and store of turfcs of earth full of greene grasse, the bare earthie part of them being turned and laid vpward, and afterward daunced vpon with the feete, and the beater or pauing beetle lightly passing ouer them, in such sort as that within a short time after, the grasse may begin to peepe vp and put forth like small haire; and finally it is made the sporting green plot, for Ladies and Gentlewomen to recreate their spirits in, or a place whereinto they may withdraw themselues if they would be solitary and out of sight.

The second sort of greene plots is that which our ancient Frenchmen, who first wrote our *Romaine* discourses and histories, haue taken and vied for a place of pleasure fit for Princes, and was called in ancient time after the name of a sojourning or abiding place, but now by the name of a beautifull prospect. Which beside the statly building singularly contriued in partitions, diuersitie of workes, and most faire windowes, compalled in with goodly water ditches, fed from continu-

*The sojourning place.
 The beautifull prospect.*

all running springs, doth contain an inner and bafe court with gardens for pleasure and fruites, with vnderwoods, warrens, fishponds, and whatsoeuer goodly and beautifull thing is woont to stand about princely pallaces.

The third sort of greene plots is that, which we intend to trim vp in this place, and it may supplie the place of the fruite garden, for a house respecting and looking to thrift, and to keepe a housholde for husbandrie: such a one as we haue heere resolved to furnish and set out euery way well appointed, and in which we are more to regarde profite ioined with a meane and moderate beautie and comelines, then any vnneccessarie sumptuousnes.

Therefore to go on in our designed course and intended plot, this place requirerh, that next after the kitchen and flower gardens with their appurtenances: we make readie and trim vp a greene plot for fruite trees, containing in it as much ground as both the other gardens, and that without any manner of other alleies of diuision betwixt it and the gardens, or in the midit of it selfe, then such distance and space, as must of necessitie be betwixt the trees, and whereof we will speake more hereafter, and without also whatsoeuer other husbandrie, grasse or other things, whereof you might hope to make some profite vnderneath, whether of haie, or any such other thing which would grow there: for the fruite tree would not haue his sustenance purloined or kept from it, by the tilling of other plants which might be seated about it, neither doth it craue to be kept warme in winter, but onely tilled and ordered according to his seasons, because that otherwise it would yeeld no profite vnto the owner thereof.

The situation of the orchard would be vpon some hill toppe, or some little hill, rather then in a plaine ground: for besides that such seates haue better aire, more pleasant and delightfome for contentment of contemplation and view, & diuers other allurements which will there offer themselues; the tops of hills are yet more apt to containe greater number of fruite-trees to be planted therein, then the plaine ground possible can: for such as stand in plaines, if they be planted anie whit neere, do annoie one another with their shade: the other on the contrarie side (according as it riseth more and more from the foote) causing euery tree to ouer-looke his fellowe, taketh away the inconuenience of such overshadowing one of another. It must also be planted more vpon the north then vpon the south quarter, that so it may minister matter of reioicing to such as shall behold it out at the windowes in his beautie and iolitic: Indeed if it be planted vpon the south, it is more open vpon the sunne, whose heate is verie requisite for fruite trees, but then it would not stande so faire for prospect: besides, that it would be offended and hurt of the dust and filth of the threshing floore when the corne is threshed, if in case it

should stand neere vnto it.

In any case let it not stand vpon the Northwest quarter, because it is a most deadly enemy vnto all sorts of plants, but principallie of flowers, which it cingeth as if a fire had passed that way, and the cause is for that it commeth from the sea side, and taketh part with the north, which is verie rough and sharp, but yet not so dangerous as that northwest winde which bloweth once a yeere, chieflie in the spring, and spoileth the cherrie-tree flowers, and the vine more then any of the rest. Whereupon there rose this Latin verse, *Va tibi galea, per quem sit clausa taberna*. In any case let not the ground whereon you plant your orchard be marshie or waterish, for the fruits growing vpon such grounds are not well relished, neither yet will they last long: it must likewise be enriched one yeere before that it be cast and digged, to make any nurserie there, either of feedes or stockes, and after it hath bene the second time digd and dunged, or marled, you must let it rest and digest his dung and marle: and in like manner pick out the stones that are in it most carefully. And as concerning the naturall disposition and goodnes thereof, it must be fat in handling, blacke in colour, and which mureth easily in breaking and stirring it with your fingers, not being hard, clayie, chalkie, or sandie.

The inclosure or defence vnto the orchard shall be either a hedge of quicke-set, which is in truth the most pleasant & conuenient, though yet the wall be more profitable, as being more strong, and built in lesse time, which also being planted and handfomely dressed, affordeth not much lesse pleasure then the hedge; or else if you like it better, a ditch cast about it, with a quicke-set hedge set vpon the raised side thereof: but in this according as the sufficiencie and reuenues of the farme will beare it out: yet alwaies prouided that it be out of the way of the cattell, and where no man can come, except he enter in at the gate: and granted that the wall is the surest kinde of defence, as also the strongest, most profitable, and perfected in least time. And in as much as the orchard is altogether dedicated and appointed for the matter of planting, grafting, and transplanting of trees in it: we will assigne out certaine places wherein the nurserie of seeds and the other of stockes may conueniently be appointed: which nurserie of feedes shall be as a well furnished shop to afford new store of plants, to furnish the orchard at all affaires and times of need.

We will first sowe our nurserie of feedes on that side by which we go into the orchard, and close vnto it the nurserie of stockes, where shall be planted wilde ones, remooued from out of the feed nurserie, to be afterward grafted vpon in their time and season. On the other side we will plant fruits vpon nut kernels, and transplant and graft them after diuers waies. In those parts of the two great void places where they are sundred the one from the other with a great path, we will

A briefe of that
which shalbe
spoken of in this
third booke.

will according to their kinds, sure out and set our great trees: and at the end of them we will pricke our oziers, so as they may for their better growth receiue refreshment from some small brooke or water course.

The second Chapter.

*Of the seede nurserie, that is to say, of the planting
of trees on pippins or seedes.*

Trees grow and spring out of the earth, either without the worke and industrie of man, or else by his toile and skill painfully imployed: of such as grow by the skill and industrie of man, some grow of seeds, that is to say, of kernels, commonly called pippins, or of other seeds, as of nut kernels, cherrie stones, plumbe stones, &c. being thrust into the ground: other some of shoots & small twigs branching from the roote at the foote of the tree, hauing their nourishing roots, and drawing fibres from the full growne rootes of the tree, or else of themselves. Some growe of buds and blossomes, as sciences: or of young branches or of boughes: some of the multiplying of branches, if especially the tree be yet young and pliant: others are grafted one vpon another. We will first inreate of the making of them grow in the seede nurserie of their feedes, and so in order afterward we will in-treate of other meanes of making trees to grow.

For the ordering therefore of your seed nurserie, and furnishing of it with pearre trees, apple trees, quince trees, and others growing of seeds, you shall cause to be digged good and deepe, a great quarter in a good earth and cherishing mould: and that if it be possible a winter before you sow them, to the end it may thereby become well seasoned, and you shall almost mixe amongst it halfe as much dung as the earth comes to that you turne vp, that so it may ripen & rot with the earth, & so be kept in great ridges, vnto Cyder time which is in September and October. At which time take the drosse of the said fruits as it commeth out of the presse, or a little after, so that it be before the seeds be rotted or corrupted, and chafe and wipe them very well betwixt your hands, then laye flat and square your plot or quarter, and that good and close, and make it out into borders of the bredth of fower feete or thereabout, and making pathes, by casting vp the mould betwixt euerie two, to the end that they may be wced vpon the one side and the other without treading vpon them. This being done, sow your drosse there in such sort as that the earth may therewith be lightly couered, and then afterward couer it againe with the earth which you haue cast vp in making of the pathes or hollowed furrowes betwixt the saide borders, and rake them ouer afterward, that so the drosse of the apples may be well broken and spread, not lying together on heapes.

Otherwise:

Otherwise: drie the foresaid pippens, and keepe them to the winter following, and afterward about the latter end of Nouember, or the beginning of the spring, sow them in manner as hath beene said, without casting vp any earth out of the passage furrowes betwixt the borders when you shall measure them out: but rake them in a little with your rake, and throw thereupon good store of thornes and boughes very shortly after you haue thus sowed them, that the hens or hogs may not doe them any iniurie. When the pippens are put forth of the earth, and growne for the space of a yeere, take away the thornes and weede away all the weedes from amongst them as oft as you can, and suffer not any one to grow vp in height with them; for feare that when you shall come to pull vp a stiffe and strong growen weede, you pull not vp therewithall the little pippin and seede of the tree. Water them if the sommer shall fall out drie, and begin to weede and lop them, to acquaint them with the hedgebill, and to keepe them still so bare of branches, as that their sap may be employed all wholly in the making of one faire and lustie bodie and stocke, and not many: afterward pull them vptoward winter, before they haue begun to blowe, to transplant and remooue into the nurserie of stocks. To cause them to shoote and put the sooner out of the earth, you must steepe their kernels in water or milke for the space of two or three daies: and you are heere to vnderstand, that the seed of the mulberry tree doth not grow so hastily, or bring forth so good fruite as the seed of the fig-tree.

To sow the elme trees

For to sow the elme, you must gather his seede before the tree be couered with leaues, which is in the beginning of March, at such time as it beginneth to be yellow: afterward they must be dried two daies in the shadow, and after that sowed in a sufficient firme ground an inch deepe, and watered often if there fall no raine.

The bay tree must be sowed a foote deepe in the ground, and sower seeds together: transplanting and remoouing it a yeere after into some other place: and in like case you are to deale with all such like seeds, whether they be of cyprus trees, myrtle trees or others.

The third Chapter.

Of plants comming of stones.

The setting of stones.

FOR your plants of stonie kernels, as of oliue trees, cherrie trees, plum trees, almond trees, peach trees, chesnut trees, pomegranat trees (if so be that pomegranat trees be rather to be reckoned amongst them which haue stone-kernels, then amongst the other which haue the soft kernels) abricots, and date trees; you must drie the stones, as they come fresh out of their fruits, which you meane to set

set in the ground at such time as the sunne is not very sharpe, and in the shadow thereof: and see that it haue beene steeped in milke or water three or fowre daies before, and then thrust it into the earth. But this must not be done but in the beginning of winter, that so they may first breake forth in the spring; for and if you put them into the earth before winter, they may also sprout and put forth before it come, and so finding them yong and tender when it commeth, may preuaile against them to kill them, they not being able to resist the rigour and roughnes of the cold and frosts. But and if for your auoiding of some labour you will graft them in their nurserie, that is to say, in the place where you first set them, and where they haue put forth, without remoouing of them to any other place, then set in euerie hole, three, fowre, or fise stones: and if all of them spring vp and take roote, yet you must let none but the fairest stand and continue to graft vpon in the place, and as for the rest they would be puld vp and remoued into some other place.

In what season soeuer it be that you set your stones, yet see to it that the ground be good, and digd very deep, but put much small dung amongst it, either alone or mingled with dust gathered out of the high waies, and set them three fingers within the earth, and halfe a foot one from another, watering them three times euerie moneth, especially in sommer when it falleth out drie, and weede them once a moneth. Especially see they be set in a faire soile, and open vpon the sunne, if so be you would haue a well fed and pleasant tasted fruite: for otherwise if you set them in a shadowed place, though it be of a good soile, indeede the fruit may be faire to looke to, but vnauourie inough to eate. When the stones are set and haue taken footing and are become somewhat pretily fed, pull them vp about A duent, which you mind to transplant, and breake off the points of their roots, and strip them of all their branches, before you set them downe againe in their newe appointed standing: and know that a double remoue doth make the wild to become free conditioned and better, bringing vnto them great advantage.

And as concerning particular properties belonging to euerie stone and how it must be set, it is to be known that grosse nuts, all maner of peaches, wild figs, almonds, chesnuts, small abricots (but especially and most singularly well the branches) becommeth free and reclaimed, being set of a stone, for seene that they finde as good and as faire a soile, as the trees enioy, from whence the fruit of the said stones were taken.

The stone of the peare-plum-tree must be set in a colde place, a foote deepe in the ground, the point downward, euerie one a foote from another, and this in Nouember in high places, and in Ianuary in low places.

The

Ground for the setting of stones.

Great and grosse nuts. Peaches. Peare-plum. Almonds. Chesnuts. Abricots.

Lime-tree.

The stone of the lime-tree must be set after the manner and fashion of the stone of the pearre-plum-tree, but it is long and slow in growing out of the earth.

Plum-tree.

The stone of the plum-tree must be set in a fat ground, a foote deepe, and that in Nouember and February, and they are to be removed the same time of the yeere, making their holes and pits neither too wide, nor too deepe.

Pine-tree.

The stones or nuts of the pine-tree must be set in cold places, in February and March, or about the fall of the pine apple, or shortly after, in pits well digged and of a good mould: the apple may not be broken by violence, or with any iron instrument to get out the kernel, but you must attend till it be opened, and set vpon it gaping. And the pine-nuts must be steeped three daies before you set them, and then you must set seven together. Some lay them in little baskets, and cut them when they are sprung vp. They need no remove, but and if you do remove them, you must looke in the taking of them vp, that you hurt not the chiefe and principall rootes.

Small nuts.

Peaches.

Auberges.

Great abricots.

Small nuts and plums of all sortes, peaches the small and great, and great abricots, in whatsoever good ground and pleasant soile their kernels be set, yet they grow not altogether like vnto the fruit of their trees whereof they were gathered: and therefore they delight rather to be grafted vpon their yong stockes.

The date stone.

The stone of the date which bringeth forth the date-tree, must be set the greatest end downward, two cubites deep in the earth, and in a place enriched with goates dung, and the sharpe side vpward, it dotheth to be watered daily, and that there should euery yeere be salt sown about it, and withall it must be removed.

The seeds of limons, citrons, oranges, Assyrian citrons, & such like, as hath been said in the second booke, must be prickt down vpon beds well prepared and dunged about the moneth of March, and the sharpest end downward, halfe a foote one from another, and a finger and a halfe deepe in the ground, they loue to be much watered, after when they are growne a foote high, remove them to the foote of some wall, open vpon the South: and in Winter when the time is hoarie, cover and fauour them in such manner as we haue spoken of in the second booke: as much may be said of pomegranate kernels, and bayberries, as you may vnderstand by the second booke.

Pistaces.

Pistaces doe require greater diligence and delight to be sown, as well the male as the female, in a very fat ground and well cared, the backe turned to the East, and this about the first day of Aprill: and at the same time of the yeere you may graft them vpon themselves, notwithstanding that some doe graft them vpon the almond tree.

The peach plant.

The peach stone would be set presently after that the fruite is eaten, there remaining still some small quantity of the flesh of the peach about

about the stone: and for the longer lasting and keeping of it, it lo- ueth to be grafted vpon the almond tree.

The fourth Chapter.

Of the nurserie for stockes.

IF you would haue a beautifull and pleasant fruite of your trees, it is not enough that you should onely sowe or set your seedes or stones in a good soile, but it standeth you as much vpon to remove them after one yeere into another place: for this translating of them doth so delight them, and reuine their vigour and spirites, as that they yeelde more pleasant leaues, and a better fedde and liking fruit. For and if you will bestowe this fauour vpon wilde plants, you shall finde them to become of a gentler nature, and farre more excellling beautie. Wherefore when the trees which shall haue sprung vp of seedes or stones, set or sown, shall haue come by some little nourishment, and grow in the seed nurserie, take them vp vpon a new moone, at night, with as many roots as possible may be; and if it happen that any of them be spoild or broken, cut it: looke vnto it also, that you do not pull it vp when the northren winde bloweth (for this winde is an enimie vnto newe set plants) and set them againe presently, least the roots should spend themselves, it must not be in a hot, or cold weather, nor in an excessive winde, nor in raine, but when it is calme and very faire, chusing rather a cloudie day, then when the Sunne breaketh out hote, and the Moone being in her increase: but and if you should not haue the leisure to remove them so soone, or and if you would tend or carrie them somewhat farre, binde them vp in their owne earth mingled with dung, and make it faste thereto with woollen cloath or leanes. When as you take them vp, marke what part standeth vpon this or that quarter, to the ende that you may set them downe againe vpon the same quarter & coast of the heauens, for and if in removing them you set them in a contrary soile and situation, in respect of the heauens, they will not thriue so well: and that is the cause why those that buie new plants, most diligently inquire in what manner of ground they stood, and what aspect of the Sunne they were most open vnto, that so they may set them downe againe in such like ground, and in the same aspect. True it is that this obseruation seemeth too ceremoniall vnto me, and exceeding harde continually to be kept, seeing wee buie trees at Paris sometimes to plant, whose first situation we doe not knowe, neither can we learne, and yet notwithstanding being planted, they cease not to thriue and prosper. And againe, what cause is there of any such ceremony, seeing the sunne which is the nursing father of all plants, doth visite euery daie all the sides of the tree, and that the ground wherein it is planted,

planted, is no lesse nourishing vpon the one side than vpon the other. These things weighed, about the thirde of December, you must lay flat another plot, and make a furrowed quarter, where you shall lodge according to the order of a hundred, the small wildings, which you shall haue taken vp out of the seed nurcerry, cutting off the ende and beardes of all their rootes, and which may be in any place about their slender little stocks, and that in a good ground, yea much better if it be possible than that is of the seed nurcerry. It is true, that the furrows must be made according to the goodnes of the ground, & the nature of the tree: for in a claye or hard ground, you must make your furrows the depth of three cubites: in a watry and marshie place, of three feet only. Some plants, as the ash and oliue tree grow better in the vpper face and top of the earth, then in the depth and lower parts of the same. Set in order your yoong wildings in the said furrows halfe a foot one from another, and there couer them, and leaue the space of a foot betwixt one furrow and another, that there you may make pathes to go about weeding with ease, and passe betwixt euery two furrowes. When thus your wildings are set, you must cut off their stockes close by the earth, and fill vp the pathes with dung, without euer going about to hide or couer the plants in the earth, and so soon as they grow, they must be well wedde round about and clenfed from weedes, and vaderdigged, or lightly digged sometimes in sommer round about, not comming ouer neere the rootes in any case: and they must be watered also on euenings, when it hath bene a very hot day, and when they haue put forth sciences for one or two yeeres, then going ouer them all, leaue not moe than one science to euery plant, and let it be the sleekest, best liking, tallest, and comeliest of all the rest, cutting the other off close by the stocke. As these sciences shall grow on, so still picke off cleane from them the small superfluous woode growing vpon them vpwart, and euen close also vnto the stocke: and this must be done in March or April, and then must some small prop or stay be prickt downe at the foote of euery wilding, for to direct and guide it by, tying them both together with wreaths of grasfe, but putting mosse or some soft thing betwixt them, that so the hardnes of the prop may not gall it when it shall be growne thicke. And thus you shall order and husband them till the time come when you must remooue them, if rather you make not choice to graft them vpon the place as they stand. When through forgetfulnesse you shall haue left your wildings or plants growen vp of seedes for two or three yeeres vntaken vp, you must furrow them as hath alreadye bene said, but with deeper digged furrowes, and then you shall not breake the rootes so much: and it will be fit and conuenient to cut off their branches vpwart, as occasion shall require.

There are found kernels of peares or garden apples that haue bene

beene gathered from trees that were sometimes wilde ones, or growen vpon trees, which haue alreadye bene often times grafted, which bring forth very straight trees, and also of comly wood, as if they had bene grafted from the beginning, not hauing any prickes or thornes, to argue them euer to haue bene wilde. Such yoong trees if you will remoue them as they are, or plant them out of their nurserie, without other maner of grafting them, they will not faile to bring you good fruit for the taste and eating, as also to make cyder of, but the best fruit doth alwaies come by grafting: for the fruit comming vpon grafting doth alwaies retaine a better forme, and groweth more and more kinde, and withall much the greater: but that which groweth of a kernell doth change as oft as the tree is changed which beareth it. And besides you must note, that although all trees which haue a strong fruit, growe better of kernels than of boughes; yet so it is, that a late seed doth bring forth but an ill-fauoured plant, especially the sayd seed being put besides his familiar and well pleasing ground.

The fifth Chapter.

Of plants, sciences, and shoots.

THE little sciences of chery trees growen thicke with hairy roots, and those also which grow vp from the roots of the great chery trees, being remooued, do grow better and sooner than vpon stones: but then they must be taken away and planted whiles they are yoong, as whiles they be but two or three yeeres olde: for when they are growen thicke they prosper not so well: and againe, if you stay till they be growen grosse, in remoouing of them you must then loppe them, and strippe them cleane of their branches, setting their great end in the earth the depth of a foot, and after treading downe the earth, and pricking downe withall at the foot of euery plant a little stake to holde them fast, and to let the windes and whatsoever other thing from harming them. But specially you must see that you cut not sciences at any other time than in Winter: for that moisture and coolenesse (during the time of Winter) is a meanes to conferre and keepe them, and thereupon also they grow and bring forth their fruit the better after ward.

The mulberrie tree groweth after the same maner of little sciences, although the best way of planting it be by taking a twigge thereof from the great branches which are cut from the old tree, of the length of a foot, and setting it good and deepe in the ground, and that in such sort, as that the ground may couer it, three or foure fingers, and this done, you must see that in Summer it be watered diligently.

Filberds in like maner doe growe of small shootes, which growe forth of the rootes of good filberd trees that are well rooted: these sciences

sciences must not haue their branches cut off when they are remooued, except they be growen very great and full of branches : but three yeeres after that they are remooued, if they doe not prosper and grow faire, you must cut them close by the ground, and they will put forth a bush of straight sciences, very smooth and neat, and of these you may chuse whether you will suffer the fairest onely, or all together, to grow vp and continue.

*Plants of the
olive tree.*

The sciences of the olive tree which you intend to transplant, must be long and faire ones, and full of grosse and thicke moisture, so as that they may be taken and grasped in the hand, and the barke thereby nothing hurt. They must be drawn ouer with dung mixt with ashes, the head and the foot, and after layd in the earth, as they were vpon the tree, the lower end more downward and into the earth, and the higher end more vpward and looking into the aire, for else they will not take at all : and this must be a general obseruation in transplanting of all maner of sciences.

*Plants of
plumbe trees.*

The sciences of a well stringed root of a good plumbe tree not grafted, doe yeeld, being transplanted, a fruit no whit inferior vnto that of the chiefe and principall plumbe trees, from which you haue taken them. But and if the old plumbe trees be grafted, you must also take grafes and graft them in other plumbe trees or wilde cherrie trees, or vpon sower cherrie trees, and not to vngraft sciences to transplant them.

French plumbs.

Garden plumbs and hartlike cherries doe not grow naturally, being planted of sciences, but desire rather to be grafted of grafes.

The sixth Chapter.

*Of pricking downe or fastening in the earth of small or
great branches.*

THe sprig or plant taken from boughs or branches doe grow more speedily and come to better perfection, than the seed of kernels, or the setting of stones, especially if it be put a litle besides his owne ground and soile, and of this sort are fig trees, quince trees, and pomegranate trees.

*The maner of
pricking downe
of sprigs of
mulberrie, fig,
quince, pome-
granate and
plumbe trees.*

When a man is disposed to pricke downe some small sprig of a mulberrie, fig, quince, cornell, pomegranate and plumbe tree, or many sprigs of all these kindes and their diuers sorts, he must cut them off betwixt the first of Nouember and the latter end of December, or a litle after : and he must see that these his sprigs be faire and wel fauoured ones, hauing a sound barke, full of litle eyes, and as thicke as a stick or thicker. He must chuse such as be straight and full of moisture, consisting of one onely rod, and of young wood, as of some three or foure yeeres old, and that they haue also as much old wood

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as they haue young : and they must be sharpened like a stake for the value of the length of halfe a foot, but the barke must be left on vpon one side, that their end which you meane to put into the ground, must be writhen and steeped in water : or else you must cleaue it a litle in quarters, and make it stand wide open and gape, with a beane in the cleft ; or else some pease or little small stone put in the midst thereof, and so pricke it downe in the earth a foot deepe : or else set it in a litle boxe of pease full of water, and so put them all into the ground together. The branches must be gathered vpon a tree that is a good handfull thicke, and hath borne fruit : they must likewise be verie sound, and they may be watered with a pipe, which goeth downe vnto the root. Obserue and marke well the place, nature of the soile, and aspect or situation of the tree from whence you haue gathered the branch, to pricke it downe on the same side, the like soile and the same situation, and lay vpon it some Elder tree, if so be that you would not haue it to shoot vp into a tall tree, but to continue alwayes low : the branches being such, they will take the better and not breake in the gathering.

To plant the fig tree after the maner of the Genowais, which shall beare fruit within three yeeres after (and it may be thus planted all Sommer time) there must be taken a fig tree branch that hath borne fruit two or three yeeres, and that either hauing leaues and fruit vpon it or not : it must be sharpened and cut biace, and pricked thicke about that end which shall be set into the ground, and afterward planted in a pit halfe a foot deepe ; in such sort as that the toppe of it may abide aboue the ground with three or foure of the litle eies, and be couered with straw for sixe dayes, and watered euerie one of those sixe dayes : afterward let it be vncovered, because by this time it will haue put forth, and in the end of the yeere towards the moneth of Februarie, you must cut off that which is put forth close by the earth, and after that it will shoot so mightily as that it will beare fruit the second yeere.

*To plant the fig
tree after the
maner of the
Genowais.*

The seuenth Chapter.

Of the maner of making sciences for to plant.

FOR to make sciences of diuers sorts which you may plant and set according as you shall haue need, cut in the Winter some great tree, if it beginne to be yellow or waxe bleake and pale, and whereof you desire to haue increase : saw off some stockes of the thickest branches into truncheons about the length of a foot, and make a furrow in some verie fat ground, and of that depth as that you may set your truncheons in them endwayes, the earth cast vpon and couering them some three or foure fingers, and providing that being

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thus

thus set in this furrow they may stand halfe a foote one from another: couer them well and water them in Sommer if there be neede, and weede them verie well: in space of time they will put forth sciences, which you may remooue when they haue taken roote some two or three yeeres: but and if they haue not as then any rootes, set them good and deepe into good earth, that so you may cause their rootes to grow. And these sciences will put forth other which will likewise serue. Marke it that all trees that put forth branches, if you cut them in winter, they will shoote out abundance of sciences, all which will be good to be planted.

*Plants of goose-
berrie, red co-
rant and bar-
berie trees.*

The barberie, redde corant, and goose-berrie-trees, are planted likewise in winter vpon sciences that come out of their roots, and they must haue some hairie stringes: but and if they haue no rootes there must some be procured to grow out of them.

The eight Chapter.

Of planting of shootes of a yeeres growth.

Propagating or planting of trees is fittest for such as haue benee planted of sciences, and such as do put forth sciences and small shootes from their rootes: for this causeth them to beare a more beautifull fruit, and more abundantly, and more durable, because they attract and draw a greater quantitie of iuice out of the earth. For this cause, plum-trees, cherrie-trees, pomegranate-trees, and all other garden trees that are wont to be grafted vpon wilde ones, would be propagated or planted; for in as much as the wilde one doth not draw such and so much iuice, as the grafted tree doth require, it is necessarie that it should be planted. As and if a sweet cherrie tree should be grafted vpon a wilde cherrie tree or one that beareth verie lowre cherries, such a cherrie tree would not continue and last long, neither indeed will it beare sweete cherries, if it be not planted a yeere or two after that it is grafted: and that because the wilde cherrie tree draweth not iuice ynough, to cause the tree to grow, and withall the iuice which it doth draw, is not so familiar or fit to bring forth and nourish sweet cherries.

*To plant foure
maner of
waies.*

There are foure sorts of planting or propagating: as in laying of shootes or little branches whiles they are yet tender in some pit made at their foote, as shall be said heereafter: or vpon a little ladder: or in a basket of earth tied to the bottome of the branch: or in boaring a willow through, and putting the branch of the tree into the hole, as shall be fully declared in the Chapter of grafting.

*The time of
propagating.*

There are likewise diuers seasons for to propagate in, but the best is in the spring and March when the trees are in flowers and begin to grow luttie. The young planted sciences or little grafts must be propagated

pagated in the beginning of Winter a foot deepe in the earth, and good manure mingled amongst the earth, which you shall cast forth of the pit, wherein you meane to propagate it, to tumble in vpon it againe. In like manner the superfluous sciences must be cut close by the earth, when as they growe about some speciall impe, which we meane to propagate: for they would do nothing but rot.

For to propagate, you must dig the earth round about the tree, that so the roots may be in a maner halfe layed bare; afterward draw into length the pit on that side where you meane to propagate, and according as you perceiue that the rootes will be best able to yeeld and be gouerned in the same pit, so vse them and that with all gentlenes, and stop close your science in such sort, as that the wreath which is in the place where it was grafted, may be a little lower than the science of the new wood growing out of the earth, euen so high as it possibly may be. If the tree that you would propagate should be somewhat thicke, and thereby the harder to plie and somewhat stiffe to lay in the pit, then you may cut the stocke almost to the midst betwixt the roote and the writen place, and so with gentle handling of it, to bow down into the pit the wood which the grafts haue put forth, and that in as round a compasse as you can, keeping you from breaking of it, afterward lay ouer the cut with gummed waxe, or with grauell and sand.

If there be manie sciences and impes in the plant which you would increase, multiplie and propagate, and that all of them by hap or casualtie doe breake in propagating of them, the remedie will be to set the tree straight vp, and to couer the rootes againe with the earth that was about them before, and which you had taken away, and then to cut all the broken sciences a little vnder where they are broken, and to leaue them so vntill another yeere, when they shall haue put forth new shootes, which the Winter following you may propagate: but and if of all those sciences there remaine some one not broken, goe forward and propagate it, cutting close by the ground some of the writen place, and of those shootes which are not broken. In propagating of them see that you lay good quantitie of the sciences of your branches into the pit: couch them there very round, couering them with the earth, which you cast vp in making the pit, after that you haue first mixt it with good fat mould: and tread it downe by little and little aboue, and looke that none of the sayd sciences doe rise againe after you haue so troden them downe. This being done, set right vp all the endes which shall come out of the earth, and that so high as you can; and so let them rest for three or foure yeere, before you furrow them, euen vntill the rootes haue taken earth, & be alreadie become full of hairie stringes: you must pricke stickes about them, for to handsome them, taking heede that you breake them not. Three

or foure yeeres after you must doe the earth from them, and that in the beginning of Winter, and hauing cut in sunder all the branches that haue put forth haire rootes together with the stocke, that is, about the writhen place, you may plant euery one of them where you please, to abide and continue there for euer; not but that you may leaue some one of them still standing in the same place, if it be fit and good for it, and then you may not pull from it his haire roots, as you doe from the other. If these plants of graftes be grown thicke already, and full of branches, then when you haue taken them vp, you must cut off the branches before you plant them, and then after they haue bene remoued, they are free and reclaimed, and all those which shall grow of them afterward will also become free and reclaimed. Againe, if you would prepare the stocke from whence you propagated your sciences, and dresse it anew after that you haue cut off all his armes, let it alone with his cuts and grafts, and out of those cuts it will put forth other sciences, of which you may make other free and reclaimed trees propagating them, and taking them vp at the ende of three or foure yeeres. No sciences are propagated but such as haue no rootes of their owne; for and if they had rootes by themselves, then they should be taken vp and planted againe with the spade, and not propagated.

Sciences fit for
propagation.

The ninth Chapter.

*Of grafting young plants, and other trees of diuers sorts,
diuers wayes and at diuers times.*

TRansplanting and propagating of trees maketh them and their fruit both verie faire and great, but yet grafting doth excell both them in this kinde; for by grafting, not only wilde trees are flattered and overcome, and those which were barren made fruitful, those of an ill taste become delicate; the late bearing, bringing forth an early fruit, and those which were early, to be late: but also the fruit growing thereby, are fairer and better fed: adde further, that grafting doth often times bring forth and beget trees and fruites of great admiration; as we see in apples, pearces, and many other fruits, which do alter both in colour and taste by the skill and cunning shewed in grafting. Furthermore it causeth, that not onely one kinde is changed into another, and that diuers fruits doe agree together and that vpon one tree: but that strange and forren trees doe come vnto vs; and ours are conueyed vnto other countries.

There are five principall sortes of grafting. There is one way to graft in the barke, that is to say, betwixt the wood and the barke: and this is but in trees that are great and of a good age, hauing a hard and firme barke. There is a second way to graft in a cleft, that is to say, vpon

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on a stock that is clouen: and this must be vsed in young trees, for old ones doe not easily admit any cleft in their stocke. The third way is to graft in a whistle or pipe: and this is by taking the barke of one tree, cut in manner of a pipe, to be fastned to the bough of another tree. The fourth is to graft the bud in manner of a scutcheon. And the fift is also to graft in the bud; but of these in particular in his proper and fit place. Before we goe about to graft any thing, we must consider whether the ground or countrie be fit for pippens or stones, and what trees are best laden there.

The best is to graft the same kindes together, although grafts and buds may take as well in trees of diuers kindes, but then such graftes come not to so good an end, seeing it is impossible that two differing sappes should agree, sure and carrie themselves so well in all points the one toward the other, as and if it were in trees that are paires or of like sorte: adde hereto that the fruit doth retaine and follow the nature of the tree whereupon it shall be grafted, rather then the graft: and so after a sort becommeth degenerate and estranged from his owne nature, which maketh me that I regard not the graftes, which are wont to be made vpon elmes: for the fruit that groweth thereon doth keepe the taste and sauour of the elme, which is not very toothsome: and yet I see lesse by the graftes that are grafted vpon the colewoort stalk, or the white thorne, or gooseberrie tree, vine branches, rose trees, or such like: for besides that such graftes are nothing durable (as being made vpon a subiect of a more feeble and infirme nature then the graft it selfe which is set to them) (wherefore the contrarie counsell is that which is to be followed at all times in grafting) the fruits that come thereof, will be either of no taste, or else very vnsauoury in the eating. Notwithstanding, although the hardest and most solide young plantes be to be preferred in the matter of grafting: yet so it is that if you graft in young stocks of a soft and moist nature, as vpon the poplar and beech tree, and such like, the graft will grow the sooner, but there is not any profite arising, and such grafts are not dealt in by any but by gardiners, which either affect curiositie or deceit, as desiring to haue grafts often, rather then for any thing else. It were better therefore to graft in trees of the same kinde, or else if you should graft in trees of diuers kinde, yet to choosethose which are nearest vnto the nature of the graft, which is the commanding partie, and whereunto the plant should verie neerely assit and be commanded by, notwithstanding that it is the feeder of the other. And in any case you must graft the trees that beare timely fruites, vpon others that beare timely fruit, and the late fruites vpon the late sitters.

And although that by the assistance and helpe of grafting, men bring in infinite numbers of monstrous thinges as well in trees as in fruits, mingling diuers kindes together, yet we must not thinke that

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wemay graft all sorts of graftes indifferently vpon all sortes of trees for neither will the Oke admit the Peare tree, nor the Fig tree or Olive tree : and on the other side the Pine tree, Firre tree, Cypres tree, or generally any other kind of tree that yeeldeth gum, oile, licours, pitch or Rosin, will not admit the coniunction or grafting of any tree vpon them, as *Plmarke* teacheth in his second booke of table talke, because they are fat, and cast out an oile humore; which (as all other sortes of oiles) is enemie to all manner of plantes : in so much as that there is no redier a meanes to kill such a tree as you would haue to die, as likewise Bees, then to annoint them with oile: adde further, that the trees which yeeld the Perrosine, haue so thin a barke, as that they cannot procure any firme or fast footing or meanes to receiue the Sap, or to incorporate themselues with the graftes, which should be set into them, as it falleth out with all wood which hath a verie moist and soft barke: for thereby is hindered the growing of the graft vnto the parts which are vnder the barke. I adde yet further that as men and women which are verie fat, do not beget or beare children, because that spending the greatest part of their nourishment in the grossenes of their body, they leaue no profitable superfluitie to make seede of: in like sorte trees which drop pitch and Rosine, spending all their substance and nourishment about the making of themselues great and thicke, they accordingly grow tall and thicke, but they beare no fruit at all, or else but a verie little, and that late in the yeere before it come to his full ripenes: wherefore it is no shame for a stranger, not to be able to liue there, where the home bred is scarce able to feede and maintaine himselfe. Trees that haue a verie hard and solide wood, as Boxe and such other, or which haue a verie tender barke, are not fit for grafting: for the one by reason of their great tendernes cannot hold the graft fast and close enough, and the other through their great hardnes doe wring and choke the same.

The time of
grafting.

It is good to graft about the beginning of December or somewhat later, as in mid-Ianuarie, according as the weather is inclining vnto coldnes or otherwise, especially hart-cherrie-trees, peare trees & such as beare earely fruit. As for apple trees and medlar trees, it is better to staie till from the ende of Ianuarie vnto the beginning of March, at such time as they begin to bud, for they are not so forward as the other. And at the same time also it will be good to graft the thicke growne young plants, betwixt the barke and the wood, with late grafts, or such as haue beene kept in the ground. All monethes are good and fit to graft in, whether it be by graft or bud, the monethes of October and Nouember excepted: but the graft is commonly grafted in winter, as hath beene saide, at such time as the sappe riseth vp into the trees and they begin to bud, for then the graftes do grow and take a great deale better. You may graft likewise in Aprill and May,

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if the grafts be full of little cielers, and that they haue beene kept buried, and their tops out of the ground in cold and shadowed places. It is true that the time of grafting must be measured and iudged of, according to the countrey and qualitie of the region: for in a cold countrey it must be later, and earlier in a hot: notwithstanding to speake generally of all countreies, the fittest time to graft is from the first daie of Februarie, vnto the first day of May, taking regard to the nature of the plants: for such as haue most iuice, must be soonest grafted: and those later which are the drier, the pomegranate and figge tree excepted; which although they be dry, will notwithstanding be grafted very earely in the yeere.

It is certaine that grafts must be gathered in the decrease of the moone, to be grafted at the same time of the old of the moone, or else in the new, or when you shall thinke good, alwaies foreseene that the grafts be gathered in the old of the moone, euen all the grafts that may be: It is true that the graft and the bud doe take better in the new then in the old of the moone, for the moone is the mistresse of saps, as of all other iuices, marrowes, and humours, or moist things: which saps runne betwixt the plant and the graft, and binde the one to the other, being of more force and power in the new of the moone then in the old: by the like reason there is a precept to be obserued and kept in the matter of grafting, forbidding to graft the winde blowing at south, because such winds are sharpe and drying. On the contrary shootes must be cut in the end of the moone, if so be you will haue them to bring forth much more fruit: for being cut at this time they haue their sap drunke in with setled abode, & by being notched onely, they do not spend themselues so much as when they be cut off, their sap then being in his full course and streame. Notwithstanding wee trie it daily by experience, that the gathering and grafting of grafts may be done at anie time of the moone, as wee will declare hereafter.

Some holde them for the best daies to graft in, which are the next three or foure daies before and after the increase of the newe moone: but their reason taken from the sap binding, and ioining together of the grafts with the plants, and from the dominion and rule of the moone ouer the said saps, doth shut out the first part of that opinion: it being certaine and true, that the weaker the moone is, so much the weaker also are those inferior bodies which she hath power and gouernment of. To graft vpon the wilde stocke, hath more hold, & is more durable, then that which is done vpon the reclaimed tree: but the fruite comming of the graft of the reclaimed tree is of a better taste, as likewise the fruite of the graft will be which is grafted vpon a tree which blossometh and flowreth at the same time, and hath a liuing and moist barke, and the reason thereof is very apparant.

To graft vpon
a wilde stocke.

To graft in
the barke.

It is vsed to graft in the bark; from mid-August, vnto the beginning of Winter, and also at such time as the Westerly wind beginneth to blow, being from the seuenth day of February vnto the eleuenth of Iune: but there must care be had not to graft in the bark in a rainie season, because it would wash away the matter of ioining together of the one to the other, and so hinder it.

To graft in
the scutcheon
or bud.

It is vsuall to graft in the bud in the sommer time, from about the end of May vntill August, as being the time when the trees are strong and lustie, and full of sap and leaues, as in Iune and Iuly; that is to say, in a hot countrey, from the midst of Iune vnto the midst of Iuly; but in cold countries, vnto the midst of August, after some small shewes of raine. And if the former be so exceedingly dry, as that some trees do detain and keepe backe their sap, then you must waite till that it be returned, and then to graft thereupon so soone as the grafts are gathered, without hauing any regard either vnto the new moone, or to the old, whether it be in grafting in the stocke, or vnto the stocke: it is true that is spoken, that we can neuer haue hope of much fruite by grafting in the new of the moone, but in the old, beginning the first day of the full of the moone.

To graft in
the cleft.

You may graft in the cleft, without hauing regard vnto raine, when the time is good and coole, as from mid-August vnto the beginning of Nouember, for the cap and warming stuffe which is laid vnto those grafts, do put away the waite and spoile which the raine and blasting would otherwise bring vpon them. It must likewise be considered whether the tree vse to beare timely fruit or not, and so to fit it with a graft of the like condition and quality. Againe, the time and season must be considered whether it bee forward or backward: for the seasons are not in all yeeres gouerned and caried by an vnchangeable and vnvariable line and measure, for either they are more forward or backward, and participate oftentimes one of anothers quality. And in all the sorts of grafting, it is a singular thing and of great preservation for the graft, to keepe the plants with cowes dung mingled with straw.

To graft in
the euening.

As concerning the particular time of grafting, it is better to graft at the euening than in the morning, and neerer vnto the rootes than vnto the boughes, because by howe much lower the graft is set, by so much the greater strength and force it receiveth from the moiture of the earth.

Grafting tooles.

The furniture and tooles wherewith a grafter shoulde be furnished, when he is disposed to graft, are a basket to lay his grafts in; clay, grauell, or sand, or some such earth as is strong, to draw ouer the plant where it is cut or clouen, and for the ioining of the graft vnto it: mofse, woollen clothes, or barks of willow, for to ioine and tie vpon the lute or earth before spoken of, that so they may keep both it, and the graft fast:

fast: and oziers to tie againe vpon the barks to keepe them firme and fast: gummed waxe to dresse and couer the endes and toppes of the grafts newlie cut, that so the raine or colde may not hurt them, neither yet the sap rising from below, be constrained to returne againe vnto the shootes: a hand saw or little sawe to saw off the stocke of the plant, a little knife or penknife to graft, and to cut and sharpen the grafts, that so the barke may not pill or be broken, which often cometh to passe when the graft is full of sap: you shall cut the graft so long as that it may fill vp the cleft of the plant, and therewithall it must be left thicker on the bark side, that so it may fill vp both the cleft and other incisions if any need to be made, which must be alwaies well ground, neat, burnished, and without all rust: two wedges, the one broader for thicke trees, the other narrower, for the lesse and tender trees, but both of them of boxe, or of some other harde and smooth wood, or of Steele, or of very hard iron, that so they may craue lesse labour in often making of them sharpe, and they must serue to set wider the cleft of the plant: a little handbill to set the plant at more libertie, by cutting off some of his superfluous boughes; hauing a handle or helme of iuorie, or boxe, or brassill, or some other wood which is very hard.

Trouble not your self with maruelling at them who graft their trees so soon as they haue planted them, or very shortly after: for the yong plant which can attract and draw but weakly, & at hand any substance for it selfe, will hardly bestir it selfe in such strong maner as to feed both the graft and it selfe, and therefore the graft cannot but drie vp: and againe, in very deed the poore plant hath iniurie enough to be taken vp from out of his place, and to be remooued to another, without heaping vpon it this new or double charge: and therefore it would not be till a yeere after that it hath been transplanted, and then the next yeere it will beare fruit: for it neuer thrives well of his grafting, if it thrue not the first yeere; and when as it hath sped thus illaunoredly, it will be belted to cut it off, and graft it againe, but lower.

The tenth Chapter.

How to choofe, gather, and cut graftes, to graft in the cleft, stocke, and rinde.

YOU must choofe your graftes of shootes that are a yeere olde or two at the most, (especially if you would graft them vpon old trees) which are very newe, and so thicke as ones little finger, full of sap, hauing grosse and thicke set cielets, one of them being neere vnto another, for else they will not beare fruit so plentifully: they must also take some part with the old wood, that is to say, part of that which was a science the yeere before, and part of the new, that is

to say, of the present yeere, so that it must be a peece consisting of two seuerall yeeres : and you must if it be possible gather them from on high, euen from the top, or at the least, from the middest of the tree, and not of the lowest and thickest of the boughes of fruit trees : and they must be in their sap, and taken from that side of the tree which standeth vpon the South ; for the East is not so meete and conuenient for vs in this cold country : they must also be grafted in the same situation and goodnesse of soile that they enjoyed when they were gathered : for if you graft them in the contrarie to either of these, it will fall out with them, as with plants, so vnadvisedly transplanted, or translated out of a hot country into a cold. Notwithstanding we daily perceiue that such ceremonies are of small effect, seeing that the Sun which is the nurse-father, visiteth euery day all the sides of your tree : and that the earth wherein it is planted, is not lesse nourishing on the one side than on the other. You must not gather your grafts to plant, at such time as the trees begin to flowre, especiallie if the trees whence they be gathered be timely fruit, as cherrie trees, plum trees, medlar trees, almond trees, peach trees, and such like : but the time to gather them is about the 24. of December and not sooner, for then the trees are full and well stored of a milde and sweete humour. But and if you should be constrained to gather them sooner, whether it be vpon occasion to carry them from one country to another or such like, stay at the least till October, at which time the leaues will be fallen from the trees. The men of ancient time obserued and made great ceremonies (as some doe as yet) in gathering of graftes vpon the ending of the moone ; and for the grafting of them presently after the change : but we find by experience that vpon all maner of daies they may be gathered and grafted, in what quarter soeuer the moone is found in, as well for fruits of stones, which are more difficult to graft, as for those of seeds or pippens, which are more easie.

To keep grafts. If you purpose to keepe them after they be gathered, especially such as you minde to graft in the barke (for such grafts may be gathered without eielets about the moneth of October) sticke them down in the ground at the foote of a tree, lay them in a pit of halfe a foote depth, couer them well with earth, making the place so, as that you may be sure to finde them when the time of grafting commeth. Some put them in earthen pots well stopped and couered, which afterward also they burie in the ground. But and if you would carrie them farre, you must pricke their endes in a turnep that is new gathered : for by this meanes their naturall iuice and humour will be preserved : or else wrap them about with earth, and with a cloth or other thing, that they may be fit to be handled, as that they may be grafted, and not dried away by the winde and force of the sunne : or else shut them close betwixt two canes or reedes, putting them thereupon in honie.

Some,

Some, the better to keepe them, lay them betwixt two tiles, neere vnto some riuer, and couered well with earth. If they be sent you from a far, looke that you go not about to graft them, before you haue first steeped them a certaine time in water, somewhat to refresh their iuice, and to set in strength againe their feebled and appalled force.

For to gather them, you must cut them off betwixt the old wood *To gather* and the new, in such sorte as that there be some of the old wood vnder grafts. one of the old eielets of the graft, and so also, as this eielet or little eie may be behinde the graft, when it shall be set out of the cleft of the plant : but and if this eielet or little eie be verie small, then it were better to cut it away. You may make of one long graffe, two or three trunchions, of which also you may at any time make very good grafts, and so let goe that other with partie woodes, beginning at the greatest eielet of the same, and making incision close vnder it, to fit it, for to be set in the stocke.

In cutting your graft make incision vpon the one side and vpon *To cut the* the other vpwarde on high, let it be well taken downe and squared, grafts. that so it may the better close to the stocke of the plant, and likewise let it be so flatted, as that by measure it may be all one in length with the cleft of the plant, when it is put downe into it, and yet it is not required that it should ioine close with the same in all places.

When you cut the graftes of hart-cherrie trees and plum trees, *To cut the* doe not flat them so much as you did the others, for they haue a thicke grafts. ker and greater pith, which you must beware not to come neere vnto, *Plum-trees.* neither vpon the one side, nor vpon the other, saue onelie that at the endes they must be verie flat. And further if the same incision be not made for the taking downe and diminishing of any more then one side, it will be better, then and if it should be so ordered also on the other side, and cut biace as wedges are which are made for to cleaue wood withall ; and so at the end you should take downe both sides, after the manner of the head of a speare.

In cutting your graft, see well that you raise not the vttermoost barke from the wood : and that withall you leaue it thicker then that which is on the other edge within.

The eleuenth Chapter.

Of the preparing of the young plant whereon you meane to graft.

NOW when you haue chosen your graft, you must likewise make choise of your plant : which that it may be a faire one, must be right and straight, round not wreathen, of a beautifull colour, a sound, neate and smooth barke, without knots, verie flourishing and moist, and of a tree that hath borne fruit : it must also enioie the like good

good soile and situation it did before in the place, where you gathered the graft if it be possible, it must bud and blossom at one and the same time, to the end that the new science may take the more easie footing and kinder nourishment there. And if in case the plant were wreathen, ioine the graft cunningly to it, and be sure that in fitting of it you make them both ioine well together, and euer matching the grossest plants with the grossest grafts.

And in as much as the plants are verie little, therefore you must cut them low and neere vnto the earth, and that rather with a knife, than with a hooke or sawe. Some saie that a sawe doth so shake and loosen the barke, as that afterward it doth not take so easily with the graft, but that makes no matter, because neither the barke nor wood doe euer take with the graft, but the skin or barke which groweth and swellth vp from the foote of the tree, is that which couleth it selfe vnto the graft, worketh all, and by it selfe increaseth, making a bodie of the saide foote, not that the sawed wood doth ioine it selfe with the saide graft, but abideth dead. If it be of the thicknes of a finger or thereabout, you must cut it to the length of a foote or halfe a foote from the earth, biace wise like the fashion of a gores foote, for to cleaue it and set therein onelie one graft.

If it be as thicke as a cudgell, cut the stocke round with a sawe vp on high, a foote or two from the ground, to put two good grafts into the cleft thereof: of which afterward you shall cut away the least and weakest when they begin to bud.

If the plant be as thicke as an arme, cut it likewise round some two or three foote high from the ground, for to cleaue it and set therein three grafts, two in a cleft, and one betwixt the bark and the wood, and that vpon the side that hath the most roome.

If it be as thicke as a leg or more, cut it fower or fife foote high from the ground, and cleaue it crosse, and set therein fower grafts, or cleaue it with one onely cleft, and graft two in the cleft, and two betwixt the wood and the barke: or, which is better, graft them all betwixt the stocke and the barke, when the sap shall be vp: for the wood of such great plantes, doth pinch and wrinche the graft mightily if you put not a wedge of greene wood into the cleft.

After that the plant is cut either with a saw or with a knife, cleanse the wound either with a little sawe knife, or with some other thing, then make it plaine with a knife that is cleane and not infected with any euill smell, and againe make it cleane againe the second time, that so it may not be infected any manner of way with the iron, because the sap of the tree may be corrupted by it, then choose out the best place in all the stocke to fasten your graft vnto, without any care of making the cleft, on what side soeuer it be. I speake this because it pleaseh some to affirme, that the tree ought not to be clouen on that side

side that the winde standeth, at such time as they go about to graft it. It is true that and if the winde should prooue great, & withall at north-east, that then you must turne your backe vpon it and stand betwixt the winde and the cleft, at such time as you are fitting and putting in your graft: because it is sharpe and scorching, verie dangerous vnto all sortes of plants, as also fruits of what condition soeuer they be, but chieflie when they are blossomed.

Before you make wide the cleft with your wedge, binde and tie with two or three turnes about with a wickar drawne verie strait your tree foote vpon the place where you intend to make your cleft, that so your tree foote maie not cleaue too farre, which is oftentimes the cause that grafts take not, the cleft being so open, that it cannot possible shut againe and grow together, and so by that meanes breatheth out whatsoeuer it hath of life in that place, and both the graft and the foote do thereupon also perish: but this happeneth oft in plum-tree stockes and branches of trees, because they are more subiect to cleaue thus, than any of the other sorts. Great trees and such as yet go beyond the forenamed measures, cannot be grafted by a cleft in the stocke, but very well in the branches, as we see accomplished in great apple-trees, and wild peare-trees, for they would be rotten before that the grafts could shut and close vp the wound in the stocke.

If the small branches be drie and without any sappe, you must cut their stockes or armes, and after two or three yeeres, when they haue put forth new sciences, graft the best, and cut away the feeble and starued ones. And afterwarde when the grafts haue put forth very well, you must strengthen and vnderprop them, or else wrap them one within another, and tie them with woode amongst, for feare that the winde should breake them: or else if it be a good and well reclaimed tree, let new sciences grow out of it. And this thing we see much practised in *Normandie, Bretagne*, and other countries, where they esteeme of apples and peares to make cyder of.

The twelfth Chapter.

To graft in the cleft:

THe manner of grafting in the cleft, that is to say, in the stocke being clouen, is proper not onely vnto trees which are as great as a mans legge or arme, but also vnto others which exceede these in greatnesse. It is true, that inasmuch as these trees cannot easily be clouen in their stocke, that therefore it is expedient to make incision in some one of their branches, and not in the maine body, as we see to be practised in great apple-trees and wilde peare-trees, and as we haue already declared heere before.

To

To graft in the cleft you must make choise of a graft that is full of sap and iuice, but it must not be till from after Ianuarie vnto March: and you must not thus graft in any tree that is already budded, because a great part of the iuice and sap would be already mounted vp on high and risen to the top, and there disperfed and scattered hither and thither into euery twigge, a newes nothing welcome to the graft. You must likewise set downe and resolue not to gather your graft the day that you graft it, but ten or twelue daies before, for otherwise if you graft it new gathered, it will not be able easily to incorporate it selfe with the body and stocke where it shall be grafted: because it will come to passe that some part of it will drie, and by this meanes will be a hinderance in the stocke to the rising vp of the sap, which it shoulde communicate vnto the graft for the making of it to put forth, and whereas this dried part will fall a crumbling, and breaking through his rottenesse, it will cause to remaine a cauity and hollow or voide place in the stocke, which will be an occasion of the like inconuenience to befall the graft: and on the other side, the graft being as yet new and tender, might easily be hurt of the bands, which are of necessitie to be tied round about the stocke for the keeping of the graft firme and fast. You must furthermore take heed, and see that the tree, whereupon you intend to graft, haue bene transplanted and remooued from out of your stocke nurserie for a long time before, that so you may assure your selfe that his rootes are long since well inseasoned, and haue fully taken with the earth, and thereby also hath sufficient store of sap and iuice.

When you are minded to graft many grafts in one cleft, see that the incision made vpon their ends be alike great, which if you looke norto, it may happily come to passe that the cleft of the stock shall be forced wider on the one side than on the other: you must likewise foresee that the grafts be of one length, or not much squaring, and is inough if they haue three or fowre cleets without the wrench.

When the plant is once sawed, and lopped of all his small sciences and shootes round about, as also emptied of all his branches, if it haue many; then you must leaue but two at the most, before you come to the cleaving of it, then put to your little saw and your knife or other edgetoole that is very sharpe, cleaue it quite through the midst in gentle and soft sort, first tying the stocke very sure, that so it may not cleaue further than is need, and then put your wedges into the cleft, vntill such time as you haue set in your grafts: and in cleaving of it hold your knife with the one hand, and the tree in the other, to helpe to keepe it from cleaving too farre. Afterward with the same hande wherewith you held your tree put in your wedge of boxe or brasill, or bone at the small end, that so you may the better take it out againe, when you haue set in your grafts. If the stocke be clouen, or the barke loosed

loosed too much from the wood, then cleaue it downe lower, and set your grafts in, and looke that their incision be fit and very iustly answering the cleft, and that the two saps (that of the graft and the other of the plant) be right and euen set, the one against the other, and so handsomely fitted, as that there may not be the least apparence of any cut or cleft: for if they doe not thus iumpe one with another, they will neuer take one with another, because they cannot worke their seaming matter, and as it were cartilaginous glue in conuenient sort and manner to the glewing of their ioints together: you must likewise beware not to make your cleft ouerthwart the pith, but somewhat aside.

The barke of the plant being thicker then that of the graft, you must set the graft so much the more outwardly in the cleft, that so the two saps may in any case be ioyned and set right the one with the other, but the rinde of the plant must be somewhat more out then that of the grafts on the clouen side.

To the end that you may not faile of this worke of imping, you must principally take heede, not to ouercleau the stockes of your trees, but before you widen the cleft with your wedges, binde and go about the stocke with two or three turnes, and that with an ozier clofe drawne together vnderneath the same place where you would haue your cleft to end, that so your stocke cleaue not too far, which is a verie vsual cause of the miscarrying of grafts, in as much as heereby the cleft standeth so wide and open, as that it cannot be shut, & so not grow together againe, but in the meane time spendeth it selfe, & breatheth out all his life in that place, which is the cause that the stock & the graft are likewise spilt, and this falleth out most oft in plum-trees & branches of trees. You shall also be verie carefull to ioine together the rindes of your grafts and the plants, that so nothing may continue open, to the end that the winde, moiture of the clai or raine, running vpon the grafted place may not get in. When the plant cleaueth verie straight, there is not any danger or hardnes in sloping downe the graft, if you leaue it somewhat vneuen, or rough in some places, that so the saps both of the one and other may the better grow and be glued together.

When your grafts are once well ioyned vnto your plants, drawe out your wedges verie softly lest you displace them againe. You may leaue there within the cleft some small ende of a wedge of greene wood, cutting it very close with the head of the stocke: or else so soon as your wedge is drawne out, put some small chip of greene wood vpon the cleft of the plant. Some cast glue into the cleft, as it were to vnite and glue together the saps of the two substances. Othersome sprinkle into it sugar or powder of cinnamom, or som other such spice, or some sweet smelling liquor, and withal dip the ends of the grafts in honie or in some other sweete and pleasant liquor, hoping that by this meanes

meanes the fruits of the trees will retaine the taste thereof. But how-
soeuer it is, couer the cleft of the grafting al about with grauell or sand
heaped on like a cauley: or else with gummed waxe, which is better to
couer withall than the former, or any other thing that can be learned,
and that the cleft may be very well filled, it must be laid on two fingers
thicke or thereabout, that so neither winde nor raine may enter or
get in, and you shall couer it ouer with mosse or rie straw, or barke, or
the thin rinde of the elme prepared with a little earth, and wreathes
of old woollen clothes, or the barke of willow, and tie them on very
straight with small oziers: but in binding them take heed that the
wreathes doe not shrinke to the one side or the other, and if you haue
not clay, then arme and couer ouer, as hath beene said, the sayd cliffs
with gummed waxe: and for want of both these, mingle small haie
and the earth of the place where you graft in maner of some or mor-
tar. When thus your grafts shall be well wreathed, fasten some small
boughes about them for to keepe and defend them.

Furthermore, if the stocke of the plant whereupon you intend
to graft, be not so thicke as your graft: you shall graft it after the fa-
shion of a goats foot in this maner: make a cleft in the stocke of the
plant, not direct but biace, and that smooth and euen, not rough:
then apply and make fast thereto the graft with all his barke on, and
answering to the barke of the plant: this being done, couer the place
with fat earth and mosse of the wood, tied together with a strong band.
And to the end that the tree may not be hurt either of the winds or o-
ther things, stick down neere vnto it, some pole of wood for to streng-
then and beare it stedfast: they are greatly to be blamed for their fault
committed, who hauing faire wilde trees or others (the fruit thereof
displeasing them) do cut them very low hauing faire branches aboue,
and a body of the thicknesse of a mans leg, and there graft them, when
as five or sixe yeeres will scarce couer the wound that they haue made
by such their grafting: whereas they might as easily haue grafted vp-
on the branches, than they had not beene aboue a finger thicke, and
would haue growen better and brought more profit, because that and
if you haue foure branches, you may make as many grafts, and these
will beare fruit the second yeere.

The thirteenth Chapter.

Of grafting in the ends of branches.

FOR to graft at the end of such branches as haue goodly new
wood, and great sciences on high, although the tree haue beene
grafted before, and that it be as yet not thorow growen, take
graftes of what sort of tree you will, and cut some of the sciences off
from the high parts of the tree where you minde to graft: and, if the

*To graft in bi-
ace like to a
goats foot.*

grafts

grafts should bee thicker then the sciences, then graft them after
the manner of the goats foote, as hath beene saide already of small
plants.

And if the sciences be of the same bignes with your grafts, then cut
them betwene the old and new wood, or a little higher or lower, and
cleaue them a little, & cut the graft of the like thicknes to the science
which you haue cut off, making but a short incision, and reseruing the
barke vpon both sides, and looking that both the sides be of equall
thicknes, then set your graft thus fitted into the cleft: and that so, as
that the barks of both sides the graft, may stand euen with the barks
of the branch. And for these grafts it is ynough, if euery one of
them, haue one good eielet or two about the wreathing: for to leaue
them any longer would not be good: and you must wreath and wrap
them in earth and mosse, and couer it ouer againe with woollen
cloathes, and tye them to verie strongly, as hath beene said. By this
meanes you may procure that one tree shall bring forth diuers fruits,
so that they be not such as the situation of the countrie and qualitie
of the aire doe refuse and reiect: as I haue seene sometimes at *Padua*
in the garden of *Messire Gabriell*, where one stalke of a tree hath
borne fruits of diuers sorts. And there is nothing that should hinder
or let vs in this countrie from doing the like, if it be not perhappes, that
in some places the fauourable furtherance and mildenes of the aire is
not so correspondent and answerable. Moreover, if you will graft lit-
tle plants in this manner, see that they be of the same thicknes of the
graftes, and graft them neere vnto the earth, as some three fingers off
or thereabouts. This manner of grafting at the endes of branches,
must be done in trees, whose branches haue beene cut off, by reason
either of some great want, or too great abundance of sappe, and that
there be put forth of their stocke new shootes, which three or foure
yeeres after may be grafted after the manner we haue spoken of.
Thus *Columella* teacheth vs to graft the oliue tree vpon the figge-
tree.

The fourteenth Chapter.

To graft betwixt the wood and the barke.

IT is vsuall to graft betwixt the wood and the barke, when trees
begin to put vp their sap, as about the ende of Februarie, and after
vntill Aprill: for then the barke parteth better from the wood, and
chiefly this manner of grafting is vsed in thicke plantes, which cannot
easily be clouen in the midst, either crosse or otherwise, and in the
stockes and branches of trees that haue a thicke and fat barke, as fig-
trees, plum-trees, pearce-trees, and chefnut-trees. The grafts that are
thus to be grafted must be gathered & kept long before, as we haue al-
ready

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readie said, least peradventure we should not meete with trees of late beare about this time, which haue not as then budded, and of which there may be grafts gathered without buds, such as is the short legged or short stalked apple tree, and such other like.

In this kind of grafting the plant must be sawed vp on high, and the grafts cut afterward, as hath now alreadie beene said before: but the incision of these grafts must not be of any great length or thicknes, but the barke must be taken away a little at the end of them, & fashioned after the manner of the head of a speare, & as thick on the one side as on the other: afterward the stocke must be very well cleaned to take away the roughnes & vneuennes of the saw, with a verie sharp instrument, that so the grafts may grow close thereunto: then thrust in a sharpe pointed knife, or some cisers of bone or luorie, deepe enough betwixt the barke and the wood of the plant, and so much, as that when it shall be drawn out, the cut and fitted ende of the graft may enter therein, and that the graft may ioine vnto the stocke, when it shall beset therein. This being done, it must be covered and wrapt well with grauell or other strong earth and mosse: after this manner you may pricke in many grafts about your stocke according as the thicknes of it will beare. After this manner are Abricots grafted, and apple-trees, almond-trees, peach-trees, small peach-trees, fig-trees, pear-plum-trees, chesnut-trees, peare-trees, and younge and little plum-trees, being the thicknes of a little finger, and the thicknes of an arme: as also all such as haue their barke somewhat slender and tender: for in thicke trees which haue their barke verie hard and thicke, this cannot well be vied, except it be vpon some of the branches, which haue a daintier barke and better disposed for the doing hereof,

The fifteenth Chapter.

Of grafting in a pipe.

THe manner of grafting in a pipe, as also that of grafting in the barke after the manner of a scutchion, is very forward in bearing fruit, but weake and easie to be hurt, because it is borne vp onely by the strength of the barke. And therefore it must not be practised in any trees, except such as are full of sap, as the Fig-tree; Olive tree, sweete Quince-tree, bastard Peach tree, Abricote-tree, Iuiube-tree, sowre Cherry tree, Cherry tree and Chesnut tree: and not at any other time, then after the beginning of Aprill vnto the end of Iune, or if the time be not too hot, in Iuly, August and September: but such grafts are not profitable, neither yet comming so soone to perfection, as those which are grafted in the cleft.

Chuse therefore in a fruitfull tree, that is full of sap, a very faire branch

branch that is full of eielets, from whence cut with the point of a knife that is very sharpe, a peece of barke fashioned like a flute, at the least three fingers and a halfe long, hauing one eielet sound and intire. Then doe as much vpon some branch of that tree whereupon you meane to graft the same, in such sort, as that the barke which you take away from the place to be grafted, may be of the same bredth, length, and situation or aspect of the heauen, that that is which was cut down from the place where the graft grew, and it must likewise haue one sound and intire eielet as well as the other. When you shall fasten it vnto the place, beware that the barke which you shall fasten, be not wet or moist, and that it doe answere and fit the window, whereout the barke was taken, and that in such sort, as that the eielet in the barke to be grafted, may answere iustly vnto the knob which remaineth sound and vndeminished in the wood, and that this knob goe into the eielet, of the pipe-like barke, which you are about to graft. By this meanes all will agree very well together, neither will there be seen any chinker, gaping or rift, betwixt the commissures and ioints of the two barks. This done, binde and wreath aboue and below the said grafted barke, with a bande of very drie hempe, being without any manner of moisture, that so the barke may cleaue to the better, and take the sap of the tree the sooner: but still you must looke to it, that your band doe not touch the eielet, or pinch the barke too harde, for this would keepe it that it should not take, and neither the barke, nor the band must be wet.

The Chesnut tree may be grafted after this maner, and profit more by it than any other trees, because the barke thereof is more apt to fashion after the forme of a Pipe, than the barke of any other tree. This way is long in working and taking and withall nothing sure or certain: and therefore I would counsell the Gardiner to trouble himselfe but little at all with it.

The sixteenth Chapter.

Of grafting in the bud after the manner of a scutchion.

IN grafting after the manner of a scutchion you shall not varie and differ much from the maner of grafting which is after the fashion of a flute or pipe, saue onely that the scutchion-like graft hauing one eielet as the other hath, yet the wood of the tree whereupon the scutchion-like graft is grafted, hath not any knob or bud, as the wood whereupon the barke is grafted in manner of a pipe: wherefore in both the sortes of grafting, we may follow the forme or order which followeth.

In sommer when the trees are well replenished with sap, and that their

their new sciences begin to growe somewhat hard, you shall take a shoote at the end of the chiefe branches of some noble and reclaimed tree, whereof you would faine haue some fruite, and not maim it of his old store or wood, and from thence raise a good eiclet the taile and all, thereof to make your graft: but when you choose, take the thickest and grossest: diuide the taile in the middest before you do any thing else, casting away the leafe (if it be not a peare-plum-tree, for the scutcheon graft of a peare-plum-tree, would haue two or three leaues) without remoouing anie more of the said taile: afterwarde with the point of a knife that is very sharpe and will cut well, cut out of the barke of the saide shoote, the patterne and resemblance of a scutcheon or shield, of the length of a naile, in which there is onelic one eiclet higher than the middest, together with the residue of the taile which you haue left behinde: and for the lifting vp of the saide graft in scutcheon, after that you haue cut the barke of the shoote round about without cutting of the wood within, you must take it gently with your thumbe; and in pulling it awaie, you must presse vpon the wood, from which you pull it, that so you may bring the bud and all away together with the scutcheon, for and if you should leaue it behinde with the woode, then the rest of the scutcheon were nothing woorth. You shall finde out if the scutcheon bee nothing woorth, if looking within it, when it shall be pulled away from the wood of the shoote, you finde it to haue a hole within, but more manifestlie if the bud be staied behinde with the wood in the shoote, when it ought to haue bene in the scutcheon. Thus your scutcheon being well raised and taken off, hold it a little by the taile betwixt your lips, without wetting of it, euen vntil you haue cut the bark of the tree where you would graft it, and looke that it be cut without any wounding of the woode within, after the fashion of a crouch, but somewhat longer than the scutcheon that you haue to set in it, and in no place cutting the wood within.

After you haue made incision, you must open it and make it gape wide on both sides, but in all manner of gentle handling and intreacie, and that with a little cifers of bone: and separating the wood and the barke a little within, euen so much as the scutcheon is in length and bredth; you must take heede that in doing heereof you doe not hurt the barke. This done, take your scutcheon by the end, and the taile which you haue left remaining, and put it into the incision made in the tree, lifting vp softly the two sides of the incision, with the saide little cifers of bone: and cause the saide scutcheon to ioine and lie as close as may be, vnto the wood of the tree, (being cut as hath bene said) in weighing a little vpon the end of the rinde to cut, and let the vpper part of the scutcheon lie close vnto the vpper end of the incision or barke of the saide tree: afterwarde binde your scutcheon about

with

with a band of hempe, as thicke as the pen of a quill, more or lesse, according as the tree is small or great, taking the same hempe in the midt, to the end that either part of it may performe a little seruise in wreathing and binding of the said scutcheon, into the incision of the tree, and it must not be tied too strait, for that would keepe it from taking, the ioyning of the one lap to the other being hindered thereby, and neither the scutcheon nor yet the hempe must be moist or wet. And the more iustlie to binde them together, begin at the backside of the tree, right ouer against the midt of the incision, and from thence come forward to ioine them before, aboue the eiclet and taile of the scutcheon (crossing your band of hempe so oft as the two ends meet) and from hence returning backe againe come about and tie it likewise vnderneath the eiclet, and thus cast your band about still forward and backward, vntill the whole cleft of the incision be couered aboue and below with the saide hempe, the eiclet onelic excepted and his taile, which must not be couered at all; this taile will fall away one part after another, and that shortly after the ingrafting, if so be that the scutcheon will take. Leau your trees and scutcheons thus bound for the space of one moneth, and the thicker, a greater deale longer time; afterward looke them ouer, and if you perceiue them growne together, vntie them, or at the least cut the hempe behinde and leaue them vncouered, cut also your branch two or three fingers aboue, that so the impe may prosper the better, and thus let them remaine till after winter about the moneth of March and April. If you perceiue that the bud of your scutcheon swell and come forward, then cut off the tree three fingers or thereabout aboue the scutcheon: for and if it should be cut off too neere the scutcheon, at such time as it putteth forth his first blossome, it would be a meanes greatly to hinder the flowring of it, and cause also that it should not thrive and prosper so well: after that one yeere is past, and that the shoote beginneth to be strong, beginning to put forth the second bud and blossome, you must goe forward to cut off in biace wise the three fingers in the top of the tree, which you left there when you cut it the yeere going before, as hath bene said. When your shoote shall haue put forth a good deale of length, you must sticke downe there euen hard ioining thereunto little stakes, tying them together verie gentle and easly, and theie shall staie your shootes and prop them vp, letting the winde for doing any harme vnto them.

In this sort you may easlie graft white rose trees in red rose trees, and red rose trees in white rose trees, to haue roses of diuers sorts vpon one and the same rose tree. You may graft after the same manner two or three scutcheons, provided that they be all of one side: for they would not be equally set together in height, because that so they might all become stauelings: neither would they be one directly

(g 3

ouer

ouer another : for the lower would stay the rising vp of the sap of the tree, and so those about should consume in penurie and vndergoe the foresaid inconuenience.

You must note that the scutcheon which is gathered from the science of a tree whose fruit is sower, must be cut in a square forme, and not in the plaine fashion of a scutcheon.

It is ordinary to graft the sweet quince-tree, bastard peach-tree, abricot-tree, iuiube-tree, sower cherry-tree, sweete cherrie-tree, and chesnut-tree after this fashion : howbeit they might be grafted in the cleft more easily and more profitably, although that diuers be of a contrarie opinion. As thus for example :

Take of the grafts of the sweete quince-tree, and bastard peach-tree, of the fairest wood and best fed that you can finde growing vpon the wood of two yeeres old, because the wood is not so firm and solide as the others, and you shall graft them vpon small plum-tree stockes, being of the thicknes of ones thumbe : these you shall cut after the fashion of a goates foot, you shall not go about to make the cleft of anie more sides than one, being about a foote high from the ground, you must open it with your small wedge ; which being thus grafted, it will seeme to you that it is open but of one side, afterward you shall wrap it vp with a little mosse, putting thereto some gummed waxe or clay, as hath beene said before, and binde it vp with ozier, to keepe it the surer, because the stock is not strong enough of it selfe for to hold it, and you shall furnish it euerie manner of way, as others are dealt withall. And this kinde of grafting is more profitable, and sooner growne vp than that which is done in the forme of a scutcheon.

The seuenteenth Chapter.

Of other sorts of grafting vpon all sorts of trees.

One may graft in the bud, by taking vp the bud of a yong shoote or plant, and putting it with a little barke in the place of another, which you shall haue pulled from the tree, whereupon you meane to graft, binding it there aboue and below in manner as hath beene said of the scutcheon-like graft, and this may be done at the same time, and vpon the same trees.

You may graft all manner of grafts, vpon all manner of trees after this manner : Make two pits, fowre foote euery way, and the one hard by the other, in the one of these plant an oliue-tree, and in the other a fig-tree, or any other such like sort of trees as shall best please you : when the oliue-tree hath taken roote, you shall bow downe such plants of the same as seemeth vnto you the fairest of the rest, and binde them to the foote of the said fig-tree : this being done, cut away

all

all the other plants of the said oliue-tree, except they be such as you meane in like manner to graft : then cut downe the fig-tree, and make smooth and euen the cut : after this cleave it in the midst with a wedge, after which scrape both the sides of the ends of the sciences of the oliue-tree, such as the tree beareth, and put them in the cleft of the fig-tree, in such manner as that they may reach through ; afterward lome the said cleft of the fig-tree on the one side & on the other with rough lome, and tie fast within the stocke of the said fig-tree, the said plants ; in such sort as that a man cannot pull them awaie. Thus three yeeres after the fig-tree and oliue-tree will grow together, and the fourth yeere when they are well growen, you shall cut and vncouple the plants of the said oliue-tree from it, as is done in propagating, so they shall seeme not to appertaine any longer vnto the oliue-tree. This manner of grafting is very vnuall in the countrey of *Mans*, where I remember I haue tasted of a grape which had the taste of a nut : because the vine that bare this grape, had beene grafted into a nut-tree, and after that manner that I haue now spoken of.

To graft in a cannon, flute, or cornet, is thus performed. You must raise a long gun or cannon hauing two or three cielets, from of a new cannon, and reclaimed plant, that is a finger thicke or thereabout, and cleave it easily the whole length of it : after you must raise of the barke of some branch of a plant, of the like thicknes, a cannon of the like length to the former, and in place of this latter, you must make fast the foresaid cannon of the said barke of the new branch, as forward and close as it can be set, and the superfluous barke of that wherewith there is nothing intended to be done, is bestowed vpon this thus grafted to defend it : after this it is tied aboue and below the cielets so carefully, as that they may not be hurt, then you must cut away the wood which is about the roote, and worke it ouer with gummed waxe all along the seames, and at the end.

To graft in the body of a tree is thus : you must pierce the stocke of a tree with a wimble euen vnto the pith, and afterward cleansing the hole of the wimble very well, you must by force put a graft therinto, which hath two or three cielets within, and then after that close vp the hole very sure with waxe.

To graft vpon a willow, or colewoort : make in the pole of a willow, or stocke of a colewoort two holes reaching to the marrowe or pith, either halfe a foote from the other, set therein as it were by force euen in either of them, a graft of such fruite as you your selfe will, hauing their barkes scraped off, and this in such sort as that the holes be stoppt all of them therewith : after this you must stoppe the same holes very well with waxe, pricking downe the said pole within halfe a foote of some water, after such a manner as that the grafts may be three fingers vnder the earth, and at the end of the yeere when it hath taken

roote, cut the plant in peeces, and plant euery graft where you your selfe will.

To graft in a
croune.

Thus you may graft in the crowne: you must cut off the bodie of a great tree, rather then a little or thinne one vp on high, but yet it may not be old, though it may haue a hard barke rather then a soft and thinne: afterward you must open it vp aboue on high, in three or fowre places, in the cut of the barke of the said stocke: which done you must with the helue of a penknife of bone being very sharpe pointed put in euery one of those opened places a graft, gathered from the most easterly part of his owne tree, then you must stop and couer well with tough lome or claie the wound that is aboue, and lay a good cap vpon it, so as that neither the raine may be able to wash and corrupt it, neither yet the aire to drie and chinker it: after this you must tie the tree with a coard or band neere vnto the place where the tree was sawed off, that so it cleaue not, then you must thrust in your wedge betwixt the barke and the woode, after which, it remaineth that these grafts be fitted to set round about the bodie of the tree, one distant from another, no lesse then fower fingers: then for the shutting vp of the matter, taking away the coard or girth; you must tie the barke with a companie of oziers, being of that length as that they may goe about the body of the tree three or fowre turnes and doubles, that so by this meanes the grafts may be garded, and stande fast against the windes and whatsoever other violence: and against the bodie of the tree you must set a stake and prop, for to beare it vp and staie it, taking away all the shootes that are about it: because that by how much the number shall be the lesse, by so much the more will the sappe procure the strength and growth of boughes.

To graft in a
science.

Some doe graft in a science after this manner: they make way into the tree, and that to the verie pith thereof with a penknife, and after grafting a plant therein, stop it vp close with waxe. Otherwise, and the likelier, some take a science of one ioint, and writh it, afterward taking from it his ioints and barke, and so graft it vpon a shoote as thicke as it selfe, and it taketh quickly.

To graft in a
morfell.

To graft in a morfell, you must take in the moneth of March a peece of the thicknes of ones thumb, and sufficient broad and long, together with the eieler & science belonging thereto, and so very speedily graft it altogether vpon the branches of another tree, cleauing the barke into three or fower, and fastening it thereto verie close and strait, and vnto the head of the stocke, if so be that the morfell go into the barke of the other, without hurting of his owne barke: it being thus grafted, will take without any other thing or preparatiue: notwithstanding it would doe no euill to put tough lome or earth tempered thicke vpon the laid ioint, and to tie it wel with some little peece of woollen cloth about the morfell, not touching the eieler in any case.

In

In Iune and Iuly you may graft in this manner on high vpon branches without vsing of any band thereto: and when this morfell hath well taken, some do vse to cut off that part of the branch that is aboue.

Some graft vpon poles after this manner: with a french wimble they pearce a pole of willow, or other white wood in many places, but with this cauear that the holes be halfe a foote one from another: afterward they put in these holes thus pearced great store of shootes of such trees as they are disposed to graft, and thus they set them in the ground, in such sort as that nothing but the end of the shoot is seene: after which, if they take, the pole is broken, and they remooued into other places.

To graft in
poles.

Some there are that make impes of peare trees and apple trees in a greene lath of witch hazell, where they put their grafts, betwixt the barke and the wood, and going afterward to choose a moist place, therein they burie thesaide greene lath halfe a foote deepe, leaving the shootes a foote long, of which they gather some impes, which they cut away, as also the band of the lath where they are grafted, and transplant them into other places, where it liketh them best: but this is not counted the surest and most infallible way.

In Normandy likewise they make plants of sprigs and new branches growing vp fro the feet of peare trees & apple trees, these they cleaue in fowre quarters, and in the midst of them they put the end of a barly eare, or elie a beane, and are reported by that meanes to breede good and naturall trees, without any other manner of grafting of them: but I am of opinion, that neither the beanes nor yet the barlie doe anie good for the helping of them to take roote, because that commonlie such stocks as are planted doe not put forth roote at the ende of the foote, but higher, as almost euery at the top of the earth, there being the most nourishing part of the earth.

Some put yoong branches and sprigs into the ground, yea and the thin rindes of plum trees, which afterward take roote, and thereupon they plant abricots, but this commonly hapneth in a moist, good, and fruitfull soile.

Some do ordinarily plant stockes of the garden quince-tree, and graft peare trees thereon, as also apple trees and great peaches, the fruites whereof taste as if they were peach plums, but they must be grafted halfe a foote within the ground, because they neuer haue anie faire trunk, and being grafted thus low, the graft will put forth roots of it selfe, which will make it indure and continue the longer time.

Some haue likewise found out a way to graft the vine, which is a very ifingular and profitable thing, for hauing a vine that is not of a good plant, you may by grafting of it, sooner come to haue fruit, then by pulling of it vp, and planting another in the place.

To graft the
vine.

Some graft vpon the foote of a plant, which is a great fault, because that

that at the most from thence they cannot gather about two or three impes, putting things also in aduventure, as well by reason they are not sure that they will take, as also because that the branch is not strong enough to defend it selfe from the winde. Notwithstanding seeing that the vine taketh roote of it selfe, you may make a triall what it will doe by grafting it vpon a branch after this manner.

Make a great pit, like as if you would burie some tree, then make your choise from the foote or stocke of some vine which pleaseth you not, of certaine branches which you shall finde fit and meete to receiue graftes, whether they be new wood, or of two or three yeeres growth: cut them off and cleaue them som three or fower fingers euen vp vnto some ioint; then sharpen the other branch which you meane to graft, and sticke it in the cleft of the other ioyning together the rinde of the clouen one on euerie side in such sort as that they may seeme to be but one, wrapping round about some molle, and after binding it vp with some packthreed or elie with oziars verie well: hauing thus done, prepare a place where you will set it, and lay downe your graft, after the manner and fashon that you vie in propagating: then lay a little horse dung not thoroughly rotten vpon the place where you haue ioined the two branches. By this meanes of one vine stocke you shall make many, turning in the earth vpon your grafts of the stock of the vine, as is done when one layeth vines in the ground. Afterward acquaint your grafts with little stakes as is vied in propagating, and these impes doe thriue and grow as well as the propagated, and beare fruit as loone.

You may likewise make the like kind of grafts, vpon pomegranate-trees, nut-trees, rose-trees, and other such like low and little trees.

The eighteenth Chapter.

Speciall obseruations of grafting, planting and sowing of trees for to haue exquisite fruits thereof.

Forward or late fruits.

IF you graft a graft that bringeth forth a late fruit, vpon a tree that bringeth forth an earely fruit, the graft will bring forth an earely fruit in his kind; as and if you graft a peach vpon a reclaimed mulberry tree, it will come two monethes sooner: the same will come to passe if you graft vpon a vine stocke, or a blacke vine vpon a cherrie tree, or a medlar tree vpon a goose berrie tree, or reclaimed mulberry tree. The cause of this hastened ripenes is the nature of the tree, where vpon you haue grafted, which being the onelie nurse to the graft, and being of a timelie fruit in respect of the nature of the graft, doth hasten and bring forward the fruit. On the contrarie, if the tree be of a late fruit and

and the graft of a timelie, the graft will afterward bring forth late fruit in his kind, and staying after his due and wonted time, as if it be an apple tree vpon a quince tree, the apples will proue to hang on the tree till Nouember: and will take so much after the nature of the quince-tree, as that they will keepe two yeeres. By how much the more you graft vpon a tree of the same kinde and condition that the graft or bud is; as an apple tree vpon an apple tree, a reclaimed one vpon a reclaimed one, or a wilde one vpon a wilde one: by so much the fruit becommeth greater and is of a better taste, as hath beene said.

Graft one apple tree vpon another, and likewise in goose-berrie-^{The grafts of the} trees and reclaimed mulberry-trees, and you shall haue fruit all from ^{apple-tree.} mer time till the beginning of Nouember.

To cause fruit to grow that shal be halfe peach and halfe nut, take ^{Half peach and} an eiele of the one and of the other, and cut them as neer the eiele as ^{halfe nut.} you can both the one and the other, and scrape their buttons a little, then ioining them, binde them also verie well together, and after cut away their tops: the fruit growing from these will be halfe peaches and halfe nuts.

You may make one fruit to haue the taste of fowre fruits of his kind after this maner: Take fowre shoot or grafts of fowre differing sorts, ^{One fruit ha-} but of one kind of tree, as of fowre sorts of pear-trees or apple-trees, ^{uing the taste of} ^{manie fruits.} As for example of the apple-tree; take the short stalked apple, the globe apple, sharpe tasted apples, and apples of paradise (because that the shoot or grafts must be of one sort of trees) tie them verie well together in such sort, as that their barke may touch one another: afterward coner them with glew or with sand, or some fat earth so close, as that they may seeme to be all one: put them thus in some well digged ground that is full of manure, that so they may take root: the fruit that will grow vpon these, will haue the taste of fowre sorts of apples. It proceedeth of the same cause if you take two grafts, the one of a fowre apple tree and the other of a sweet, and coupling them together so close and neere, as that they may seeme to be one only; vie them as before, and looke as the grafts were, so will the apples be. In like manner if you couple, ioine and close together in such close and fast manner two small fig-tree boughes, the one of a blacke fig-tree and the other of a white, and so set them, and after that they haue put forth and blossomed, tie them againe, to the end they may incorporate and grow together, making but one stocke, the figs that come thereof will haue a red flesh on the one side, and a white on the other. Some to worke the like effect do put into some linnen cloth the seedes of two sorts of fig-trees, and hauing tied them very strait, dig them in the earth, and when they are growne vp, they remoue the fig-tree which is growne vp vpon them.

Some

Some doe likewise make grafes to beare halfe pearces and halfe apples, cleaving one apple tree graft, and one pearce tree graft, and after ioining the one halfe of the one to the other halfe of the other, and tying them close together, and loming the ioints and seames very well with gum and wax mixt together, in such manner as that the water cannot finde any entrance in at their ioints, and when this is done they graft this double graft vpon the stocke of such a tree as shall fall for their purpose: But you must thinke that this manner of planting is very hard to bring forth fruit. Wherefore they which take pleasure therein, must be contented with two sortes of grafts, and not to plant them but rather to graft them vpon another tree of the kind of the said grafts binding them close together, & sharpening them very fity for the purpose at the lower end, in maner as if they were but one onely graft.

Cherries with-
out a stone.

If you hollow the branch of a cherrie tree taking away the pith, and after set it againe it will bring forth fruit without any stone: or else thus better: cut off a yoong cherry tree within a foot of the earth cleaving it also even to the roote, take out the pith both of the one side and of the other, afterward ioyne them together againe and tie them close with a strait band; and a yeere after that this cherrie tree hath taken, graft therein a graft of a cherrie tree which neuer bare fruit, and the fruit which cometh of such a graft will be without any stone. Otherwise, cut off from such stone-fruite tree as you desire, a graft which may be easily bended: sharpen it on the two ends & graft it likewise on the two endes vpon two partes of the tree, make close the two grafted places with the mofse of fat ground, and tie them carefully with a band. The yeere following if you see that the two ends of the graft haue taken some force and strength from the stocke, putting forth some buds, then cut the graft asunder in the midst, & take cleane from it the thickest sprig that it hath, & let the other grow, and it will beare in his due time fruit that hath no stone. The same will come to passe if you propagate the endes of the smallest boughes of the yoong cherry tree, plum tree, or other stone-fruite tree, and after that you see that they haue taken roote, if you cut off the thickest and fairest twigge and let alone the leanest and slenderest. The reason and cause of this is, for that the stone cannot growe, if the tree lacke his pith, but in the tops and ends of little boughes there is no pith: therefore the fruit that cometh of them, whether they be planted or grafted after the manner that hath bene said, will haue no stone, euen no more then that which groweth of trees whose pith is taken out.

If in the vine, fig-tree, cherrie-tree, or apple-tree, you cleave a branch which hath borne fruit, and take the pith out of it, putting in Laxative fruit. steede thereof some laxative or soluble thing, and binding it well and Fragrant fruit. straight, you shall make the fruit laxative, according to the nature of that which you haue put in: and if you put therein some sweete smell or

or pleasant colour, the fruits will smell of and shew the same: and if you doe this in a rose tree, the effect will appeere in the rose: and who so shall put treacle or myrridate in the vine, the wine made thereof will cure the bitings of serpents; & not the wine onely, but the grape, vineger, branch, and ashes of the branch, will be good against all manner of biting of venomous beasts.

Coloured fruits.
Fruits hauing
the vertue of
treacle.
Wine against
the bitings of
serpents.

To graft speedily, take a graft of one knot and writhe it, and take away the barke with the knot, and after inuelt and decke vp therewith some shoote that is of the like thicknes with the graft, and it will take.

To graft a vine vpon a vine: you must cleue it as you do other trees: To graft a vine that is to lay euen to the pithe, and afterward putting the graft into the cleft, you must stop it vp with waxe verie well and tie it about verie close: but you must obserue that it is no fit time to graft the vine except it be in the moneth of Februarie in warme places, & in March in cold places, and that when the wine sheddeth thicke liquor and not thinne like water: the like may be done in May and in the beginning of Iune, when the sap or iuice of the vine is all fallen, but in the meane time, you must keepe the grafts that you would graft in cold and shadowed places, that they may put forth buds and spring. See more heereof aboue.

To haue plums of diuers sorts all the sommer time and vnto November, graft diuers sorts of plums vpon the goose-berrie bush, reclaimed mulberie tree, or vpon a cherrie tree.

Plums at
all times.

To make medlars, cherries, and peaches, that they may be aromaticke in eating and smelling like spices, and that they may be kept vntill new come, graft them vpon the reclaimed and well husbanded mulberie tree as I haue told you, & in grafting of them wet the grafts in honie, and put therein a little of the powder of small spice, as of cloves, nutmeg, and cinnamon, and the fruit will taste of them.

Peaches, cher-
ries and med-
lars eating
like spice.

To cause medlars to grow without stones, and withall to be sweet as honie, graft them on eglantine, and in the grafting of them wet them in honie. But to haue medlars in their greatnes two moneths before ordinarie, and that one may be better then twentie others, graft them in a reclaimed mulberie tree or a goose-berrie bush, and at the grafting thereof wet the graft.

Medlars with-
out stones.

To haue pearces of *Augusta*, of *Parma*, or of *Saint Rieule*, a moneth or two sooner ripe then others, graft them in a reclaimed mulberie tree, and if you would that they should indure and keepe good vntill new, graft them on a quince tree, that they may come late, and on a reclaimed mulberie tree, for them to come early.

Pearces of
Augusta.
Pearces of Par-
ma made to be
early ripe.

To haue reclaimed mulberies early ripe, graft the mulberie on the pearce tree, chesnut tree or gooseberrie tree: and to haue the late ripe, as towards Nouember graft them vpon the medlar or quince tree. They must alwaies be grafted in the increase of the moone, and yet

Take mulber-
ries early and
late.
The time of
grafting them.

yet better three or fowre daies before the first quarter, for how many daies the moone is old when it is grafted, so many yeeres will it be before the tree bring forth fruit, as we haue touched before.

Nuts without
shells.

To haue nuts without shells, you must take a kernell which is very sound and not any whit hurt, and wrap it in wooll or the leaues of a vine, or in plane tree leaues, that it may not be eaten of ants, set it thus iawrapped, and the nut tree comming thereof will bring forth nuts without shells: the like may be done in almond trees, if you oftentimes put ashes vnto the foote thereof, or vnto the roots vnder the ground, and this also holdeth generally in all other fruits which haue an outward shell if they be set in this order.

Nuts, plums
and great
almonds.

To haue great nuts, plums and almonds, take fowre stones of the foresaid fruits, and put them in a pot or other vessell full of earth, joining the one to the other as neere as may be, and turning the pot and the bottome vpward, make a hole in the said bottome, and the stones shall be constrained to put forth their sprout vp on high through the said hole, and by this constraint the fowre sprouts will ioine and incorporate themselues together in such sort, as that they will all make but one stocke of a nut tree, which according to his season will beare fairer nuts than any other trees of the same kinde and nature. But for the more easie doing heereof, you must after the fruit is once shaped and fashioned, take away from the nut tree, almond tree, plum tree, and such like, all the small and rascallie sort of fruit which you shall finde vpon them, and so the iuice of the tree will giue it selfe wholly to the remainder: which also by that meanes will be the better fed and nourished, as hauing bestowed vpon them all the substance which was provided for the others that are taken awaie if they had not bene gathered. Wherefore the case stands plaine in the whole matter of nourishment, whether it be in things that haue life or those which are without life, that the starued or rascallie sort doth come, by the iuice his conuersion and being turned vnto the nourishing of other fruites which are greater: and it cannot be otherwise seeing the distributive vertue of the trees being occupied about many must needs haue the lesse for euery one, whereas when it hath but a few to feede it dealeth the more bountifullie.

To cause an oake or other tree to continue greene as well in Winter as in sommer, graft it vpon a colewoort stocke.

Write what you will in the cieler of the fig tree, which you meane to graft, and the fig growing thereof will containe the said writing.

The fig tree will not loose his fruit if the stocke be rubd ouer with mulberries; or if you cause it to be cast about with pits while the seven starres doe appeare, watering the foote with salt brine and water mingled together equally.

The chertie tree will beare a pleasant and sweete smelling fruit, and

To keepe an
oak or other
tree greene at
all times.
Written by
That the fig-
tree lose not
his fruit.
The chertie
tree grafted
vpon a base
tree.

and will not be subiect vnto the eatings of snails, caterpillars and other small wormes if it be grafted vpon a bay tree.

The pearce tree that you will graft, will beare a pearce smelling like roses or muske if you cleaue the graft which you meane to graft, and put into the cleft thereof a graine of muske, or a dried leafe of a sweet smelling rose, and so graft it. And the like may be done in other fruit trees to haue well perfumed and sweete smelling fruit: by this peece of cunning skill roses become to smell of muske, and the cielets haue the smell of cloues.

The pearce tree
of sweete roses
muske saueary.

It must stand for a generall rule that neither any graft after it is blossomed, as neither that which is laden with fruit, is to be grafted.

If the white poplar be grafted vpon the mulberrie tree, it will bring forth white mulberries.

White mulber-
ries.

The cherry tree will beare his fruit more earlie and before his ordinary time if you lay quicke lime vnto the rootes: or if they be watered oft with warme water: some say likewise that if you graft a blacke vine vpon a cherrie tree, that then the vine will beare grapes in the spring, the reason whereof we haue set downe in the beginning of this Chapter.

Grapes in the
spring.

Graft Citron trees, vpon pomegranate or mulberrie trees, and the fruit thereof will be of a red colour.

If you would transforme fruites from their naturall shape, into some other diuers and artificiall shapes, put the said fruites when they beginne to bee somewhat bigge, betwixt two mouldes of plaster or baked earth, within which there are portraictures of diuers sorts, cut and tie them softly, for the fruit as it groweth will take the stamp and impression more and more: but in the meane time you must conuey aire into the mouldes at little holes: for else the fruit would rot within.

To fashion
fruites after
what shape they
will.

The graft that is made vpon the Aler tree or oake, bringeth forth a very strong tree: but if it beare fruit, yet the fruit is of no sauour or taste.

To haue peaches or almondes to grow with letters written vpon them: after that you haue earen the peaches or almondes sleepe the stone two or three daies, afterward open it softly and take out the almond, and with a brasie pen or otherwise write vpon the rinde of the almond, what you please, but doe it not too deepe, afterward put the almond againe into his stone, wrapping the said stone about with paper or parchment, and so plant it, and the fruit growing thereupon will be written and in grauen.

Peaches or al-
mondes written
vpon.

To make peaches red: seauen daies after you haue set the peach stone, take it out of the earth againe, and within the opening of the shell put some vermillion or cinnabrium, and then set it againe: It will fall out likewise after the same manner, if you graft the great peach vpon the red rose tree, or vpon the almond tree, or vpon the red damaske

Red peaches

*Peaches of one
or other colour.*

maske plum tree : you may also make the peach of itselfe either colour as you will, if according to the manner before said, you put such colour as you would haue it of within the shell of the kernell.

To prevent that peaches doe not become withered and rotten, you must take away the barke of the stocke of the peach tree, that so there may issue out from thence some small quantitie of moisture, after you must draw the place ouer with mortar, mixt with straw: Pearce the body of the peach tree belowe, and take away the pith, and fasten with in it a stopple of willow or corneile tree, and then you shall haue peaches without any stone.

*Fruitfull
pomegranate.*

Pomegranate trees will prooue very fruitfull: if you annoint the stocke of the tree with purcelane and spurge stamped together.

*To make bitter
almonds sweete.*

Of an almond tree that is hard and bitter you shall make a soft and sweete, if you bare the stocke euen vnto the rootes which lie shallowest in the ground: and water them oft during certaine daies with warme water, before that it blossome, and thus the almonds that before were bitter will become sweete.

*To make good
muscadell.*

To make good muscadell: Take an iron wyre and put it in the plant of a stocke, which is cut with three eies, vsing the means to haue all the pith forth: after which fill vp the said stocke with nutmegs, stopping it so therewithall that the water may not get in: and the rootes that these three eies shall beare will be muscadell rootes.

*Nuts with shin
shells.*

That nut will haue a very tender shell and a very thicke kernell, in whose foote, stocke and rootes there are put ashes.

*A nut tree be-
ring neither
leafe nor fruit
till midsummer.*

To cause a nut tree that beareth no leaues before midsummer, vpon midsummers euent to put forth both leaues and fruit together, and withall to haue his fruit ripe and readie to eate as soone as any other: fill a pot with greene nuts gathered the said midsummer euen, and make a hole in the bottome of the pot, that the water may runne out, putting it after that vpon the said midsummers euen into the earth. Plant the shootes that come of these, and you shall finde the thing before spoken of.

*The grafting of
peaches.*

The grafting which is performed to a graft vpon a tree correspondent and answerable to the nature of the graft, proueth of most beautifull growth and most fruitfull, and his fruit most durable: which faileth not out when this correspondencie, sympathie and fellowship is wanting: and this is the cause why the peach tree thriveth better being grafted in the plum tree then elsewhere; and the pearce-plum tree in the almond tree, and there continue a longer time.

*The grafting of
the pear-plum-
tree.
Plums like to
the almond.*

If the eielet of the pearce-plum tree and of the almond tree be grafted together, the kernell of the fruit which cometh thereof will be an almond.

The plum tree grafted vpon the almond tree beareth a fruit like vnto the almond, and if it be grafted in the nut tree, the rinde thereof will

will be like vnto the nut huske or rinde, but within it will be a plum: Againe if it be grafted vpon a quince tree, it will bring forth a fruit of a diuers fashion, according to the nature thereof.

Graft a plum tree graft or any other fruit trees graft vpon the fig tree, and you shall haue your fruit to grow without blossoming. *Fruits without blossomes.*

Graft the grafts of an apple tree vpon a sowre pearce and vpon the Richardine apple tree, and you shall haue apples of a yellow or straw colour, and of the chesnut tree: and to haue such as will last vnto November, you must graft them vpon a quince tree, and other late trees, and so they will be for to keepe two yeeres. *Apples of a yellow colour.*

Take two grafts of apple trees, the one sowre, and the other sweet, and ioine them close together when you shall graft them: the apple will taste both of the one and other sauour, as we haue said before. *Apples of two tastes.*

If any tree bring forth his fruit late, or if it be altogether barren and without fruit, and yet full of leafe and woode: set in the midst of his maine roote, or else in the midst of his stocke about winter, a wedge of greene wood, the yeere following it will beare fruit. The reason is, because by the meanes of this wedge, the sap and substance which wandred abroad and imploid it selfe about the bearing of leaues and increase of woode, will draw in it selfe and go a closer and neerer way to worke, conuerting his seruice to the making of fruit. *Late riping fruit.*

You shall haue cherries on many trees which will be good to cate vnto November, if you graft the cherrie tree vpon a reclaimed mulberry tree, and vpon a wilde one. *Cherries at all times.*

If you desire that the fruit of your grafts should increase in goodness and surpasse the taste of the common grafts as they are when they are grafted, you must first before you graft them, steepe them in hony tempered with rose water, so long as till they be thoroughly moistned, and then grafting them, draw them ouer afterward in steed of mortar with virgins waxe and other things fit to lute withall: if after this manner you graft medlar trees on goose-berry bushes, and vpon naturalized mulberrie trees, and withall in the grafting wet your graft in hony, you shall haue a haltier or earlier and better fruit. *Sweet medlars.*

Graft chesnut and calior pearce trees, vpon a gooseberrie bush if you would haue them to beare their fruit early: and vpon the white thorne, for to beare it late, or else vpon the sowre pearce tree. *Forward pears and late pears.*

To make apples red, you must water the tree with vrine, or else plant rose trees neere vnto the apple trees. *Red apples.*

Pearces will haue no stones, if at the first you picke away the stones and all other grauell from vnder them very carefully, making the ground where the tree shall stand free thereof, and withall lay vpon it at the roots being planted good store of sifted earth, watering it afterward very diligently: but and if the pearce tree be already growne vp, and become a perfect tree, you must lay it open to the lowest rootes, *Pearces without stones.*

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taking

taking away all the stones and grauell that is vnderneath and about it, and casting in the earth againe which you cast forth abroad but after that it hath bene sifted, and some dung put vnto it, seeing that it bee watered, after you haue so cast in your earth.

The pomegranate will become very red, if you water the pomegranate tree with water and lee mingled together.

The fowre pomegranate will become sweet, if you lay about the roote of the pomegranate tree, the dung off wine, and water it with mans vrine.

Graft the graft of the peach tree vpon the quince tree, you shall haue peaches and quinces together: likewise if you graft vpon the peach tree, the graft of the quince tree.

The graft of an almond tree grafted vpon a peach tree, or that of the peach tree grafted vpon an almond tree, causeth the one tree or the other to bring forth both peaches and almonds, whose rinde and kinnell also will be good to eate.

To haue a pippen or kernell to bring forth a faire fruit and timelier then any other graft vpon the same stocke, take the branches of the peare tree or apple tree, and at the lower end make little holes, but not cleane through, and not within a handbreadth one of another, they must be one right ouer against another, & haue a graine or two of salt put into them, and heereupon the branch laid in the earth with a fewe oates, cutting off the end as is vsed to be done with grafts when they are grafted. If heereupon the branch take and waxe greene, it will beare a fairer and timelier fruit then any other of that kind.

To haue red apples, you must plant rose trees or mulberie trees neere vnto the apple trees. Or else set some stake in the earth neere vnto the apple tree, and there neere at hand set a vessell full of water, whereupon the southerne sunne beames may directly beate in such sort, as that the vapour which shall rise from the water may beate against the fruit: or else vncouer the apple tree at the foote in the spring time, and water them sundry times with vrine: couering them againe about ten or twelue daies after, and watering them with vrine betwixt times.

To make apples sweete, you must water the rootes of the apple tree with mans vrine, wherein hath bene dissolved goates dung, and the lees of old wine.

To haue great cherries, you must often breake the cherrie tree. To haue great quantitie of apples, you must compasse the stocke of the apple tree the height of a foote about the earth, with a plate of leade taken from the pipe of a spout, and when the apple tree beginneth to blossom, you must take away this band of lead. This banding may be renewed euery yeere, to make the apple tree fruitfull: the like courtie also may be taken with the peare tree.

To

Red Pomegranates.

Sweet pomegranates.

Peaches and quinces together.

Peaches and almonds together.

To haue faire fruit of a pippen or kernell.

Red apples.

Sweet apples.

Great cherries. A fruitfull apple tree.

To make a tree to beare grapes together with the fruit of his owne kinde: put the stocke of a vine in the foote, and boring the tree cleane through with a wimble, you shall at this hole put through the vine stocke in such sort as that there may be two ioints remaining within the stocke, and so much of your vine stocke as remaineth within the stocke of the tree must be pilled, and the barke taken away, that so the substance of the tree and of the vine stocke may more easily grow together: after this, you shall stop the holes of the saide bore verie close, both of the one side and of the other, to prevent all danger of water getting in, and at the end of three yeeres, cut off the vine stocke behinde, thus your tree will beare grapes and his owne naturall fruit, and both they will grow from the same trunk or body.

Graft the graft of an apple tree vpon a peach tree, and likewise the graft of a peach tree vpon a peare tree; and on the contrarie, and you shall haue a strange fruit called peach apples, and peach peares. And thus likewise standeth the case, if you graft (as hath bene saide) the graft of a peare tree.

The nineteenth Chapter.

Of the time of planting and manner of transplanting of grafted trees, both great and small.

Some say that it is best to plant in the spring Equinoctiall (which is the time about the twelfth of March) because that trees at that time take roote, and bud more readilie, and put forth the sooner, especially in cold places. The greatest part of this our countrey of France, doe plant and transplant trees before and after the fowre and twentieth of December, at which time we see heere in this citie of Paris euery wednesday and saturday great sale of diuers sorts of trees: and yet in my iudgement this is not the best time to plant and transplant, because that trees would not be washed nor wet about their feet, at such time as they are planted: but for the time before and after the fowre and twentieth of Nouember (which is called the dead moneth) it doth nothing but raine for the most part, as we haue obserued for this ten yeeres space: and although this time were colde as some commonly report that for three weekes before this day, and three weekes after, great colde do rule and raigne; then if the colde be so great, how should it be but that the rootes of the trees transplanted, as also other plants should freeze, especially the earth being newly stirred, as is most evidently apparant in vines. But the best time to transplant trees, is in Autumne, because that in Autumne there is as it were a shadow of sommer, S. Martins sommer, and in this time it seemeth as though trees would make a new spring, as the blossoming of some trees at the same time doth seeme oftentimes to

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A tree bearing grapes and his owne naturall fruit.

The first time trees at to plant.

perswade, and for that in this time trees take roote much better then in winter, in which time there is nothing almost that thriueh. And if the case so stande as that it is fit for to plant great thicke trees, the pit must be made sixe moneths before, and that bicause the earth should thesby be corrected, and as it were renewed by the aire and heate, as husbandmen and other workemen know very well which turne their grounds before winter, and all the time thereof let them lie thus tilled, then by a far stronger reason, you shall find that it is much better to plant trees in autumnne then in winter. But howsoever it be, when you plant any thing in autumnne, it must be done some five daies before the end of August, and in high and drie places men plant at all times and seasons. It is good to sow or set the first day of the first quarter of the moone, but the 8. 9. 10. 11. 12. 13. 17. and 18. it is not good. If you plant in the decreafe of the moone, the tree will yeeld the more profit, and fruit will grow the sooner thereupon, and by how much your planting falleth to be neerer vnto the end and going out of the moone, by so much the tree will be of a more beautifull growth, and becomming more fertill and fruitfull: but and if you plant in the increasing and new moone, indeed your trees will take better and become more durable and lasting, they will spread in roote and wood and leaues, but they will giue ouer so much the more to beare fruit. If constrained by some necessitie you plant in the new of the moone, then it will be best for you to breake off the shootes that they shall thereupon put forth about the latter end of the moone, and then they will beare their fruits as others doe. Notwithstanding this limiting and bounding of the time of the moone is not of such warrantise, but that the tree may be as profitable at all other times of the moone, as well as either then or else in the increafe and new of the moone.

Some plant in Ianuarie the plants that haue the shanke or foote of their shootes cut biace, as also the plant that is set of stones and in a wel tempered place: but in a warme place, men are wont to plant in October, Nouember, and December.

Trees that haue a grosse thicke roote are planted in October, Nouember, and December: but the shootes or litle branches are planted in March when they are in sap.

Trees that haue a great pith, as fig-trees, naturalized mulberie trees, hazell, and such like are planted without any roote, from after mid-September vnto the beginning of Nouember: but other trees which you would plant with roots, must be planted about the beginning of December or very shortly after.

Grosse trees are transplanted from one place into another in the moneth of Nouember, and they must be freed from snailles, and lopot and cropt before they be transplanted: for so they take the better and put forth their sciences verie powerfully: and in taking of them vp

Grosse or thicke trees.

or transporting of them, it happen that the barke of their rootes be broken; you must draw the pilled and vncouered place ouer with good dung or earth, before that you put it into the ground againe, and stirre vp the earth verie well round about where you intend to set them downe againe, to the ende that their rootes may spread and seare themselves to their good contentment, without being pinched or streightned.

Some do remoue from after the beginning of Nouember vntill March when the trees begin to enter into their sap: for the sap once drawing vp a loft, doth forbid all remouing of the tree: and therefore in such case the sooner the better, that is to say, if presently after the leaues be fallen which is in the beginning of winter you goe about it: but in waterie places it is good to stay till Ianuarie and Februarie: but nothing must be done this way when it raineth or when the earth is wet: for it would so harden vpon the drying, as that the roots would be opprelled and choaked.

The yoong grafts which you haue grafted in the stocke nurserie, *Young grafts.* or elsewhere, must be remooued as soone as the grafts shall haue closed vp the cleft of the plant as some are of opinion: but yet this is hazarded ware, the graft hauing not as yet taken almost any disposition or good liking of the sap of the plant, which being thus againe remooued, is halfe astonished and put out of the high way of his wel pleasing nourishment, and so beginneth to wither, when it commeth to take a taste of his new dishes and prouision: but and if you stay till the graft haue put forth a faire branch, before you remoue the graft, you shall shun the danger that might otherwise ensue.

You must plant your trees againe as soone as you haue taken them *To remoue trees.* vp, if no other weighty matter let you: but if you be put off from doing it, either because it is brought you from far, or vpon some other occasion: you must so soone as they be taken vp couer their rootes with the earth from whence they were taken, new leaues and straw, that so the raine may not wash them, and make them afterwarde to rotte when they become drie againe, and to the ende also that the aire and breath either of the winde or of the sun, or yet of the moone may not dry them and suck out the moisture which keepeth their roots in good hart and fit to grow, both these things being very hurtfull, but the rain the worse of the two.

Sowre cherrie trees cannot abide to be remoued, for being transplanted they will hardly put forth any sciences, especially if they haue their chiefe and principall roote maimed.

Before you remoue great trees, you must lop off their boughes very diligently (as hath bene said:) but as for litle ones you neede not crop them; to take off any part of their heads; neither yet to take any of their boughes from them, if they haue not too bushe a head. If

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you desire to know a reason wherefore, it is thus: If you leave the head and tops vpon trees when they are grown somewhat great and thicke, they will stil be sending of their sap vpward not looking to the feeding of the rootes, for that the aire attracteth the nourishment of plants, as may easilie be proued by example when there groweth any small tree vnder one that is verry great, for there the small tree will not thrive well, as if it were abroad in the aire and from vnder the shadow, and so that which hath his head cut off wil take root sooner then and if it were whole and vntouched. But if the tree which you remoue exceed not the thicknesse of a great inche you shall let it remaine whole, because yoong plants take roote more easily than those which are old, and the reason is openly knowne.

If the rootes of the trees which you would remoue, be much longer than is needfull, you may take off the ends in setting them downe againe, and that so much as may fit best for the hole wherein you meane to set them, for so by this meanes they will not be stopp'd vpon the sides of the hole, but will attract and draw moisture out of the earth for the nourishment of the tree a great deale more abundantly.

When you remoue any tree, you must lay his roots round about with fat earth, and take heede that the weedie earth which you haue digd or cut away from the pit whither you meane to remoue it, doe not fall in amongst the rootes, for it would put them in danger to be ouerheated: or else that they growing vp againe, might diminish the nourishment of the tree. If it happen that the earth which you haue taken out of the pit be full of wormes which might hurt the rootes, then mingle therewith some lee and ashes. When the roots haue taken foote, trample downe the ground as hard as may be, or else beat it with a pauiers beetle, watering it afterward if it be drie, or else not.

The twentieth Chapter.

Of the place and soile for trees in generall.

THE principall point in growing of trees is to provide them of conuenient aire and earth, because that these doe cheere and season them, and are the proper subiect of their nourishment. And as concerning the earth that is recommended vnto vs as to bee had in regard and looked vnto more than any thing else, as that it be such as is very murly, temperate in colde and heate, of a meane and middle sort of moisture and farnesse; for such ground as exceedeth in any one of these things is not so fit for anie fruit tree. This is a rule to stand generall in and for all fruit trees: but as for particular kinds of trees, it is very well knowne that every particular tree hath his

seuerall and particular soile, whence it may gather fit and agreeable nourishment for it selfe as *Theophrastus* testifieth. In like manner one desireth a diuers kinde of placing and situation from the other. Wherefore the trees which craue the refreshment of hauing their stockes taken vp, doe commonly thrive better in vallies then in high places, as well for that their seate must not be altogether so drained of moisture as the higher places be: as also for that the moisture which is in higher grounds conueigheth it selfe and distilleth into the lower and hollow, whether it be raine or any spring rising from thence.

In watry places you must not make your pit verie deepe, where in you meane to plant your tree; but in drie grounds you must set them somewhat more deepe, neither yet must you heape too much earth in vpon those pits when you fill them vp againe, that so the raine may the better staie about them and water them.

That which is commonly receiued, as that in good ground there grow good fruits, must be vnderstood with respect had to the naturall goodnes, that the fruit hath in it selfe, if both the industrie and skil of man to husband and keepe it neate, and deliuer it when anie inconuenience presseth vpon it, to drie and to season it so as that it may yeeld his fruit in due time, be not wanting; for these failing, the fruit will likewise greatly faile of his goodnes, taste and durablenes, and so will falsifie the generall rule aboue named.

Set downe with your selfe to remoue your trees, into so good a ground or rather better then that from whence you tooke them vp, hauing respect to other especiall obseruations besides to be obserued, according as will be required of the particular natures of euerie one.

And if it be possible, remoue them into the like situation for the receiuing of the sunne shine, vnto that which they were first set and planted in; and that you may not faile heereof, marke their barke vpon such or such a quarter, and set it vpon the same againe in removing of it. But this obseruation (as I must confesse) is not alwaies kept, for the reasons aboue named.

Also plant those of a forward spring in a late soile, and a late soile in a hot ground.

The greatest part of trees doe delight in the South sunne and to be seated vpon some sunnie banke, from the Westerne winde as being verie contrarie vnto them, especially to almond trees, abricot trees, mulberie trees, fig trees and pomegranat trees, but principally from the Northeast winde, because it is sharpe and swithning, verie hurtfull for all sorts of plants, euen to all fruites of what qualitie soeuer that they be; but chiefly when they are in blossome, and that because it bloweth from off the sea, as also for that it is halfe North which is verie sharpe, but not so dangerous as the Northeast; and some saie that this winde bloweth once a yeere, as in the spring, and that it spoileth buds

especiallie those of the vine. *Vnde versus: Paribi Galerna, per quam sit clausa saberna.* On the contrarie, chefnut trees, cherrie trees that beare a sowre fruit, quince trees and plum trees doe not much affect or sport and delight themselves either with cold or much heate.

In watric places trees commonly growe great and beare much fruit and leaues: but they are nor of any commendable relish, colour or durableness: yea they beare fruit commonly the yeere they are set, if they be accustomed to beare. Trees must be set the thicker in a fruitfull soile.

If you meane to plant trees in a cold place, and that yet the tree should not be hurt of the colde: you must plant them on the sunnie side of the banke; from the North, but towards the South.

The one and twentieth Chapter.

Of the place and time wherein euerie fruit tree delighteth to be sowne, planted, and grafted in particular: and first of the almond tree.

The almond tree.

THE almond tree delighteth in hot places, looking towards the South or East, or where the aire at the least is moderate: as vpon the tops of hiles, or places neere vnto hiles, that are somewhat stonie and grauellie; stonie or marlie: in which places it doth nor onelie flourish well being planted, and blofome abundantly, but beareth therewithall great quantitie of drie almonds, as also hard and well relisht ones. But contrariwise if it be planted in a moist and watric ground, and cold place, it neither groweth well, nor beareth fruit well, neither yet continueth long. The fit time for the setting of it is about the winter Solstice, which is the eleuenth day of December, euen vnto the end of the same moneth or somewhat after: for the plant of this tree being forward and earely in putting forth buds, if it were planted in the spring time, it might let slip and loosen the time of the yeere, which might be the fittest for the maintaining and comforting of his blofome. If you would haue it to grow of the stone vnbroken, and if I may so say, of his seede, you must let it be in Ianuarie and all Februarie, in such places as are temperate; or in October and all the moneth of Nouember in places that are hot. And thus to cause it to grow of this fruit, you must take new almonds, thicke ones, hauing white shels, very porous and spoongie, and lay them in steepe for the space of twelue howers in honied water, and after this dig them in the earth fower fingers deepe, the sharpe end downward, and after to water them three or fower times a moneth. It groweth also of shootes and sciences, but the science must be taken from the top of the tree, full of pith, sound of barke, and cut vnder the knot. And as concerning the grafting of it, you must take the time of autumnne, for as hath been said

said this tree is a quickespur and forerider: but and if you stay till the spring time, you shall breake it off when the science is fully put forth. And for the chusing of grafts, that will take well, you must take them vp on high and on the top of the tree, and not from the middest, much lesse from below: and these graftes you may graft, either in the bud or in the cleft, and vpon a tree of his owne kinde, or vpon the peach or plum tree: indeede the almond tree that is grafted, is not of such growth, or so fruitfull, as that which is planted.

The good Farmer must plant and grow great store of almond trees, seeing they are not chargeable to maintaine, neither yet their fruit to keepe, but rather of great profit and lesse losse then any other, seeing that euen vnder them corne will grow iolly and faire, the Almond tree hauing but a few leaues and those little ones. *The profitable almond tree.*

The barren almond tree will become fruitfull and beare, if you lay open the rootes in winter, or else if you pearce some part of the stocke close by the earth, and put through the hole a wedge of oake, watering it about with mans vrine. *The barren almond tree.*

You shall make bitter almondes sweete, if you lay round about the rootes of the almond tree swines dung, and vrine, casting much earth vpon it afterward and this yeerely: or if you bore a hole in the stocke of the tree, and put therein a wedge dipt in honie: or if (as *Plinie* and *Theophrastus* say) you bore the stocke through and through below and let the sap run out. Of sweete, you may make fower ones, if you let the beasts brouse and crop off the first and tender branches. *Sweete almonds. Bitter almonds.*

The almond tree will be free from all annoyance of fogs, if so be there be small grauell laide vnto the rootes before it blofome, and when it shall begin to blofome then to take it away.

You may haue written almonds if you breake the shell of an almond very finely without doing any harme to the kernell, wherevpon hauing writen what you thinke good, wrap vp the shell and kernell in paper and so set it well covered with durt and swines dung. *Almonds with in printed letters.*

Almonds are gathered when their huskes gape through the force of the Sunne: and hauing bet them downe if you shell them altogether, and wash them in salt brine they will become white, and will keepe a long time, provided that before you lay them vp to keepe, you drie them in the Sunne. Their huskes will be easily taken off from them, if you spread them vpon straw. *The gathering of almonds.*

The place to keepe them well must be dry, whether it be coffer, presses or garner: and if the number be great that you would keepe, you must seee that the place haue good store of aire and be lying open to the North wind. *The place to keepe them in.*

The bitter almondes haue power to resit drunkennes, as *Plinie* witnesseth, of a certaine Physitian which did vse to drinke out all commers and not be drunken himselfe, and that by eating fine or fixe bitter

bitter almondes before he did drinke: but they kill hens and chickens if they ate them. The bitter almond bruised and rubbd or laid vpon the browes and temples, doe appease the head ach, and procure sleepe, especially if you put vnto it water of Veruaine.

Diseased lungs.

The vse of sweete almondes is good for them which are troubled with clammy steame in their throate, or which haue weake lungs, are subiect to the grauell in the raines or difficultie of vrine, as also to restore natures force and to make men apt to vnerie. The gum of the almond tree doth quickly stay the spitting of blood: yea the daely vse sufficiently sheweth how profitable this fruite is, for it serueth all the yeere long for the making of almond milke, potage, penners, marchpanes, and other such daintie deuises.

The two and twentieth Chapter.

Of the peach tree, abricot tree, Spanish peach tree, peach-plum tree, bastard peach tree, and the small peach tree.

THe peach tree is planted of his stone, setting it two fingers within the ground, and the small end thereof vpward: it delighteth in sandie places, in drie places, and where the sunne hath his full force: but in cold, moist, and windie places it dieth presently if it be not defended from the said inconueniences. You must set the stone with the sharpe ende turned into the ground, and when it is in the earth, digge it, batte, and stirre vp the earth about it at the foote, at the least thrise a yeere: you must allow it dung, a fat soile, and a small mould, and that a little before winter come, & especially swines dung, which maketh it to grow more thicke then any other sort of dung or batling: by this meanes you shall haue good peaches, thicke ones, and fleshie: you must likewise weede them oft: after, when it is two yeeres old, you must remooue it, and lay it along in his pit, euen after the manner that they vse vines, letting one onely bough stand out of the earth, which may growe to serue for the stocke and body, and thus it will continue long by reason of the great number of rootes which it will haue both to stay it as a foundation, and to feed it: but you must cut off the longest branch, and that which is the straightest of all the other, which is the thing that would be diligently practised vpon all fruite trees, because that it is the thing which keepeth them from bearing store and abundance of fruite. It is not to be grafted out of itselfe, if you will haue it excellent: howbeit to make it last the longer, (in as much as it soone waxeth olde) it is good to graft it vpon a bitter almond tree, damaske prune tree, or quince tree, but not otherwise then scutchion or flute like.

It must be watered at euening in hot weather, with coole water, and

and sometimes with water mingled with the lees of wine, especially when it withereth and beginneth to fall away: as also to remedy it when it is in danger of fainting and drying, you must lop it and cut away all the boughes, as is wont to be done with willowes when they are headed: for by that meanes they become lustie and frolike, and to haue as many boughes as they had before: it must also be staid vpon some pole or willow, because his rootes be verie tender, small, and not creeping farre into the earth: likewise we see that the peach tree doth grow old and fall away incontinently.

It beareth a diuers fruite, as well in colour and taste, as in substance, and this diuersity cometh for the most part of the ground: but principally of the husbanding of them. And that it is thus, the peach trees that are planted or grafted vpon vines, bring forth peaches of a better taste and more solide substance. The peach tree grafted vpon a mulberie tree, bringeth forth peaches that haue red flesh. The peach tree grafted vpon a nut tree doth beare peaches with huskes like nuts, whose tree is but small, and hath leaues like vnto the almond tree, and a reddish flowre: it is true that such a tree may become such a one of it selfe, as we see infinitely in France. The peach tree grafted vpon an almond tree, beareth peaches which haue a kernel like vnto the almond, but the rinde and the flesh like vnto the peach.

There may as much be said of Abricots, called of the Latines *Præcocia*, or *Armeniaca*: of Spanish peaches, medlar tree, bastard peach tree, and small peaches, which are kindes of trees agreeing much with the peach: all which are verie tender in frost, especially the grafted abricot tree, and it continueth not past halfe the time of the peach tree: all of them are subiect to be spoiled of the cold, snows, frosts and fogs, which happen after that they are blossomed: but to keepe them from these dangers, it will be good to graft them vpon the quince tree or almond tree: all of them will beare great fruit, if when they blossome they be watered with goates milke. Concerning the particular vertues of the peach tree, see more aboue in the nineteenth Chapter of this booke.

The flowres of the peach tree are excellent good against melancholy, and the wormes. If you make syrups thereof of leuen or eight infusions to be taken fasting. The gum of the peach tree is taken with good successe in the spetting of bloud with the water of plantaine or purlaine: for the cough and difficultie of breathing with hydromel, or the decoction of solefoot. For the grauell and stone with the iuice of radishes, citrons, or white wine, the weight of two drams. The leaues stamped and applied vnto the belly, doe kill wormes: the iuice thereof dropt into the eare doth the like: the kernels eaten, take away the wringings of the bellie: eaten to the number of sixe or seuen, in the beginning of meate, they preuent drunkenness: stamp and bould

in vineger to the forme of a broth; and after rubbed in place, conuenient they hinder the falling of the haire: stamped and made in form of a milke with the water of veruaine, and rubd about the browes and temples, they cease the headach: the oile made by expression ceaseth the paines of the eares; and in clysters, the colicke and sciatica.

He that hath regard of his health must not vse these fruites, but as sparingly as he can possible, and fasting rather than otherwise, because they corrupt easilie in the stomacke: but aboue all things they maie not be eaten dript or steeped in wine, because wine correcteth them not as some thinke, but rather causeth that their iuice pearceth the more sodainly and easly into the veines. The peaches of *Corbeil* are counted for the best, hauing a drie and solide pulpe, and somewhat red, not sticking or cleauing any thing vnto the kernell. The *Romaines* made great account of the peaches which they called *Persica Duracina*, as do also the *Brittons*. The least dangerous, least subiect to be corrupted, and most pleasant, are the *abricots*; which also some haue left out of the number of the kinds of peaches, and placed amongst the plums, as well because of their pleasant smell, as for their harmlesnes, and that both within and without they doe rather resemble the plum than the peach. The oile pressed out of their kernell, is marvellous good against the hemorrhoides and swelling of vlcers, and against the impediments of the speech, and paine of the eares.

Spanish
peaches.

The three and twentieth Chapter.

Of the small nut tree or hassell tree.

THe hassell-tree (which is called the small nut-tree of the small fruit which it beareth, or the filberd-tree, of the great fruit that it beareth) groweth in any aire or ground: but it best delighteth in a leane ground, that is sandie and moist neere vnto waters, or in places that men vse to water, because this helpeth them as well in the bringing forth of their fruit in great store, as for to make them indure long: adde heereto that they put forth and spring in such sort at the roote, as that thereof one may set as many as he will in other places. When they are sowne they must bee put two fingers under ground, but indeed they grow better of a plant that hath roote, or of a shoote cut biace, and hauing old and new woode as we haue already declared in the sixth Chapter. They are planted in October and November in a warme and temperate place: or in February and March: and it is better to leaue vpon them some boughes when they are set than to set them of one single rod, for so they beare the more fruit. They must yeerely be digged anew at the spring, neere vnto the foot and round about, and their shootes all cut away, without leaving any standing, saue three or foure for to plant and make thicke bushes shadow,

dow, and the same very neate and cleane for height, not leaning any branch or bough, after three or fouer sadome from the top. Wherefore if they be oft lopped, picked, and pruned, they wil grow the more straight, compact, and high, and will beare better and fairer fruit: but otherwise if a man neglect them, they run out all their nourishment into wood and leaues without fruit. Their fruit is called the small nut or filberd. The filberd of hot countries, (where such trees are called filberd trees) is more round and fleshie then the French small nut, and it is a fruit very easly dried and made yellow. But and if you woulde keepe it fresh and white almost all the yeere long, shut it vp close in an earthen pot, and set them in the earth, and when it is thus kept it bringeth not so much annoiance with it as otherwise it would, for it naturally procureth drowisie headach and inflammation of the stomacke. I knowe not by what obseruation of our ancestors, this speech hath growen common amongst the people, that the yeere which yeeldeth plentie of nuts, doth also yeeld many mariages. Both the little nut tree, as also his fruit haue a certaine contrarie vertue against venomous beasts, for if you hang a cluster of small nuts in any part of the house, no scorpion or venomous beast will enter thereinto but flee away presently: the countrie people haue likewise marked in all ages, that the serpent, lizard, or other venomous beast dieth presently hauing bene stricken with a branch, staffe or rod of the hassell tree. And it is no maruell, seeing nut kernels eaten with figs and Rue doe resist venome, and the biting of venomous beastes. The best small nuts and filberdes are those which haue red shels, and which are hardly broken. The raw shell finely powdred, and drunke with water of *Carduus benedictus*, doth heale the pleurisie in the beginning thereof: being drunke to the quantitie of two drams with red wine, it staieth the fluxe of the bellie and the whites: it is true that for the fluxe of the bellie and whites the red part of the kernell which sticketh vnto the shell within is a great deale better and more forcible. The filberd nourisheth a great deale better then the nut, as being a closer but not so far a substance.

The foure and twentieth Chapter.

Of the cherrie tree, sweete cherrie tree, bitter cherrie tree, and the hart cherrie tree.

Common cherrie trees, sweete cherrie trees, bitter cherrie trees, and hart cherrie tree are sortes of trees agreeing in many things: for they all delight to grow in a cold and moist ground, or else altogether indifferent betwixt hot and cold: for a hot aire they can hardly indure: and so likewise they refuse to haue any dung, because it ouerheateth them and is contrary to them. And for this cause they

they must neuer be planted in a manured ground. Notwithstanding if you so temper the dung as that it may not be querhot for them, it can not hurt them to be dunged, no more then (as we will shew by and by) to haue vnquencht lime laid to their feete to hasten their fruit: but this is true that if you dung them yeerely, that then you shall not haue them of any long continuance. They delight rather to haue their rootes compassed with small branches, and the broken parts of their owne sciences, or small lamps and gobblers cut from their owne small branches, for in these they greatly reioice and profit mightily, hauing them in steed of dung. You may either digge the kernell into the ground and burie it, or else plant of the sciences neere the tops of hills and mountaines, whether it bee in a high or low place in October, Nouember, December and Ianuarie; you may graft them in Nouember, or (according to Palladius) from the twelfth day of December vnto the first of Februarie. The best is to graft them in Februarie and in March: albeit that it be the best cutting of all trees that yeeld gum, when the gum is not yet rising, or after it is quite gone downe and returned from whence it rise. Lastly, cherrie-trees neuer thrive so well being nothing done vnto but planted, as when they are grafted: they delight to haue their dried branches often weeded out from themselves and the sciences growing at their foote: they delight also to be set in holes and pits that are digged and cast, and to be often digged about: and if you would hasten and cause them to bring forth their fruit sooner, you must lay quicke lime to the foote of them, or else water their rootes often with warme water; but then such fruit is much altered and made woorse, retaining but little of his naturall goodnes: **cuen as we will prooue and finde by the haitie cherries which the inhabitants of Poytoun send vs vpon horsebacke.**

They may be grafted vpon the plum tree and corneile tree: but best vpon one of their owne kinde: in such sort; as that sweete cherrie trees being grafted vpon sowre cherrie trees, doe beare a more soft cherrie, then those are which grow vpon sweet cherrie trees, grafted into sweete cherrie trees. Cherries grow fairest vpon small cherrie trees, and more plentifully also then they do vpon high and tall ones. Wherefore who shall graft the small cherrie tree vpon the great shall procure greater store of fruit and more thicke ones, such as are the wilde cherries, & also to haue more store of great boughes, then those trees haue which doe but as it were traile on the earth: in like manner if when you graft them you set the bud and the eie of the graft below, the boughes that grow forth thereupon will fall out after the like manner.

The Cæurs and Agriots may be grafted vpon the common sweet cherrie tree, but better vpon wilde ones then vpon garden ones. We must therefore acknowledge eight sortes of cherries, growing vpon cherrie

cherrie trees: that is to say, those which are properly cherries; hauing a very short stalke and round apple, being also red, fleshie, full of iuice, sharpe, and hauing a sweete kernell: wilde cherries, which haue but a little flesh on them, but are red also on that side toward the sunne, and white on the other side, the stone cleaving to the flesh: blacke cherries, whose iuice is so blacke as that it coloureth the hands and lips: bitter cherries which are somewhat of a bitter taste, whereof they haue their name: *Guyens* cherries, so called because their first originall was in *Guyenne*, they are long ones and many hanging together at one stalke, they are also very sweete: *Pingarris*, and these are grosse thicke ones, white, hauing a hard flesh, but sweet and cleaving to the kernell. Cæurs which are like vnto a mans hart, as well without as in their kernell, some do call these cherries *Heaumes*, & the cherrie tree *Heaumur*, especially in the countie of *Anion*. Agriots which are ripe last of all are sharpe relished, and indure carriage far off, and they are also the same which are wont to be preserved.

Of the speciall properties and vertues of the cherrie and cherrie tree, see the nineteenth chapter of this booke, wherein is declared how the cherrie may be made to grow without any stone. If the cherrie tree be hurt of pismires, you must rub his stocke with the iuice of purslaine: if it be too full of sap, you must make a hole in the principall roote.

Cherries how faire soeuer they be, yet they are of small nourishment, beget euill humours in the stomacke, and wormes in the body, and such are those especially which are called Cæurs. The sharpe sweete cherries are verie delicate, fit to preserve with sugar as well for such as are sound as for them which are sicke. The bitter cherries are good raw, but better drie and in sauces, pastes, and tart stuffe. The sweete cherries are chiefly commended, in that they make the bodie soluble, as the sharpe or eager ones doe binde it, coole it, and temper the heate of choler. The gum of cherrie tree drunke with white wine, doth breake the stone as well of the reines as of the bladder. The water of cherries newly gathered being distilled with a gentle fire; taken at the mouth in the quantitie of halfe an ounce, doth put off the fit of the falling sicknes, a thing very happily and with good successe tried in many, as *Manardus* allureth vs.

The five and twentieth Chapter.

Of the quince tree.

THE quince tree as well that of the garden as the wilde one: and of the garden ones, as well the male as the female desireth a cold ground, and especially that is moist withall; notwithstanding that we haue seene it as well to grow in places lying open to the

the sunne, as at *Constant* a place belonging to *Monsieur de Ville-roy* neere vnto *Paris*, but yet indeed not faire off from a river: and this kinde of tree doth so much craue to haue the companie of moisture, as that if the time fall out drie, the necessitie must be supplied by watering of it, and if for want of moist and waterish ground, it be set in a drie ground, or in a stonie or clayie ground, it must then also be often refreshed with water: it must also be vnderdigd and laboured about the foote, that so the wet of the night may pearse and sinke downe vnto the rootes, that so it may bring forth good fruit and good store thereof. When it is planted of rootes it groweth so well, as that the second yeere it beareth fruit, but it beareth not so soone when it is planted of branches. It would be planted during the increafe of the moone in the moneth of Februarie or Nouember. This tree is verie commonly vsed to graft other trees vpon, because they being grafted thereon doe continue and endure longer, and beare a more delicate fruit, then if they were grafted vpon trees of their owne kinde. His fruit must be gathered in the moneth of October when that blasting comes, and the fruit groweth to be of a golden colour: for this is a signe that it is ripe, and this must be in cleere and faire weather, and in the decrease of the moone, then you must cleanse it from the mossie hoarinselle that is vpon it, and lay them out orderly in the sunne vpon hurdles.

Quinces of di-
uers colours.

If the quince tree make any shew of being sicke, you must water it with the ferlings of oile mingled with equall quantity of water: or else with quicke lime and fullers clay tempered together with water. You may make quinces of what fashion you will if you teach them to grow in mouldes of wood or baked earth. As concerning the meanes to keepe them we shall speake of that hereafter.

The garden and reclaimed quince tree beareth two sortes of fruites, the one the male, which is called the quince apple, the other the female which is called the quincesse, thus differing, the male is lesse, more writhled and wrinkled, drier, of a sweeter smell and of a more golden colour then the quincesse: the wilde quince is verie odoriferous, but of a very hard flesh. If you graft a male quince tree vpon a female, or the female vpon the male, you shall haue tender quinces, and such as may be eaten raw, where as the other are not fit to be eaten before they be prepared.

Venome.

The smell of quinces is contrarie vnto venome and poison, also the quince it selfe doth comfort the stomacke, stay the flux of the belly, and make men to haue a sweete breath. For which reason wise *Solon* (as saith *Plutarch*) did command not onely the betrothed, but also the married women that they should neuer lie with their husbands but that they should first eate of the flesh of a quince. And yet notwithstanding the woman with child when she draweth neere the time

of

of hir deliuerance may not vse quinces, although that in vsing of them in the time of her being with childe, they will be some meanes of her bringing forth of a faire babe. Some make a confection of quinces *The fluxe of the belly.* called marmalade which is very soueraigne against the flux of the belly, which is prepared and made in manner as we will shew in the five and fortieth Chapter, according to which patterne wee may make a laxatiue marmalade after this sort. Take of quinces cleansed from their pippens, cut them in quarters, but pare them not: boile them thoroughly in water, then straine them through a cleane linnen cloth and wring them out diligently, then boile them againe with sugar putting thereto a sufficient quantity of Rubarbe in powder. This marmalade purgeth very speedilie, and withall comforteth the stomacke and the liver. In steede of Rubarbe you may put some other laxatiue, as *Settle*, *Agaricke* or such like. The Cydoniatum or Marmalade of Lyons is made with scammonie. *A laxatiue marmalade.*

The fixe and twentieth Chapter

Of Oranges, Assyrian citrons, common Citrons,
Lemons, and Pomeadam.

THe Orange, Assyrian citron and limon desire to be set vpon the South or South-west winde, for being touched with such winds as are warme and moist they become more abundant in fruit, better coloured and thicker, which is the cause that the sea coasts being haunted with the said windes doe abounds with durable plants and such trees bringing forth very fruitfully: for others set vpon the North and North-east are not thereby so well fitted. Some make nurseries of these kinde of trees, sowing their seedes in March: They will affirme and giue it out likewise that they grow of scilences set and pitched downe in small furrowes or sticke downe in baskets: and some doe graft them vpon the stocke neere enough vnto the roote, and that in Aprill and in May: and some say, that they may be grafted after the manner of the Scutcheon-like graft, in the moneth of sommer: putting their pippens in a pot or basket neere vnto the tree where you would they should be grafted or halfe swallowed: but the most certaine direction and instruction about these trees, is that which is set downe in the second booke, and whereunto we refer you for the same purpose. The pomeadam tree is much to be esteemed, even of the best gardeners, not in respect of his fruit (which indeede is more beautifull than profitable); in as much as it is neither good to eat rawe nor yet to prelerue, but onelie fit to wash the handes, or else to carry in the hand: but to graft citron trees, orange trees, limon trees and Assyrian citron trees vpon as we haue said in the second booke, because they prosper maruellouilie vpon this tree, and bring forth verie quicklie

quickly faire and great fruites; especially the orange tree: we haue in- treated in the second booke, of the differences of Oranges, Citrons, Melons and Assyrian citrons, whereunto we will further adde that the citron of Assyria is of a verie good smell, but of little sweetnesse or any other taste. And therefore it is vsuall to cate his flesh with salt or su- gar, or with salt and vineger: the limon differeth from this kinde of citron, because the limon is lesse, in colour drawing toward a green, bunching out both aboue and below, after the manner of womans nipples.

Pomeadams.

As for pomeadams they are round, twise or thrise as great as oran- ges, not hauing a very thicke rinde, rugged, vneuen, and hauing many clef- ses or chaps very manifestly appearing like to the printes of teeth: some thinke they had this name giuen of being the apple which Adam did bite vpon in this earthly Paradise: they are relished almost likeli- mons, but not altogether so pleasant. If you cut it in the halfe and sea- son it with the fine powder of brimstone, and after rost it vnder the ashes, and rub therewith the itching body, or any part of it, it will heale the same.

The seuen and twentieth Chapter.

Of the Fig tree.
 Fig trees are either white, carnation, red, pale, or Greene: and some also be blacke: there are some that beare before the colde cometh, others are more late in their fruit: and againe of all these some beare a small fruit, as namely the white ones: and other some a great and grosse fruit, standing out with great bellies, as by name the blacke ones; of which yet further there is one kinde that beareth long figs, hauing almost no bellies, and these draw nothing neere in good- nes vnto the great bellied ones & those which are more short. All sorts of fig trees loue a hot aire and country, a drie and stony ground, in so- much as that it ceaseth not bearing of excellent fruit amongst the heapes of small stones, provided that there be good store of depth of earth to spread and sinke downe his rootes into at ease. Such a tree as many others is apt for hot countries, but he that would haue of them to grow in colde countries, must make choise of those which bring forth their fruit before the cold time of the yeere: and must couer it with some shield in winter, and compasse it about the foote with fat ground, or dung of Oxen, or Alges very well rotted, for otherwise it will yeeld him no pleasure. This tree is so full of pith and his fruit so moist, as that if you water it the fruit will not keepe, but yet you may vnder-dig and dig it, to the end that the nightes wet may enter into it: you must take from it all dead and rotten wood nor suffering by it the water to find any standing vpon the tree, for otherwise the fruit

fruit would not haue any tast or fanour.

The plant of the fig tree which is of a branch or of shootes new- ly put forth, is planted in October and Nouember in a warme and temperate aire: but in Februarie, March or Aprill, where it is a cold aire: and yet the Genowaes doe plant braunches all the moneth of August, as they are laden with leaues and fruit. As for the grafting of it, that may be done in Aprill as well in the bodie, or stocke, as in the barke or rinde. Some say that the fig tree planted amongst vines, doth it no annoyance, which is in some part true, because there as some consent and agreement betwixt the fig and the grape, and both their woods are full of thicke pith: and raisins or dried grapes be- ing wrapt in fig leaues, doe not onely keepe well and sound accord- ing to their nature, but amend and become better both in tast and smell; and in part false, because the fig tree casteth out such large branches and broad leaues, as that the shadow thereof doth hurt the vine: there are some low dwarfish fig trees, like vnto the peach tree; the fruit of which peach trees, is somewhat agreeing with the grape, so as that the peach being sliced into red wine, doth most highly con- tain and please the tast; and these indeede can doe small harme vnto vines standing amongst them: but he that troubleth not the vine stockes with any kinde of tree at all, shall doe better then he which doth otherwise.

If you desire to haue low fig trees, and such as may be kept in earthen pots, vnder your windowes, to satisfie your desire with their pleasant sight: cut in the spring time a shoote of the fig tree before it bud, writhe his top with your hand, set it, the writen top downe in the earth and the end where it was cut vpward and out of the earth, it will put forth manie small boughes all about the pot which will beare pleasant fruites, the tree continuing to remaine alwaies low: you shall haue carely figs, if you water the fig tree with oile, and Pigeons- dung; and on the contrarie late ones, if you take away the first buds, when they are growne to be as big as beanes.

The fig tree the elder it is, the more fruitfull it falleth out to be: it is very subiect to be eaten of vermine, and the meanes to free it from this mischief, is to set by it some onions: or else for to kill the vermine you must scatter quicklime, or cast old vrine, or the lyes of oile there about the place. It will not be lost cost to annoint the stocke with the iuyce of mulberies, or if you spread and lome it ouer with red fullers earth, when it is a full moone, or if you hang at the branches of it yoong figs newly put forth. Furthermore, figs wil grow with letters vpon them, and garnished with what shape you desire, if when you graft the fig-tree, you write in the cic of the fig-tree such proportion, as you would haue that the figges should beare: and besides without vsing any such curious course nature delighteth to

sport her selfe with this fruit, in such manner as that shee carueth out an infinite number of figures and indented notches full of pleasantnes to behold, and these are tokens of the goodnes of the figge: for as it is verie fat the iuice doth constrain the skin to fall into wreathes and to quarter out a thousand shapes. This is a maruellous thing, that although the fruite of the fig-tree be verie sweete, yet the leaues thereof are of a sharpe and bitter taste: likewise the wood being burned doth yeelde a sharpe smoke, and the ashes a verie scouring lee, and maruellous strong, because of his sharpnes: as if the fig-tree had bestowed and bequeathed all the whole substance of his sweetnes vpon the fig, and had left neuer a whit for it selfe. This is also a marvellous thing, that the fig-tree is not subiect vnto the thunder claps.

We haue oftentimes tried that if you steepe two or three figs in aqua vitæ all night, that such figs eaten in the morning doe cure the shortnes of breath: the milke of the fig-tree dropt into the eare, killeth the wormes therein: the leaues of the fig-tree rubbd, doe prouoke the hemorrhoides. Look for a more ample discourse of figs and the fig-tree in the second Booke.

The eight and twentieth Chapter.

Of the apple-tree.

The apple tree. **T**HE apple-tree, which is a tree most in request and the most precious of all others, and therefore called of *Homer* the tree with the goodly fruit, groweth any where, and in as much as it loueth to haue the inward part of his wood moist and sweate, you must giue him his lodging in a fat, blacke and moist ground; and therefore if it be planted in a grauelly and sandie ground, it must be helped with watering, and batling with dung and small mould in the time of autumn. It liueth & continueth in al desireable good estate in the hils and mountaines where it may haue fresh moisture, being the thing it searcheth after, but even there it must stand in the open face of the South. Some make nurceries of the pippins sown, but and if they be not afterward remooued and grafted they hold not their former excellencie: it thriueh somewhat more when it is set of branches or shootes: but then also the fruit prooueth late and of small value: the best is to graft them vpon wilde apple-trees, plum-trees, peach-trees, peare-trees, peare-plum-trees, quince-trees, and especially vpon peare-trees, whereupon grow the apples, called peare-maines, which is a mixture of two sorts of fruits: as also when it is grafted vpon quince-trees it bringeth forth the apples, called apples of Paradise, as it were sent from heauen in respect of the delicatenes of their cote and great sweetnes, and they are a kinde of dwarfe apples, because of their stocke the quince-tree, which is but of a small stature.

The

The apple loneth to be digged twise, especially the first yeere, but it needeth no dung, and yet notwithstanding dung and ashes cause it prosper better, especiallie the dunge of sheepe, or for lesse charges sake, the dust which in sommer is gathered vp in the high waies. You must many times set at liberty the boughes which intangle themselves one within another; for it is nothing else but abundance of woode, wherewith it being so replenished and bepestred, it becommeth moisie and bearing lesse fruite. It is very subiect to be eaten and spoiled of pilimires and little wormes, but the remedy is to set neere vnto it the tea onion: or else if you laie swines dung at the rootes, mingled with mans vrine, in al much as the apple-tree doth reioice much to be watered with vrine. And to the end it may beare fruit abundantly, before it begin to blossome, compasse his stocke about and tie vnto it some peece of lead taken from some spout, but when it beginneth to blossome take it away. If it seeme to be sicke, water it diligentlie with vrine, and to put to his roote asses dung tempered with water. Likewise, if you wil haue sweet apples, lay to the roots goats dung mingled with mans water. If you desire to haue red apples, graft an apple tree vpon a blacke mulberrie tree. If the apple tree will not hold and beare his fruite till it be ripe, compasse the stocke of the apple tree a good foote from the roots vpward, about with a ring of a lead, before it begin to blossome, and when the apples shall begin to grow great, then take it away.

Apples must be gathered when the moone is at the full, in faire weather, and about the fifteenth of September, and that by hand with out any pole or pealing downe: because otherwise the fruite would be much matted and the yong sciences broken or bruised, and so the apple tree by that meanes should be spoiled of his yong wood which would cause the losse of the tree. See more of the manner of gathering of them in the Chapter next following of the peare tree: and as for the manner of keeping of them it must be in such sort as is deliuered heer-after.

You shall thaw frozen apples if you dip them in cold water, and so restore them to their naturall goodnesse. There is a kinde of wild apple, called a choake apple, because they are very harsh in eating, and these will serue well for hogs to eat. Of these apples likewise you may make veriuice if you presse them in a Cider presse, or if you squeeze them vnder a veriuice millstone.

Vineger is also made after this manner: you must cut these apples into gobbets, and leaue them in their peecees for the space of three daies, then afterward cast them into a barrell with sufficient quantity of raine water or fountaine water, and after that stoppe the vssell, and so let it stand thirtie daies without touching of it. And then at the terme of those daies you shall draw out vineger, and put

Gathering
of apples.

Vineger.

into them again as much water as you haue drawne out vineger. There is likewise made with this sort of apples a kind of drinke, called of the *Picardians*, *Piquette*, and this they vse in steed of wine. Of other sorts of apples, there is likewise drinke made, which is called *Cider*, as wee shall declare heereafter.

Neate wine.
Mingled wine. An apple cast into a hogshhead full of wine, if it swim, it sheweth that the wine is neat: but and if it sinke to the bottome, it shewes that there is water mixt with the wine.

Infinite are the sorts and so the names of apples comming aswell of natures owne accord without the helpe of man, as of the skill of man, not being of the race of the former: in euerie one of which there is found som special quality, which others haue not: but the best of al the rest, is the short shanked apple, which is marked with sportings, as tasting and smelling more excellently than any of al the other sorts. And the smell of it is so excellent, as that in the time of the plague there is nothing better to cast vpon the coales and to make sweet perfumes of than the rinde thereof. The short stalked apple hath yet furthermore one notable quality: for the kernels being taken out of it, and the place filled vp with frankincense, and the hole ioined and fast closed together, and so roasted vnder hot embers as that it burne not, bringeth an after medicine or remedy to serue when all other faile, to such as are sicke of a pleurisie, they hauing it giuen to eat: sweet apples do much good against melancholicke affects and diseases, but especially against the pleurisie: for if you roast a sweet apple vnder the ashes, and season it with the iuice of licorice, starch and sugar, and after giue it to eat euening and morning two howres before meat vnto one sicke of the pleurisie, you shall helpe him exceedingly.

The nine and twentieth Chapter.

Of the Pearre tree.

The pearre-tree.

THE pearre-tree (being the most in request and pretious next vnto the apple tree) amongst all the fruit trees that are) is ordered for the most part after the manner of the apple tree, although the woode and fruite of the one be more firme, than that of the other, and that the pearre-tree bring forth his fruit late, as not before the ende of Autumne, when as all the great heate is already past: notwithstanding you shall set it in the same ground with the apple tree: and in the first fowre or fve yeere of his growth you shall lay it open at the foote, a little before the ende of December vncouering it euen vnto the rootes, which you shall shauo and trimme with a knife bowed againe: and in the end of Ianuary you shall couer it againe with his own earth mingled with good made mould, keeping from thence forward his place well weeded, the foote verie neate and cleane, and the stocke verie well freed from intanglements of boughes, so farre as the

the hand can doe it, and throughout very carefully cleansed from mosse, snailles, and caterpillers, husbanding and ordering the earth at the foote of it euerie two yeeres at the beginning of winter: for the fruit which the pearre tree thus husbanded shall beare, will be both more faire and better relished, and keepe longer. The pearre-tree that is planted in a leane, drie, chalkie or gravelly ground is but of a starued growth, bearing a sharpe, small, and ordinarilie a stonie fruit. The kernels are sown in the nurserie as those of the apple tree, but the hoped fruit is long in comming and scarce attained throughout the whole life of a man, for it is farre longer time in comming to perfection, then the apple tree. It groweth also of a branch well chosen, and he that will so grow it, must plant it in September and October in hot countries: but in cold countries in Februarie and March: and in temperate countries it may bee done in either of the two times, as it shall best please him: but the pearre-tree that is most sure and likeliest to bring contentment of it selfe, is that which is grafted vpon the yoong plant in the nurserie, and in such curious sort maintained and ordered, as hath beene saide, as also if it be removed some three yeeres after, affording it a large and deepe roome in a good mouldring earth. It may also be grafted in a peach tree, quince tree, and almond tree, but yet better vpon it selfe, then vpon any of these, for so it becommeth of a better nature. It is known by proofe, that the pearre tree grafted vpon a mulberie tree bringeth forth red pearres: and if it happen that your pearre tree bring forth a stonie pearre, you must remooue the earth from the foote and powre in vpon the rootes euerie daie for the space of fiftene daies the lees of good old wine.

Pearres must not be gathered before the latter end of autumne, when the great heate of the yeere is past, because their moisture being weake and in small quantitie, the sun suffereth not that it should come vnto any good consistence, before such time as the aire begin to turne and change into coldnes. And therefore saith *Theophrastus*, this is the onely fruit tree that ripneth his fruit best and soonest in the shadow: such gathering of pearres also must not be taken in hand but after that the autumnall blasting and deaw be fallen at the least three or fower times vpon them, because it strengtheneth them greatly to their better enduring and lasting, and increaseth their goodnes. But in any case they may not be gathered in raine, but rather in drie weather, being themselves well dried by the sunne, and that in gathering, they be not hurt by any manner of meanes whatsoeuer: but to choole them one after another, by cutting them downe with a good knife made fast to the end of a pole: or else to make them fall into a cloth spread vnderneath for the receiuing of them, and in it separating the rotten, spoiled or hurt from amongst the faire, sound, whole and vnhurt ones,

that so they may be laid vp to keepe in such sort as we wil declare hereafter in his place.

Although generally and without saying any thing of any particular by way of comparison, the apple be far fuller of iuice, and for the most part more sound then the peare, notwithstanding if one should stand vpon the taste, the peare is commonly more pleasant and better relished, and more contenting and a greeing with ones taste, eaten in his season, raw, roasted, or preferued, then the apple: wherefore I am ashamed that men giue not themselves to plant moe peare trees then apple trees, seeing that besides the reasons alledged, that the peare tree of all other fruit trees, is the fairest, straightest, and couering no whit so much ground with his shadow, as the apple tree doth, bearing also his fruit almost euery yeere, where the apple tree is but a iourney man bearing one yeere and not another.

Looke in the treatise of perrie, There is a drinke made of the peares, called perrie, whereof we will speake, as also vineger of wilde peares, as hath alreadye bene said of apples.

The peare hath this speciall vertue aboue shereft, that the often vse of the kernels should be maruellous profitable vnto such as are troubled with the inflammation of the lungs; as also for them that haue eaten many mushroms, that they may rid their stomacke of so great a load, there is nothing better then to eate peares: for the peare by his waightines and astringent iuice, maketh the mushroms eaten and lying in the bottome of his stomacke, to descend and fall downe from thence.

The thirtieth Chapter.

Of the medlar tree.

The medlar tree.

THE medlar tree groweth into a thicke stocke: it endureth the cold aire easily, and yet delighteth best in a hot or temperate aire, and in a sandie and fat ground. It is planted either of rootes or of branches and that in Nouember: and some sow it of stones in a ground mixt with dung: it will beare fruit in great quantitie, if there be laide to the foote of it earth mixt with ashes. It may bee grafted vpon it selfe, or vpon the peare tree, apple tree, or quince tree: and that it may be well grafted and with good grafts, you must provide your selfe of those, which grow out of the midit of the medlar tree, and not of the top: and it must be grafted in the cleft or highest part of the stocke, not in the barke, because the leanness of the barke would not be able sufficiently to nourish it.

If you graft it vpon a quince tree, the fruit will be very faire, and the reason is verie manifest, because the stocke which receiueth the graft and nourisheth it, is giuen naturally to bring forth a thicke grosse fruit:

fruit: and yet it will yeeld a fairer, without all comparison, if you graft it vpon the hawthorne, with which it is ioyned in exceeding familiar and friendlie league, also the fruit that commeth thereof is more beautifull and plentifull: it may also be verie fitly grafted vpon any other thorne it selfe being pricklie: if you graft the medlar tree vpon any other tree that is not of his owne kind, the medlar will haue either no stones or verie few, or else very little ones. If the wormes assaile the medlar tree, you must water the stocke with vineger, or throw ashes vpon it.

Some hold it for certaine that the flesh and especially the small stones of the medlar dried either seuerally and alone, or else together, made into powder and drunke with whitewine, wherein hath bene boiled the rootes of parslie, doe breake and consume the stone as well of the reines as of the bladder. Looke into the seconde booke in the chapter of turneps, as concerning this remedie. You may make a cataplasme of drie medlars, cloues, white and red corall, and nutmeg, all incorporated with the iuice of roses, to lay vpon the bellie in the great fluxes of the same, and vpon the breast for the spetting of blood.

The one and thirtieth Chapter.

Of the mulberie tree.

THE mulberie groweth vpon a certaine kinde of tree which hath a firmewood, but a brittle fruit and leaues, it buddeth the last of all other trees, after that the cold is ouer passed, whereupon it is called by the name of sage or wise, witty, and prouident; it putteth not forth his leaues, till all other trees be laden with leaues, if at the least you hasten not forward his budding, by giuing vnto it fresh and new dung in the new of the moone of Februarie. This tree is of two sortes, the one white, because of the white mulberies; the other blacke, because of the blacke or red mulberies which it beareth and bringeth forth: which though they resemble one another in this, that both of them doe put forth their leaues later then any other tree, yet notwithstanding they are vnlike in flowers, leaues, and other considerations. For the blacke doth not onely bring forth a far fairer and better relished fruit, and that of greater abundance of liquor then the white: but it hath besides a thicker stocke, and a greater and harder leafe, it groweth verie hardie and with much adoe being planted, and is a great while in growing before it become great, and therefore is no shame that there are so few, it being so vnapt of it selfe to grow being planted of plants and sciences, as also propagated and multiplied vnder the earth, with the stocke that bare it, euen as is vsed to be done with the white ones, which yet doe grow infinitely euery where, as well planted of shootes and propagated, as sown: both the one and the other doe

doe loue a hot aire, or at the least a temperate, a ground that is fat, and well battled with dung; and labour at the foote, and to be kept cleane from mosse and caterpillers, and without any dead wood. They are planted, especially the white, either of shootes or of roots, or buds, and that in October and Nouember, euen in like manner as the fig-tree. In planting of them you must make them deepe and large pits, and couer them with earth mixt with ashes: they may be grafted vpon the chesnut tree, apple tree, wilde peare tree, cornaile tree, elme or white popler (and then they will beare white mulberries) and this must be in the cleft; and vpon the fig tree in the scutcheon-like graft: they may also be grafted vpon themselues; and the one vpon the other, as the white mulberietree vpon the white, and the blacke vpon the blacke, and that chiefly and principally after the pipe or flute-like fashion: in what manner soeuer you graft them, the graftes must be chosen of a good thicknes, and from such mulberietrees as beare fruits full of good seede and kernels. It would be but labour lost to sowe them vpon kernels in the nurserie in this cold countrie, for besides that but a few mulberries haue seede, yet those which haue doe bring forth neither tree nor fruit almost that is any thing worth. But whatsoeuer it is, or in what place soeuer you plant, graft or sow them, let it be far from houses, to the end that the infinite number of flies which flocke thither when the fruit is ripe, may not become tedious to the inhabitants, but yet let it be in such a place as that the hens may eare them when they fall downe, because this vittaile doth fat and feede them very mightily. It buddeth the last of all trees, as we haue said, but for a recompence it becommeth ripe by and by.

The mulberrie tree hath alwaies beene of great request and great profit in countries where cloth of silke is made, as at *Lucke, Geynes, Almerie, Granado, Auignon*, and afterward at *Tours* and other places, because the small wormes making silke, are brought vp and nourished of the leaues of this tree: which for the same purpose are carefully sought of them which doe make account to draw silke into a fleece: whereupon it is come to passe, that there are to be scene in many places about the saide townes of great mulberietrees, as it were little winges of forelts, the said mulberrie trees being planted after a iust and due proportion and leuell of line, and most exquisitely maintained and looked vnto by them which owe them: for from hence they reape large summes of money, selling the leaues yeerely for the purpose before spoken of; for as for the fruite, they make no great purchase of it, because the mulberrie tree will not be robbed of his leaues, for so it would come to passe that it should not bring forth fruit, of the valew of three halfe pence.

The wood of the mulberrie tree is good to make chestes, forkes, and compalles of; and such other workes as must yeeld and be pli-

ant:

ant: it is also good about shippes and boates.

Mulberries must be eaten before all other meats, and that without bread, or else but with a very little, because if they be mixt with other vittailles they do but cause them to corrupt: it is true that they coole and moisten verie much, and do also loosen the bellie.

Mulberries put into a glasse vessell wel stopp and couered with their iuice may be kept a long time.

The iuice of mulberries halfe ripe mingled with hony of roses, as a singular remedy for the inflammations of the moun and throat, as also for the purrified teeth and exulcerated gums.

The two and thirtieth Chapter.

Of the timely Peach tree.

THe timely peach tree, is a peach tree bearing a very small fruit, but earlier than other peach trees doe, and hauing his name thereupon: it is of a verie good relish and no way harmefull, in euery thing else it is like vnto the other peach tree both the one and the other delighting in cold grounds and open vpon the winds; they likewise craue no other manuring than that of their owne leaues, and content themselues to be planted three or foure fingers deepe in the ground: but and if they lie very much open to the force of the wind, they require either to haue some wall, or else some other way to stand in the forefront betwixt them and the winds to breake it off. The timely peach craueth such a ground as the plum tree, and groweth either of the stone or of a plant. It is to be planted in October or Nouember or else in January or in February. It may be grafted very well vpon it selfe or vpon the plum tree, peach plum tree, and almond tree, and in drie times it must be oftentimes watered and digged in craveth like husbanding and ordering that the other peach tree doth. See more aboue in the Chapter of the peach tree.

If you fill up a great company of the new leaues of the timely peach tree, or common peach tree into a glasse viall or earthen pee, and after stop it and lute it well, so as that no moisture can get into it, and so set it a foote or two within the ground neere vnto some brooke, or else in a heape of horse dung for the space of a month, and after straine out the said leaues with a presse, you shall draw a singular oile to temper the rage of agues, anointing the wrist of either arme, the temples, and backe bone of him that hath the ague the seventh before the fit take him.

The

The three and thirtieth Chapter.

Of the walnut tree.

The wal-
nut tree.

THe walnut tree is a tree very common and sufficiently knowne in all partes, so called by reason of the annoiance that it worketh others which are neere vnto it; as also the places where it is planted, men, yea and the very beastes: in so much as that it is proued by experience, that if a man doe sleepe vnder it, at his awaking he shall finde a great heauines in his head, and withall become so light and giddie, as that he will not be able to stirre: yea the shadow thereof is so malignant, as that no good thing can grow vnder it, and the rootes (as well as the shadow) stretching and spreading themselves far, doe hinder and trouble all the ground where the same tree is seaded and planted: so that it must not be planted in arable ground, but especiallye not in fat and fertile ground; but rather vpon the North quarter by the high way sides or elsewhere, so that there be no other fruit trees by to take harme by it. This tree is for many causes to be gotten of the husbandman: in asmuch as it needeth no great dressing or provision for the maintenance of it; it suffereth and beareth iniuries of those which oppresse it, and yet neuertheles extendeth and yieldeth his fruit with libtall fort euen with it owne losse, it prospereth both aboue and vnder the earth, and there is neither leafe, fruit, shell, or gristle betwixt the kernell, but there may profit and commoditie be raised of it, both night and daie, as shall be declared in euery of his particular properties. It especially delighteth in a fat, mouldry, light, and (in a word) in a good coth ground, the husbandman likewise delighteth in such a ground; but the walnut tree refuseth no kinde of aire or ground, for it can very well endure to beare and suffer much. For the planting of it, you must make choise of such walnuts and trees as beare abundance of fruit, having thinn shells, and a white: full, and thicke kernell. And to make it growe, you may dig the nut into the earth, the pointed end downward, or else plant it of shootes that are faire growne, and that in Nouember and throughout all December in hot countries; but in Februrary and March in cold countries; and in temperate countries, in which of the two seasons you will. But such as would haue it to grow of the nut in Nouember & all December, must obserue and see that the nuts which they would burie in the earth for this purpose, be but a yeere old, of a faire shell, sound and drie; and, if it be in the moneth of Februarie, or any part of March, the nut must be steeped, as some are of opinion, for fowre or fve daies aforehand, in some childes vrine, or else as I gesse, in coves milke: for the tree that first cometh thereof, will beare his nuts as little displeasing either in eating

To plant the
walnut tree.

eating or in the oile thereof, as if it were the fruit or oile of sweete almonds.

If you would haue this tree to grow faire and full of nuts of a good taite, you must remooue it, but let it be possessed of the earth where it grew either of a graft or otherwise: and in remoouing of it, some finde it not good that the small rootes should be cut away as it is vsed in other trees: both because the master rootes doe gather footing and strength thereby, as also for that they being releued by such shootes, would become more strong and more able to pearce the earth, and to sucke and sup vp greater quantitie of the moisture of the same: I could be of minde, that when it is remooued (which must not be but when it is two or three yeere olde) there should be taken from it at that time, whatsoeuer surplussage and surcharge of rootes, euen so many as may be tearmed bastard or by-rootes and not of the master or maine ones. For as for the cutting off of the endes of the great rootes, that is done but for the opening of their mouth, that so they may the better sucke in the moisture and iuyce of the earth, (if one may so speake of the new nurse which you haue appointed and assigned it.) In respect of his pits and holes whereinto you remooue it: they must be digged of a great depth and widenes, and be well stirred round about, and set distant thirtie or fortie foot one from another, that so it may the better spread forth his branches, which are wont to couer and occupie a great deale of roome round about it: and if they should be any neerer one vnto another, their boughes would grow one into another, whereas they craue to haue their sides free & open. And this is the reason why they should be planted vpon the borders of groundes lying vpon high waies, for by this means the great compasse which their branches take, do not hurt seed grounds, or not aboue halfe, and by this means the looking glasse wherein the husbandman may behold such hindrance and disadvantage as might come by scarfitie that yeere, shall not be far off from him or his hinds, who hold it for certaine, that great store of walnuts doth preiudge great spoile of corne. To set a tree of some other kinde amongst them, is no more profitable then to lay the inheritance of some base and meane fellow, betwixt the demaines of two great noble men: for the walnut trees, which are naturally great spreaders in the earth with their great rootes, will rob it and eate it out of foode and sustenance euen home to his owne doores, and couering it aboue will take from it both the sun and the libertie of the aire. But in as much as the thinges of this world are so framed, as that there is nothing which hath not his enimie, you must beware of placing the walnut tree either vpon feede or plant neere to the oake, as also not to set it in the place where any oake, hath stood at any time before: because that these two trees haue a naturall hatred one vnto another, and cannot couple

To remooue the
walnut tree.Pits to set the
walnut tree in,
or to remooue
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couple or fure together.

*The grafting of
the walnut tree.*

The walnut tree is grafted in February vpon it selfe, and vpon the plum tree in a clouen hole, howbeit the walnut tree doth not profit much or thrive when it is grafted vpon any other tree then vpon it selfe, because it abhorreth the company of all other trees: It must be digged about, that so it may not grow hollow by reason of the gresse. It must be remoued in hot and drie places in October when the leaues are fallen, and yet better in Nouember: but in cold places in February and in March: and at either time in temperate places.

*The beaten
walnut tree be-
cometh fruitful.*

This is a marvellous thing of this tree, that the more it is beaten yeerely, the more fruit it beareth the yeere after following, although the boughes be bruised and broken: for which cause good farmers are carefull to geld and weed out some of the boughes of such a tree, and withall doe make great and diuers incisions with some edge toole in the stocke of the tree.

*Tender walnut
shells.*

If you cast and spread ashes sundrie times and oft at the roote, and vpon the stocke of the tree, the nut will haue a more tender shell, and a more brittle kernell. It will grow fairer and beare fruit sooner, if you strike a copper naile into it euen to the midst, or else a wedge of wood. It will not let drop any vnripe fruit, if you hang at some of the branches or tie about his rootes white mullein, or some rent and torne suttian taken out of a dunghill.

*Walnuts without
shells.*

Walnuts will grow without shells, if you breake the shell without bruising the kernell, and afterwarde wrap the said kernell in wooll or in the fresh leaues of the vine, and so put it into the earth. If the walnut tree displease you in respect of the harme it may doe vnto his neighbour trees, you may cause it to die, and presently dry away, if you strike into the roote thereof a very hot naile, or a wedge of mistle tree wood, or if you put beanes to his roots, or a cloth dipped in the termes of women.

*The gathering
of walnuts.*

Walnuts must be gathered when they begin to cast their rinde, and when they are gathered, they may not by and by be laide vp, but first dried in the sunne.

*The profite of
the walnut tree.*

The profits that the walnut tree yeeldeth vnto his master are infinite: for of it he may gather to make excellent preserues, taking his nuts about midsummer: it yeeldeth woode for the kitchen, by being lopt of dead boughes, wherewith it is oftentimes troubled: but in cutting off this dead wood care must be had not to cut it off rounde, because it would be a meanes for to make way for the raine to enter in, and the wet of the night would settle therein, and in tract of time rot it to the hart, but it must be cut biace, and with a ridge, that so neither raine, nor the wet of the night may get in or rest vpon it. It giueth a rinde which is good for the things spoken of hereafter: it affordeth shells, which make good ashes: it affordeth a kernell to be serued at

*The wood,
The rinde, shell,
kernell.*

the table, seruiceable in the kitchen, and in lamps: and furthermore of the droffe of the kernell some make candles, in such countries as where the oile is much in request, as in *Mirebalou*, and thereabout: it affordeth a gristle betwixt the two halfes of the kernell, which being dried in the shadow (after that the kernell is once perfected) and afterward made into powder, and drunke with a small draught of red wine, doth by and by assuage the paine of the colicke: as also the fruit comming of it, when it is worth nothing but to make refuse and out-castings of (as the nut growne old and all hoarie) ceaseth not notwithstanding to do good seruice: for and if you burne it lightly, or squeeze it out easily with a hot iron, the oile that then will come forth of it, is singular good to take away blewies of strokes, whether about the eies or elsewhere in the face or other part of the body: the old nut serueth also for other vses as shall be said by and by. The wood of the walnut tree is good and handsome to put in worke, when you would make any faire and pleasant worke, because it is list and smooth of his own nature.

*The gristle of
the kernell.*

The old nut.

*The wood of the
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The small buds of the walnut tree (called of the Latins *Indi*) appearing in March, being dried, and after powdered and drunke with white wine, the weight of a French crowne, are exceedingly good in the suffocation of the matrix. The oile of the nut drunke to the quantity of five or six ounces, doth cure the colicke: if you mix a little quick lime amongst the oile of nuts, it will make a singular liniment for the swellings and shortnesse of the finewes. The old oile of walnuts cureth the falling of the haire called *Tinea*.

If you pill off the greene pillings of the walnuts, and cast them into water, and after cast this water vpon the ground, there will grow from thence great store of worms, very profitable for fishers: if you boile the pillings in a caldron after they be fallen from the tree, as opening of themselves, and rub any kinde of white wood whatsoever with this water, it will turne to the colour of the walnut tree, but more faire and beautifull.

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Some steep the barke of the rootes of walnut trees in vineger, and after lay it vpon the wretts of such as haue the ague. This draweth out all the heat of the ague: but it swelleth the skin of the wret.

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Mithridate.

The walnut closed vp in a hen or capon set to the fire to rost, causeth the said hen or capon to be the sooner roasted.

To boile a capon

The distilled water of vnripe walnuts, gathered about midsummer, is singular good to driue away tertian agues, if one take about some fowre or five ounces of it.

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Mithridate.

To boile a capon

Tertian agues.

of hard digestion, causeth headach, and hurteth the cough and short breath, and therefore it must be vied sparingly: steepe whole walnuts pillings and shels and all in a sufficient quantity of water vntill such time as that their shell be sufficientlie softned and moistned, and that the kernell may be pilled easilie from the thinne filme that couereth it ouer, as it fallerth out in greene walnuts: this done, take the kernels so pilled, and let them steepe in a pot well covered in very good aqua vitæ; giue two daies after, two or three of these kernels whole to a woman that cannot haue her termes, for the space of eight or nine daies before her accustomed time of; hauing her termes, and that in the morning, and after that she hath purged. This medicine hath neuer a match in prouoking of the termes that are staied, and it is a thing well prouoed. And as for the manner of keeping and preseruing of them we will speake in his fit place.

The biting of
a mad dog.

If the same day that you haue beene bitten of a dogge (which you doubt to haue beene madde) you put vpon the biting an old nut well braied, and after take it away, and cast it to a hungry cocke or hen, if the same eating it die not, it is a signe that the dog which did bite you was not madde, but and if it die, then it is a signe that he was madde, and therefore the sore must be looked vnto as is meete within three daies.

The fowre and thirtieth Chapter.

Of the Oliue tree.

THe Oliue tree is a kind of tree for the most part smal and thick of leaues and rounde, for there are some sorts also that haue great branches disperied here and there out of order: both the one and the other sort are contented with a shallow grounde, for in many places they growe vpon the thinne greene swarth or turfe that couereth the rockes, and vpon the ground hanging vpon the sides of some great steeres; thus you may see how the oliue tree disposeth of it selfe euery where, how vnfitting and vnlikely soeuer that the ground bee, prouided that it haue a warme aire, and Easterly or Southerly winde at commandement. He that woulde carefully appoint it out such a plot, as the vine would require: might erre in many places: for the oliue tree is not so much to be regarded in respect of his soile and seate as the vine, for it contenteth it selfe with a great deale lesse then the vine will. If you giue it grounde that is good and fatte earth, and the sunne and windes, which it delighteth in, in other places, doubt not bnt it will do as the Spaniard, who pleaseth himselfe with as good as nothing, when he knoweth not how to amend himselfe or do better, and performeth his seruice therewithall: but and if he come where he may but haue the smel of it, he is stuffed as full as the greatest glutton

glutton in all *Lymosin*: so the oliue tree being once seased in his tal-
lance of a good peece of ground, contenteth it selfe and beareth fruit handiome. As concerning the planting of it vpon the north in hot countries, and there seating it vpon the tops of mountaines or lesser hills, or vpon the south in colde countries, these are but troubles and paines without any great foundation: for as concerning cold countries there is no talke to be had of growing of oliue trees in them, and as concerning hot countries, there is neither taking nor leauing of quarters or coasts in respect of this tree.

The oliue tree doth increase it selfe by shootes which it putteth forth at the foote; for being pulled vp vn hurt, and planted elsewhere, they growe vp very speedily: and to prepare them a faire place to grow in, you must dig them pits where you minde to set them, a yeere before hand, of fower foote depth; and, if you cannot haue holes made readie for them so long before, but must be constrained to set them downe in new digd ones, then you must season and purifie the saide holes by burning of the leaues and some small branches of the oliue tree therein, or else some straw at the least: for the fire drieth vp the euill iuice of the earth of the saide hole, in the same manner as the sunne should haue done by little and little all the yeere long. Some would that it being prickt downe of a branch, it should not be set in so far a ground, because the oile would not be so excellent, as and if it were planted in a ground betwixt fat and leane, and that not without appa-
rance of truth: but whether it be planted in the one or the other, it will be husbanded euery yeere for the space of a great circle round about the foote; for indeede he that tilleth and dresseth his oliue ground yeerelie, doth a great deale better then he that doth not. In any case it would not haue the rootes scanted of libertie, but to spread and lie at large: and, if you bestow any manner vpon it, being the thing it loueth well, then bestow vpon it goats or horse dung well rotted, and that after you haue digd it about the foote, to the end that the dung may mingle well with the earth so digged. After you haue once set it, remoue it not thence for the space of fower or fife yeeres, neither then must you dare to be so bould, if that it haue not gotten a stocke as thicke as a mans arme, and taken it vp, take vp therewithall the greene turfe of the ground where it stood and whereunto his rootes sticke fast, and when you set it downe, giue it the like situa-
tion for coast and quarter that it had before.

You may graft it vpon it selfe, and it will beare more thicke and kinder fruit: or else vpon the wilde Oliue, but then the profit is not like, as when it is grafted vpon the garden and tame one. The Itali-
ans graft it vpon the vine, boring the vine stocke neer vnto the earth, and putting into this bored hole a small oliue branch, that so it may take neere at hand and at the first offer, both the nourishment and

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vinie

vinic qualitie of the stocke of the saide vine : along the which must be set a stake or thicke prop to helpe it to beare vp the waight and burden of the graft when it is great, and these Oliues will talt both of the one and of the other, and become as it were vined Oliues. Such a prooffe is not to be miliked, in as much as the variableness of nature is shewed thereby which is content to suffer her selfe to be drawne to bring forth a mungrell fruite or second hermaphrodite by the coupling together of two natures in one : but the end of such experiments turne not to profite, neither for the preseruing of the oliue, nor for the drawing of oile Omphacine, nor yet any other, for which endes God ordained and gaue vs the oliue tree. And to speake the truth, the mingling of kindes and differing rootes of trees, (if it be not according to and iumping with the naturall vertues of them both, and according to an agreement in some good measure of perfection, and yet furthermore well and thoroughly allowed and approoued by reason :) becommeth rather a monitrous birth, and an inforcement of nature, then any profitable Impe- either for the health of man, or for the sauing and sparing of it selfe. Heereof are sufficient witness I know not how many sortes of Apples, Peares and Cherries, thus iumbled together by offring force vnto nature without iudgement or reason, and but that they become somewhat admirable vnto the eie, they yeelde no profit vnto the body of any man, more then to draine his purse drie : except there be aduised iudgement in making choise of that thing and way which may be both for the aduancement of the yeerely profits of his ground, and for the good preseruation of his health. But leauing off these discourses, let vs returne againe to the Oliue tree, which hath both more beautie in it selfe and more profite for the master if it be contained in a reasonable stature for height, and spread it selfe abroad, then and if it should shoote vp and become very long and tall. For if it exceed the height often foote and a little more, it is abated and hindered in the putting forth of so many blossomes as it would, and hath his boughes crushed in peeeces which grow vp at that pitch, when the winde bloweth strong and thereupon also it casteth his fruite in vntimely sort, euen when it is very full. For this cause in many places there are some found which perforce doe turne downeward such boughes as grow so high, not regarding their standing out like bosses and bunches, provided that they be low and lurkingly couched : because that being so trussed vp they are free from stormes and tempestes, and abound the more in fruite : and if yet the Oliue tree would be climbing higher, then you must cut off such aspiring boughes or branches, and this must be done after the gathering of the Oliues is past. It is true that the Oliue tree must be eight yeere old, before you reforme it in the boughes growing ouer high, by cutting them off with a saw : but as for the shootes putting forth at the
foote

foote and along the stocke, you must not refuse the cutting of them off how yoong soeuer the tree be. The profit comming both of the one and the other, is that it aboundeth more in fruite : and this is the cause why some commonlie say; that he that husbandeth and ordereth it with care and taking of paines about it, helpeth it forward in the bringing forth of his fruite : as also he which manneth it as it earnestly craueth : but he that cutteth downe some boughes off from it, compelleth it by all manner of meanes to become fruitefull ; seeing the nature of the Oliue tree is such (as *Quintilian* saith) as that it being cut off and made bare of boughes and high mounting tops, it spreadeth rounder and broader, and putting forth more boughes, doth also beare the more fruite, because the property of the Oliue tree is to be ranke, either in boughes or in fruit. It hapneth sometime to the oliue tree that it bringeth forth but one onely bough, exceeding all other in beauty and height. When this falleth out it must be cut off without delay, for this is a signe that the tree in space and time will conueigh all his whole workmanship that way, and will leaue nothing for anie thing else : and vpon this will barrennes come in the end. And where-as the Oliue tree craueth to be left bare and thin of boughes, and then beareth more fruite, yet if the boughes be stricken downe with poles when the oliues are beaten downe, it groweth much worse and goeth backward, forsaking and forslow his former fruitfulness. So that hereupon you see that in gathering of oliues, you may not beate them downe with poles, but rather you must haue ladders borne vp vpon a goates foote, to lift you as high, as that you may gather the oliues with your hand. There are some countries where the oliue trees doe rest and giue ouer bearing for one yeere after that they haue borne, and then the yeere after that they beare out of all measure, as in Portingale, and the oile that is made of those is good in the highest degree. You must in any case looke to the inconueniences and harmes that the oliue tree is subiect vnto. Manie times in drie or moist places oliue trees are spoiled and become all ouergrown with mosse, which must be taken away with one toole or other : for else the oliue tree will neither abound in leaues nor fruit.

Sometimes the oliue tree although it be faire, yet beareth no fruit, *The barren oliue tree.* and then you must bore through the stocke with a wimble, and put in good and deepe the graft of a greene bough of a wilde oliue tree, or of some other oliue tree that is fruitfull, and that vpon either side of the hole : then afterward to close vp both the said holes with mortar mixt with straw, and the tree as a new made thing will become fruitfull by the grafting in of this graft. Others in such case do vncover the roote and renew the seate that it standeth in. Again it may be remedied, and the foote not vncovered, with the lees of vnsalted oliues, with mans vrine that is old, or with the stale vrine of hogs.

The fruit
spoiled.

It falleth out many times that the fruit is spoiled and lost, by the naughtinesse of the ground where it is planted : and then it must bee thus remedied. The tree must be vncovered very lowe at the foote round about and quicklime put into it, more or lesse according to the greatnes of the tree : for a little tree craueth but a little. The oliue tree sometimes beareth much fruit or flowres, and notwithstanding by a secret disease that is in it, it cannot bring them to a good end to ripen them : when this happeneth the stocke must be vncovered round about, and the lees of oile mixt with sweete water afterward applied thereto.

The withered
oliue tree.

Sometimes the oliue tree becommeth all withered and falling into a consumption, which thing may happen through wormes or other vermine which spoile and eate the rootes, and the remedy is to water the foot with lec of oliues. It sometimes also falleth out that the fruit of the oliue tree falleth before it be ripe : for a remedy whereof take a beane that hath a weeule within it, close vp the hole with wax : afterward take a greene turfe from neere vnto the roote of the oliue tree, and put the beane in it, and so couer it with earth, and the fruit of the oliue tree will not fall.

Above all things, you must keepe oliue trees from turtle doves, stares, and other such like birdes which are exceedingly giuen to licorishnesse. As concerning the oliue tree and oliues, you may see more at large in the second booke, and of the oile in this third booke.

The five and thirtieth Chapter.

Of the date-tree.

The date-tree.

THE date-tree hath much a doe to beare fruit in this countrie, but and if it beare, yet it is very late : it craueth to haue a hot aire and country, or at the least well tempered, and the fruit which it beareth, is ripe before the oliue tree be good. It delighteth in a light, sandy, and vntilled or champion ground : and it is a plant either for Aprill or May, to be planted of a small plant with the roote. The stone is set new in October, and there must ashes be mingled with the earth where it is planted : and to make it grow and beare goodly fruit, it must be watered often with the lees of wine. Looke in the second booke.

Who so is carefull of his health let him not eat any dates, or else as few as possibly he can, because they cause the headach, obstructions, wringings in the belly and in the stomacke. And yet notwithstanding this, they staie the fluxe of the belly, and put into gargarismes they cure the fretting and canckrous vlcers of the mouth.

The

The sixe and thirtieth Chapter.

Of the chefnut tree.

THE chefnut-tree is a kinde of tree growing verie great, high and thicke, differing but a little from the walnut-tree, it beareth a verie profitable fruit, and which hath not his like, whether you respect the shape, his nature, or the nourishment that it affordeth vnto man, as is to be seene in *Auvergne, Saoye, Periguenx,* and *Limosin*, and especially in the countrie of *Lionnoyle* and *Daulphinie*, where the great chefnuts grow : in which countries, especially in *Parigord*, the greatest parts of the forrests are of chefnut trees, and an infinite number of people liue not of any other thing but of this fruit, eating it sometimes boiled, sometimes roasted, sometimes made into bread, sometimes into broth with milke, sometimes in meale baked after another sort. Likewise nature seeing the profit that redounded vnto men from this so profitable a fruit, hath fenced and armed it with strong harness and such mightie armour as that it goeth for prooffe, both against the toooth of the beast, and beake of the birds, so long as it is kept within his vppermost cote and prickly covering ; yea and furthermore vnder his rinde and pilling when it is taken away, with another rinde that is good and hard, and with another that is more soft and fine for the better preferring of it. This tree pleaseh it selfe with such a ground as is lying vpon the North and being moist rather then drie, or standing vpon the South, for as much as it loueth the shadow better then the open sunne ; the valleies better then the mountaines ; a soft ground better then that which is hard and massie, and a light ground, and yet not a sandie or clayie. To haue good store of chefnuts, it is better to sow them then to plant them, and that in a well digged and stirred ground being also neat and well battled, and that in the moneth of March, setting them in the earth a foote deepe the shape ende vpward, fower or sixe of them together taken out of great and ripe chefnuts, and euerie hole distant from another, the space of a fadome : and two or three yeeres after to plant them in some other places fortie foote asunder euerie one from another, and that in respect of the great compasse which they take with their branches on euerie side. If you would haue it to grow of a branch, it must be such a one as hath roote : for to make it grow of it selfe by pricking downe into the earth some science, it will neuer be. Wherefore the most certaine way is to make it grow of the fruit it selfe, pricking it downe into the earth, as hath beene said : notwithstanding, it may be propagated or multiplied burying and sinking some of his new shoots in the earth. It taketh likewise if it be grafted in the cleft or in the canon or gunlike graft, and that in March, Aprill and May vpon it selfe,

K k 3

or

or vpon the beech tree, or vpon the willow, but it then ripeneth very quickly, and beareth a fruit of a sharpe and vnpleasant taste.

*The gathering
of chefnuts.*

Chefnuts must be gathered in Autumne, and kept till their rindes be become of a verie bay colour and cast out their fruite. Howbeit if one would keepe them a long time, it were better to beat them downe with poles whiles they be greene, and not to tarrie till they fall to the ground: for those will not keepe about fiftene daies if they be not presently dried in the smoake.

To keepe chefnuts.

The manner of keeping chefnuts, is to couer them with common nuts: for the common nut hath power to drie and inuade the excrementous moisture of all things, whereunto it is applied: or else to gather them reasonably ripe in the decrease of the moone, and to put them in a coole place in sand, or in some vessel: but let it stand continually in the coole, and so well stopt as that no aire may get in, for otherwise they will be spoild and rotten in a short time.

The fairest, best fed, and most pleasant chefnut of all others, is that which groweth in the countrie of *Lyannoise*, and are called great chefnuts of *Lyons*: or else I know not as yet from whence they haue taken their name. But howsoeuer it is, besides the profit of the nourishment and sustenance which the chefnut yeeldeth: the chefnut tree is of great vse to make vessels of, as caske to put wine & other drinks into, to build bridges withal, as also conduit pipes, pillers, and infinit other things about buildings, engines, props for vines, pales and railes for parkes, gardens, and other such places.

*The leaues of
the chefnut
tree.*

The leaues of the chefnut tree, after they be fallen are gathered vp before any raine come to touch them, and serueth for litter for cattell, which beeing thus turned into dung serueth to manure withall: many vse them to fill featherbed tickes withall, and call them mockingly by the nickname of parliament beds, because the leaues make a noise when you lie downe vpon them, when you rise vp from them, or when you moue your selfe any manner of way to or fro.

*The ashes of the
chefnut tree.*

The ashes of the wood of chefnut tree is not good to make leese of, because it spotteth and staineth the linnen so mightily, as that such stains will neuer be got out.

*The hardnes of
womens breasts*

Chefnuts with vineger and barley flower applied in manner of a cataplasme vnto womens breasts which are hard, doe make the same soft: stamped with salt and honie, they are applied vnto the bitings of mad dogs: the rindes or skins thereof are put many times in lees which are made to colour the haire yellow: their red inwarde rinde which lieth next vnto the white kernell, being drunke the weight of two drams, stayeth all manner of fluxes of the belly and of blood, as also the whites of women with equall quantitie of Iuorie. Chefnuts in as much as they be windie, they prouoke men to lust: being eaten excellently

excessiuelly they cause the headach; they swell and harden the belly, and are of hard digestion: such as are roasted vnder ashes are lesse hurtfull, than the raw or boiled ones, especially if they be eaten with pepper and salt or sugar.

The seven and thirtieth Chapter.

Of the Pine tree.

TH E pine-tree craueth a sandy, light, and stony ground, and therefore it groweth willingly in outcast and contemned plots: such as there are many of by the coasts of the maine sea. It is planted in the moneth of October and Nouember, and it is not to be translated till after that it hath bene three yeeres planted, and then it must be seated in a well digged place, and in an earth well manured with horse dung. This tree hath a nature contrarie vnto the walnut tree, because it causeth to thrive and prosper whatsoeuer is set vnder the shadow of it: againe it is not so comberfome, as to keep away the sun and the winde from the things that ioine next vnto it or vnder it. The pine kernell (for to be kept) must be put in new pots full of earth together with their shels.

Such as haue weake lungs, or are growen leane by some long sickness, must go a taking of the aire into the Forrests, where there are good store of pines, because such aire is very profitable for them. Their kernels steeped in warme water to take away their oily quality and sharpnes, being often eaten do cure the ache of the sinewes, the ache of the backe, the palsey, benumbednes, trembling of the parts, weakness of the lungs, shortnesse of breath, vlcers of the lungs, vlcers of the reines and of the bladder, the scalding of the vrine, and make fat such as are leane and wasted, stirre vp lust in such as languish and are weak vnto the worke of venerie: they cure the gnawings of the stomacke, taken with water of plantaine or iuice of purslaine. The new nuts of the pine tree distilled in a limbecke, make a singular water to take awaie the wrinkles of the face, and to stay the excellient grea growth of womens breasts, if you apply a linnen cloth steeped in this water vnto them. See in the second Booke.

The eight and thirtieth Chapter.

Of the plum tree.

TH E plum tree is a common and ordinary tree, agreeing with all countreies of whatsoeuer conditions, howbeit the damaske plum tree is more cheercfull, and pleaseth it selfe better in a dry country and hot aire, then it doth elsewhere. The plum tree will grow easily, and increase infinitely, for and if it be once brought into a

K k 4

plot

plot of ground, in a short time it seazeth it selfe vpon the whole place, and if it be planted on the one side of a wal, it will leape within a short time after vnto the other side of it, and so placeth the wal in the midd: it desireth not to be dunged, because the dung maketh the fruit to mould or rot, and easily to fall downe: but it would be oft digged at the foot round about, as far as the compasse of his roots stretcheth: and watered in drie weather. It groweth vpon a stone buried a foote deepe in the earth that is fat, and that in Nouember or Februarie, hauing steapt the said stone for three daies space before you sowe or set it in lee, or longer in a composition of cinnamon water, if you woulde haue it to yeeld any aromaticall smell: or else of a meere plant hauing a roote in a pit a litle digged, because it graspth not much ground with his foot, but yet it must be good and light and easie to be pearced round about, for the affoording of an easie and plentifull seat vnto it. It groweth also in prosperous sort if it be grafted after the scurcheon-like fashion, either vpon it selfe or vpon the sweete cherrie: or else in the cleft, and that besides the two former, vpon the apple tree, almond tree, peach tree, and ceruise tree: of all which sorts of grafts, that is the best, which is vpon it selfe, or vpon the sweete cherrie tree: for all the rest are but meanes to cause the plum to degenerate from his nature, and to become bastardy, as well in their shape as in their taste. The fittest time to graft them is in Februarie or in March, and then rather in the stocke then in the barke.

There is a certaine kinde of scab which doth take hold of it, and that either by letting the gumme to stande and hang about it, and to waxe old, which it casteth forth, or else by reason of the mosse which it gathereth, and for that cause it would haue his gumme taken away at the beginning of colde weather, and the mosse rubbed off with a rough linnen cloth, or a mosse rubber of horse haire, and this at all times. There hapneth likewise vnto it an vndisposednes through the fault of the gardener, not casting the ground about the foote, or cutting off the rotten and corrupt woode: whereupon it turneth in and rowleth it selfe vp into small balles, sometimes in one place, sometimes in moe, and this is a disease which being neglected, doth spread it selfe in the end, all ouer the tree, from one end to another, and bringeth it wholie to destruction: and therefore so soone as you shal see the sick tree in this sort to crumple and runne vpon heapes, you must cut off very cleane all the boughes thus diseased, whereof it would be murdered and kild, euen to the found and whole branches, and withal to order and husband it in all good sort about the foote, to the taking away of this euill humour, which in this manner crooketh and caueth to turne round his wood. There hapneth also sometimes by reason of some secret cause, that it so languisheth, as that it giueth over to beare fruit: for the putting of it in hart againe, you must lay open his

The plum tree
out of frame.

The languish-
ing plum tree.

his roots, and cast vpon them the lees of oile mingled with water, or else the stale of oxen, or mans vrine, or cast vpon the rootes the alhes of vine branches thoroughly boiled.

All plums in generall are colde and moist more or lesse, the sweete ones lesse, the sowre and sharpe ones more.

The sweete plums haue vertue to loosen the belly, and yet they will purge more strongly, if at such time as when the plum tree is young, there be taken from it some part of the pith of the stocke, or else one of his boughes, and the place filled vp againe with scammonie. They will in like manner procure sleep, if you put into the saide emptied places the iuce of mandrakes or opium. Sharpe and taste plums are giuen to staie the belly. There is great accounts made in France throughout and euery where else, there is a speciall account made of damaske plums, which are of three sorts, the blacke, red, and violet colour, all of them prouing very excellent in the countrie of Tourraine, for from thence are sent throughout all France of them dried, which are vsed at all times. The plums of Pardigaine are likewise greatly esteemed by reason of their plumpnes and pleasant taste. Furthermore dates are very rare and scarce in this countrie, namely those which come neere to the dates of other strange countries, which are more pleasantly relished then any other. Some likewise make accounts of Rhenish plums dried, by reason of the pleasant tartnes and sharpnes which they haue.

Laxative
plums.

Sleeping plums.

Plums of Brignoles.

The nine and thirtieth Chapter.

Of the pomegranate tree.

The pomegranate tree is a tree of litle husbanding, yeelding small delight to the sight, by reason of his ill fauoured branches and boughs: saue so long as it is bearing his fruit before it come to perfect ripenes and yet put out, quartered, and as it were laid open to the shew, out of his coat and couering, this tree is the most delightful to behold of all others: the frame and fashion of whose flower and fruit being well considered, is a worke of nature right admirable: there is not that raine, that scorching heate of the sunne, nor yet almost that fading and decaying old age, which can cause it to forgoe his goodly shewe of rubies: and yet notwithstanding how famous a thing soeuer it be, it groweth without any dainty or delicate handling and looking to, and that sometimes at the foote of a wall, sometimes in the midd of a heape of stones, and sometimes amongst the hedges by highwaies sides. It is true that it craueth a hot countrie, and where it may not be debarred of the sunne, and if it happen to be set at any time in a fat ground, it maketh his best aduantage of it, being in this respect

The pomegranate tree.

respect like vnto the oliue tree, whereof we haue spoken before. And if it be in such a countrey as is fit for it, you neede not to thinke either of the digging or vnderdigging of it; for it reckneth not of seeing it selfe set in a great heape of stones, as neither to breake croilewise through a ruinous wall, neither cealeth it for any such thing from bringing forth his good and pleasant fruite: but in cold countries where it hardly groweth it would be digged and husbanded about the foote twice a yeere, that is to say, in Autumne and in the spring. It will grow either vpon rootes or of grafting in the cleft, and that vpon it selfe, about March or Aprill: but and if you will plant it vpon some branch that hath rootes, you must choise such a one as is a handfull thicke, and make it a delightfome and fine moulded pit. Some would haue it thrust into the earth with a stake by it, as is vsuall in setting willow plantes, but I cannot finde that this way of thrusting it downe thus into the earth doth prooue to any good. The Pomegranate tree will not loose his flower, if when as it is flowered you compasse the stocke about with a ring or hoope of leade, or with the old slough of an adder.

Pomegranate
wine.

The wine of pomegranats is made of this sort: you must take the ripe kernels cleane and free from their skins, and put them in the presse, where they must be pressed by and by: some straine them throug bags made for the purpose: some cause them to be put into vessels vntill it be well fined: in the end they powre oile vpon them that they may not corrupt or grow fowre.

The pomegranate apple put in a pot of new earth, well couered and luted with claie, set in an ouen, and in the end so well parched as that it may be made into powder: then such powder taken the weight of halfe a crowne with red wine, doth helpe the partie maruellouslie that hath the bloudie fluxe. The innermost flowers of the pomegranate made vp in conserue with sugár, haue an incredible force to stay all manner of fluxes of the matrix, whether white or red, taken in the quantitie of halfe an ounce with the iuice of fowre pomegranates or red wine, or water wherein Steele hath beene quenched: as also to staie the bloudie fluxe, the shedding of nature, the fluxe of the guts or of the stomacke. The kernels of fowre pomegranates dried, made into powder and after mingled the weight of an ounce, with a dram of fine powdred frankincense, and two drams of this powder taken euery morning, do stay the whites.

The fortieth Chapter.

Of the Ceruise tree.

The ceruise
tree.

The ceruise tree as wel the male as the female, delighteth in a cold, moist, and mountainous place, but in a hot and plaine place it

thriveth not. It must be sowed of the stones, and some plant it of shootes in Februarie and in March. It is grafted in the end of March and Aprill, vpon it selfe, vpon the thorne or quince tree, and vpon the pearce maine tree in the barke or stocke: it must be oft digd and watered, and let him that can, lay dung vnto the foote of it mingled with ashes, and that in very deepe pits.

Ceruises are gathered in Autumne before they be ripe, they are gathered by handfuls tied together: or else they are orderly laid vpon straw to ripen them: for otherwise they are not fit to be eaten because of the harshnes.

The wood of the ceruise tree is very solide, close, and hard, and therefore in great request to make tables of, and other house implements: as also to make goades and whips for neatherds.

There is wine made of ceruises, as there is of pears. Ceruises haue force to restraine fluxes of the bellie: and for this cause they may be dried in the sunne before they be ripe, and afterward vied.

He who hath sometimes beene subiect vnto the biting of a mad dog or otherwise, must not sleepe or rest vnder the shadow of the ceruise tree: for if he doe, it will hazard him to cast him into his former madnes: such is the force of the ceruise tree to raise vp, renew and reuiue a qualified and appeased madnes.

The one and fortieth Chapter.

Of the Corneile tree.

The corneile tree which the Latins call *Cornus* (so called because of his stocke is of such knottin and solide woode as that it seemeth to be horne), as well the male as the female, delighteth to be planted in a fat and sandie ground, and as for other things it would be plared or grafted after the maner of the ceruise tree: in any case it must not be planted neere vnto where bee-hiues stand, neither suffered to grow there of it selfe: because that bees hauing tasted of the flowers, fall into a flux of the bellie and die thereupon presently: but the contrarie falleth out in men, who by hauing eaten of the corneile tree berries, or of the conserue made of the flowers of the corneile tree, do fall into a collicuenes. The fruit is long and round, fashioned like an oliue, and is not ripe before Autumne, and then it becommeth of a red colour or the colour of waxe. This fruite containeth in the pulpe of it a stonie bone. Some make of the pulpe or flesh a confection like vnto marmalade with sugar, and it is very singular in bloudie fluxes and the staying of womens termes.

The

The two and fortieth Chapter.

*Of the Iuiube tree.**Of the Iuiube tree.*

THE Iuiube tree is a tree that is verie rare and seldome scene in France, but much in the countrie of *Prouence*, especially about *Dupont*, *S. Esprit*, and in *Languedoc*. This is a tree of great reach and compasse both for his height and bredth, and naturally it loveth to be in hot countries, not so much seeming to regard the soile where in it is set: likewise in many places of the said countrie it is seen in turning waies and publike places; but and if you would haue it to grow in cold countries, you must not so lightly regard it: for you must see that it be seated in a good fat ground, and manured with pigeons dung, and ioining to the side of some wall, whereby it may haue the reflexe of the South sunne, of which you must looke to giue it the full fruition before all other things. Sometimes it groweth of kernels, three or fower of them being put into the earth together, and their sharpe ends downward, the holes must be a foote deepe, and heaped full of cowes dung mingled with ashes of vine branches, and that in Aprill in hot countries, and in May in such as are cold. And when it is once growen vp, and become somewhat strong, which will be about the terme of eightene monethes or two yeeres after, then you shall remooue it into some other place with such obseruations as haue bene deliuered concerning others, and concerning the countrie as it shall fall out hot or cold. Some likewise plant it of the roote, when it riseth vp into shootes which haue small threddie and hairie rootes, loosing and pulling them vp gently, together with some of the principall rootes of the tree, for feare of parting them and their threddie rootes, planting them in pits prepared some fiftene daies before, in a light ground & that in March. As concerning their sciences to make them grow, it is not so certaine a thing as that it deserueth the troubling of ones head about it: but for grafting of it in the cleft either vpon it selfe, or vpon the medlar tree, or vpon the quince tree, you may if you will: but grafted vpon it selfe the Iuibes will be more grosse and thicke, and of a more pleasant taste: as generally all manner of fruit is, being grafted vpon a tree of his owne kinde. Some will say that it reioiceth during the time of winter, to be compassed about with a heape of stones, and when sommer commeth to haue them taken away: and that it craueth likewise to haue oxe dung laid to the roots of it: but in those countries where there are such great store of plants, this peece of seruice is altogether neglected, which notwithstanding is the meanes to caule great store of faire and good fruit.

The

The three and fortieth Chapter.

Of the Bay tree.

THE bay tree is very common, seeing it groweth in any ground, *The bay tree.* as ouerthwart the conieburrowes and heapes of stones. It groweth many times from vnder the foundation of wals. It is likewise to be a countrieman in euery coast and quarter, but yet his naturall inclination and birth-right is to be in hot countries, or at the least temperate: and therefore being inticed ouer into cold countries it must be much made of and well welcomed when it commeth there. For indeede it must be planted in a fat, solide and good soile of earth, neere to some wall where he may haue the South Sun to comfort him with a double comfort, and at the approach of winter it must be manured, ouercast and couered with long straw in the strength of the winter, or else well cased and wrapt about with mats: it must also be vnderdigd for the first foure or fve yeeres after his comming and bearing, and that in March and April. And yet if notwithstanding all this pain and industry taken it shall happen to be extremely and rigorously intreated of the frost, and that the leaues shall begin to wither away and the wood to wax blacke, then you must adde more store of earth vnto it at the foote and strengthen it there, in the moneth of March, if that the cold put forth and begin to be dealing the same yeere: for the dung will haue kept the rootes and clasping gripes in force and whole vntouched; and so it will not faile to put forth with speede new shootes and sprigs in abundance, which will be fit to multiply and propagate the winter following in the said month of March, at which time the sap draweth vp vnto the barke, if so be that you desire to haue great store. It taketh also of a branch, foreseen that it be set in a fat and blacke earth which is moist. The time to set it of root, plant or branch is either in Autumne or in the Spring. It is sowne in the same seasons a foote vnder ground and fowre berries together; and when one yeere is past, you must plant it where you will haue it abide. In any case you may not sow it or plant it neere vnto any of the lattice worke or climbing and running frames made for the vine, much lesse neere vnto the plant it selfe, because that the Bay tree is altogether enemy vnto the vine aswell in respect of his shadow, as of his heate, which draweth away all meanes of growth from the vine. Looke in the second booke.

The leaues of the bay tree doe preferue, keepe vncorrupt and make faster the fish that is fried, especially that which is fried in oile, laying them by beds one vpon another: they performe in like maner the same good vnto dried figs, damaske or fraile raisons, if you straw of them among the said raisins in the fraise.

You

The two and fortieth Chapter.

*Of the Iuiube tree.**Of the Iuiube tree.*

THE Iuiube tree is a tree that is verie rare and seldome seene in France, but much in the countrie of *Provence*, especially about *Dupont*, *S. Esprit*, and in *Languedoc*. This is a tree of great reach and compasse both for his heighr and bredth, and naturally it loveth to be in hot countries, not so much seeming to regard the soile where in it is set: likewise in many places of the said countrie it is seen in turning waies and publike places; but and if you would haue it to grow in cold countries, you must not so lightly regard it: for you must see that it be seated in a good fat ground, and manured with pigeons dung, and ioining to the side of some wall, whereby it may haue the reflexe of the South sunne, of which you must looke to giue it the full fruition before all other things. Sometimes it groweth of kernels, three or fower of them being put into the earth together, and their sharpe ends downward, the holes must be a foote deepe, and heaped full of cokes dust mingled with ashes of vine branches, and that in Aprill in hot countries, and in May in such as are colde. And when it is once growen vp, and become somewhat strong, which will be about the terme of eightene monethes or two yeeres after, then you shall remooue it into some other place with such obseruations as haue bene deliuered concerning others, and concerning the countrie as it shall fall out hot or cold. Some likewise plant it of the roote, when it riseth vp into shootes which haue small threddie and hairie rootes, loosing and pulling them vp gently, together with some of the principall rootes of the tree, for feare of parting them and their threddie rootes, planting them in pits prepared some fiftene daies before, in a light ground & that in March. As concerning their sciences to make them grow, it is not so certaine a thing as that it deserueth the troubling of ones head about it: but for grafting of it in the cleft either vpon it selfe, or vpon the medlar tree, or vpon the quince tree, you may if you will: but grafted vpon it selfe the Iuibes will be more grosse and thicke, and of a more pleasant taste: as generally all manner of fruit is, being grafted vpon a tree of his owne kinde. Some will say that it reioiceth during the time of winter, to be compassed about with a heape of stones, and when sommer commeth to haue them taken away: and that it craueth likewise to haue oxe dung laid to the roots of it: but in those countries where there are such great store of plants, this peece of seruice is altogether neglected, which notwithstanding is the meanes to caule great store of faire and good fruit.

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You

You must obserue as well in the leaues of the bay tree as in those of the Iuniper and Elme tree, that they being cast into the fire do presently crackle, and that the cause of this is for that they take fire before their superfluous and raw moisture be consumed and spent.

The leaues of the bay tree dried and rubd one against another, if there be put betwixt them a litle powder of brimstone, doe cast out sparkles of fire, as doth the Steele and the stone, in like maner do iune leaues. The boughes of bay tree stucke downe in arable ground doe keepe the corne from mildew and blasting. Some are of opinion that tempests and lightning, will turne away from those houses and places where there are hanging any bay tree boughes, whether it be at the chamber floores, or else at the doores or windows.

The tender crops of the bay tree boild with flowres of Lauander in wine do heale hardnes of hearing and noises in the eares, if the vapour be taken thereat with a funnell: the *Vinula* being fallen is againe restored to his place; If you lay the baies of the Laurell trees very hot vnto the top of the crowne of the head, with equal weight of cumin, iſope, organy and euforbium mixt together with hony. The baies of laurell pound with wheat bran, Iuniper berries and garlicke heated in a hot frying pan, sprinkled with wine, and laid to the flanks, doe prouoke the retained vrine. If women with child and neere their accompts, do eat euery night going to bed, ſeuē laurell baies or bay berries, they shall haue a more easie trauell and deliuary.

The fowre and fortieth Chapter.

What space must be left betwixt fruite trees when they are remooued.

The greatnesse of trees is to be considered.

THat you may fitly appoint the standings of trees, & their distances one from another, in respect of the trees themselves, compared one with another: you must first consider the height, fulnes of the leaues and boughes, and spreading of the same, according as euery sort of tree doth ordinarily grow and attaine vnto: and besides the ordinary how by place affoording abundance of nourishment the tree may exceede and surpass it selfe in height and bredth, for that fruite trees would not be incombred aboue head or ouer his top, but would haue the breathing and blowing of certaine windes at libertie, and with sufficient space fauourable to light vpon them, and withall the fruition and benefit of the sunne: in all which points, the vnequall proportion of one tree vnto another in height or bredth doth offer let and hinderance. And yet further, if they would haue their waggings and plyings to and fro to be free, that so they may play at libertie when the winde toseth them, how greatly should the exceeding greatnesse of the neighbour trees disturbe and trouble one another, if

care

care and aduise be not taken in the first planting of them? And therefore you must haue regard and cast an eie about you for this cause, that so you may well and profitably appoint our your distances and spaces betwixt one and another: for in good and fat groundes, where trees may grow much, you must allow more space then elsewhere: and further you must note, that one tree planted well at libertie, whatsoener the place be of it selfe, doth fructifie and beare a great deale more.

If you minde to plant thicke and grosse trees all one a row, and vpon high waies and against the hedge of fieldes, then you must leaue them some thirtie fute foote of space one from another, but and if you intend to plant manie rowes in one and the same place, then you must be sure to leaue fortie fute foote space betwixt euery two, and as much betwixt one ranke and another, that so the boughes may the more freely spread themselves euery waie vpon their emptie and vacant sides.

The space and distance betwixt trees.

As for peare trees, apple trees and others of that bignes, if you plant onelic one rowe by the sides of your field hedges or elsewhere, it will be enough to allow twentie feete betwixt one and another: but and if you set two rowes vpon the hedge of your garden allies, then you must allow them some twentie fute feete betwixt one and another euerie waie square, in such sort, as that as well the allie, as the space betwixt euerie two trees on either side may make a perfect square of fute and twentie feete in euerie line, and if the distance allowed them be of lesse quantitie, then it must be somewhat answered and helped by not planting of them euerie one right ouer one against another, but as if you should wrap and lay them vp one within another to let the full and planted place of the one side stand ouer against the voide and emptie of the other. Some would that there should some small trees be planted amongst those great trees which you thus set about the allies for the times whiles they are in growth, but this would not doe well if either they should be suffered to continue there alwaies (because it would breake the rule and precept deliuered before touching such course) neither yet if they should be taken vp afterwards: and the reason is because they draw away and cate vp the iuice and nourishment of the earth, which should wholie be imploied in growing and furthering of those which are intended for the inclosing and defending of the allies.

If you should goe about to plant a whole field or quarter of your garden with great fruit trees, such as are before named, you must then set them checkerwise, and allow them betwixt twentie and thirtie foote of distance the one from the other euerie way, that is to say, from tree to tree, and from row to row.

Plum trees and other trees bearing stone fruit, and being of the like size of bignes will not admit vnder fourteene or fiftene feete distance

stance one from another in euery row: but and if you will onely plant two rowes, vpon the sides of your garden alhes, then they neede not aboute fixe foote distance square, but you must looke that this proportion or whatsoeuer other that you set downe to your selfe, doe iustly answere the proportion of the length of the place intended to be planted.

Sweet cherrie trees.

Sweete cherrie trees and bitter cherrie trees doe looke to haue allowance of distance betwixt ten and twelue foote, but and if they be to be planted vpon the sides of the great alley of your garden, then it will suffice to allow them betwixt nine and ten.

Common or the lesser sort of cherrie trees.

The lesser trees, as cherie trees, quince trees, fig trees, haseil nut trees, and such like are sufficiently allowed if they be set distant betwixt eight and nine foote in your greene grasie plot or orchard, and betwixt five and six in alleies and garden rowes. When you would plant two rowes, either of them of severall kindes of trees, then set the lesser on that side that the sunne falleth first vpon, that so the shadow of the greater may not disaduantage them.

The fise and fortieth Chapter.

Other precepts about the planting of fruit trees.

IF you plant peare trees and plum trees one with an other, it will be better to set the plum trees towards the sun: for peare trees doe better indure the want and withholding of the same.

To remove.

When you shall take vp a tree to plant it else where, take a great circle round about the foote, and raise together with the roote as much of the earth cleauing thereunto as you can, for besides that thus the rootes doe not loose their bed, they finde themselves otherwise also infinitely better contented, when they carrie with them the earth already reclaimed and familiar vnto them, then and if they should be constrained in their new lodging to stoupe and conforme themselves to the earth which they should there finde. For as for watering of the rootes in pulling of them vp, to the raising vp of the more earth therewithall, it is as good as nothing, but rather doth much hurt, because that this wet earth being within the new hole becommeth stiffe, and hard, which cannot but greatly offend the rootes of the tree remooued: for the verie remove doth astonish and blur them so, as that it maketh the pointes of their rootes as it were blunt, and to haue their mouthes stoppt, so as that they can neither draw vnto them, or else goe forward themselves, so that if they finde not the earth of their new lodging so light and crumly, as that they may pearce it without straining of themselves, and conuey themselves any way, either the tree continueth long without taking, or else it dieth right out. For the auoiding of which discommoditie, you must not either wet the new hole,

neither

neither yet the tree in remoouing of it, nor so much as remooue it in a drilling time: and it is inough that the hole hath continued open before for the space of fiteene or twentie daies, and hath drunke in of the dew and wet of the night. Of one thing you must take good heede, that you giue it his iust quarters of North, South, East, and West, as it had before, and that if you take it vp from a plaine ground, that then you bestow it in a plaine ground againe: and, if you remooue it from a hilly place into the like, or otherwise into a plaine, then you must looke that the seate wherein you set it in, be defended in like manner from the windes, both below and on high, as it was in his first.

You must not plant the trees that haue beene broused by cattell or haue had their endes broken off: for they grow not so well, except you thinke it good to cut off the ende of their tops and head, to see if that thereupon they will take and grow againe. You may plant trees also without rootes, if they haue great pithes, as the Fig tree, tame mulberie tree, haseil trees and other such like.

And as for the pits wherein you meane to plant trees, you must make them six foote deepe in clayie places, but not so much in moist places: you must likewise make them roomethie and wide enough, for though the tree that you shall plant should haue but small rootes, yet you must make it wide, that so there may store of good earth be cast in round about the roote. And if the bottome of the earth where you make the pits be too soft, then helpe it by putting to it some drie earth, or else stay till it harden and breath out his moisture: On the contrarie if it be too drie or hard and hornie, dung it and moisten it with water, letting it drinke in of the same well and sufficiently, not that you should make it like a poole, but sprinkled or bedewed with water therewith to coole it: againe it is meete that if your tree be old gathered, that they be watered and steeped at the foote two or three daies. If any of the rootes of your trees prooue too long or to haue their bark hurt, then you must cut them off biace, and let the side that is most vnfirmishe be vnder when the tree shall be planted: for there will small rootes come forth round about the cut.

It is a generall rule, that before the remoouing of any manner of tree whatsoeuer, and especially if it be a tree growne vp of kernels, if it be growne thicke, for to cut off the branches of it first, and to leaue nothing on it, except such sprigs as are not above a fingers length, or somewhat more or lesse, according as the tree doth require, and this is it which some vtter in a proverbe: That he that will plant his father must cut off his head: but as for small trees which haue but some one small wand or rod put out of them, there is no need that such should be cut up on high, when they be remooued: the stockes of the nurserie which you intend to graft, must be very well put forth into branches before they be remooued: as we haue said before.

L I

And

To give trees
their fit places.

And when you shall set downe your trees in their pits, you must free their rootes from being intangled one with another as much as you can, and make them all to draw downward, not suffering any one of them to turne their ends vppward: and it is not needfull that they should be set so deepe into the earth, for it is inough that the roots be laide in so deepe, as that the earth may couer them halfe a foote or thereabout, if the place be not very schorching and stony: and you must not fill vp your pit, but leaue a hollow round about the tree with some open passage or conduit, that so the raine water staying there may be conueighed vnto the roots of the tree.

When your trees shall be spred in the pits, and the roots thereof orderly laid at large, weigh downe vpon them easily with your foote, and after mingle well manured earth with a part of that about the pit, and straw this vpon your roots, causing the smallest of it to fall downe amongst them; but lay not the grassie side of the earth towards them, for that might let them in too great a heat: you shall mingle the one earth well with the other, and so fill vp the whole pit. And if there be any wormes in the earth that you shall put in, then you shall mingle some leeches therewith to kill them, because they might do hurt vnto the rootes. Afterward when your pit shall be filled within halfe a foot, or neere there about, you must tread downe the earth well vpon and in the places about the rootes, and it is farre better if it be drie in that place, then for to haue it wet.

To kill wormes.

The prickling
downe of trees.

But and if you prick downe or plant a tree of a prop, stake, or pole without rootes, with a wooden beetle or mallet, make nor way for it into his hole with another stake, but let it make his owne hole for it selfe, not leauing it such a depth of earth to passe through, as that it cannot possibly enter without spoiling his barke: but when you driue in the stake, tie it in such sort at the vpper end, as that it may not cleaue in driuing.

The sixe and fortieth Chapter.

*Of pruning, lopping, vnconring and making
cleane of trees.*

Thelothfull and negligent hinde, saith that a tree must neuer be touched after it is planted, but a good husbandman saith, be still doing one good turne or another vnto the earth and the tree, & they will do the like to you againe. It were true indeed, that to say that we may not touch the tree, would haue some colour of reason, if it were to be vnderstood of the not remoouing of it from his first seate, it being good and according to the nature of the tree: but to say that we should not touch it at all after it is once planted, would be either to proue negligent, or else to be willing not to receiue anie fruit

fruite of his trees: for by how much you are the more diligent about it, and procure it the more good and pleasure, by so much the more increase will it repay you againe: and hee shall neuer haue good or much fruit, that shall not be diligent in cleansing of his trees in winter, and in the end of Autumne: for as concerning the taking away of superfluous and bad branches, and picking of them, it is most certaine, that a tree that busieth it selfe much, to growe woode, must haue his branches tamed about the beginning of December, by taking awaie of them so many as are superfluous, with the vnneccessarie woode, ouer tall and high boughes, and such as hinder it from making of manie buds to blossome and beare flower: In doing whereof you may not touch the principall branches. Againe, you must free your trees of branches, and some part of the stocke also when it standeth behinde others that take away his sunne: that so after such disbranching and losse of some part of his stocke, it may set afresh vpon putting forth of new, and that so couragioullie, as that it may surmount and ouer-grow those which before did ouertop it, and take away the sun from it, for the same reason, if the sun enter not in forcible enough amidst the branches of a tree, but that some are still shadowed, it commeth to passe that those shadowed ones do not beare any fruite, and therefore there is cause that it should be obserued and marked euer as it groweth, what branches there be that do ouershow and drown the other, and to take them out of the way when the leafe is fallen: you must likewise cut the boughes that looke downeward, or which grow crooked in the midst of the tree, as those which hinder the growth of it. This disbranching must be done in the decrease of the moone, when there is not either excessive cold winde, or raine, and that with a good cutting toole: and not in any case when the tree is in his blossomes, because that so it might come to passe easily, that they should drie away. Yoong grafts may not be too soone pickt and pruned, least they should become too frolicke and lusty, putting vp still in height, hauing but a feeble body to beare so great a head: and therefore they must be let grow strong about the foote before you do any thing vnto them.

It is likewise most certain, that the dead wood of a tree doth cause other branches for to die, and so by little and little the whole tree throughout: or else it keepeth the tree from growing and rising, which is the same that we call bourgening. Then it appeereth how necessarie it is to take away all dead wood, and it may be done either in summer or winter. This mischiefte haunteth old trees most, or else such yoong ones as the Sun hath come too fiercely against, in the place of their standing: or else by some inconuenience of lightning, thunder or tempest: or else of some venomous beast lurking at the foote of it, hauing bitten and wounded some fibrous part of the roote: or else by hauing

To take bran-
ches from trees.

To make way
for the sun to
come to the
trees.

To take dead
wood from
the tree.
What is meant
by bourgening.

Exceeding heat
of the sun, hurt-
full to trees.

had some of the branches tainted and wronged by the spade or pickaxe in the laying of it open at the foote, or multiplying of it by propagation. And if it be meete that that should be remedied that is about the earth; then that also which is vnder the earth, and with greater care and diligence: for the heat of the earth and dung doth ingender vermine at the foot of the tree which eat away the rootes: or else sometime dung cast about it doth minister such store of nourishment vnto it, as that thereupon it is forced to put forth so great store of shootes and sciences, as that these doe make it to miscarrie, without hurting or taking any nourishment from any other of the trees: So that then heereby it appeareth that there is neede to digge trees at the foot in winter vnto the very quick of the earth, and take away from thence whatsoeuer may threaten any danger; and as for such number of sciences to see them planted other where, whether they be of plum trees, pearre trees, apple trees or such other, and at the end of three yeeres to graft them. And heere it shall not be amisse to note that the sciences of hawell tree being remoued, bring forth the better small vntes.

To order trees in winter.

In like maner the tree must haue some recreation given it in winter, after his great trauell in bringing forth of his fruit, and that in this sort: as by opening the earth and laying his rootes bare, that so you may cleanse them, and that the raine and the snow may far them, which especially & principally hapneth in many places that are hot, dry, and lying very open vpon the Sun in his scorching heate: Furthermore if the barke of the tree begin to drie away, shewing signes of small store of nourishment within: that then you make fast vnto the foot of the same tree some dead dog or other carion for to reioice it withall, and some one or other scuttle full of good and small dung to lay about the foot of it: or on the contrary leaashes, if so be that the ground be found too far and full of wormes.

A dead dog or some other carion made fast to the foot of the tree.

To be careful of trees.

The age of the tree will make it to grow full of mosse: and if it be young, then too much moisture will make it mossie, as also too much durrell: that disease feedeth vpon a tree and maketh it leane, as the scabbe doth the beast. And we must not thinke that this can happen by reason of the mosse that is put about and about the wreath of the grafts. The remedie for this, is to lay it open at the rootes, as hath bene saide heere before: as also to make it cleane in Winter with a knife of woode or of bone, for feare that the mosse continuing in peace, winne the country and in fine deuour the whole tree.

The tree is to be cut off vnto the quick of the earth.

He that will haue faire young trees, must dig about them every moneth, and cut off vnto the quick of the earth some parts euerie of those times, after March is past, and so long as vntill they be grown great and full of sciences, and then they must not be digd after then

then thrise a yeere. In winter whether they be great or small the earth must be taken from their feete, that so it may be mingled with dung, and put into the pit againe, to the continuall retaining of necellarie moisture and comfortable influence of the heauens, as we haue saide before. And in sommer and when it is extreme hot, there must be kept and gathered a heape of coole earth, about the foote of the said tree, to helpe it to auoide the heat and drought of the said season.

It is best to disbranch and prune trees when the sap beginneth to rise vp into them, and when they thereupon beginne to bud and blossom in signe of approaching sommer, and this time most commonly falleth out about March and Aprill. And in this busines you must see that you cut the superfluous boughes off close by the stocke, and the sap thereupon will by and by runne out at the same cut, which thing cannot so happily succeed with them which cut trees in winter. And to preuent that the thicknes of the weightie and great branches, may not rent the barke from the tree in falling, cut it first halfe a foot from the earth, and after goe forward to saw off the residue verie close vnto the tree, and lastly put the sawed dust vpon the cut.

If you disbranch and prune your trees in winter, leaue the stumps sufficient long to cut them afterward againe in March and Aprill: but and if you meane to lop and disbranch your great and olde trees to the ende they may grow young againe when you perceiue them to loose their lustie colour and to begin to looke yellow, then you must dee it shortly after the first of Nouember, as after that their leaues are fallen and before their sap put vp againe: and in cutting or sawing of these boughes, leaue their stumps with the stocke, that so you may graft vpon them new sciences, some longer, some shorter, as the tree requirerth, being sure in all your worke to take away the most offending branches, that so the remainder may receiue the more humour and substance.

If the tree through age or otherwise become barren contrarie to his wonted custome: you must not cut off all his boughes, but those onely that are dead. Likewise you must vncouer his rootes after the beginning of Nouember is past, and cleaue the thickest of them, and put in the clefts some shuvers of hard stone, and there leaue them, to the ende the iuice of the earth may enter in that way: afterward at the ende of winter you shall couer their rootes againe with good earth.

When the grafts of three or fower yeere old are broken, broused or hurt of cattell; or when as you see that at such age they increase not neither grow greater, then you must cut them againe and graft them more low or more high then they were. And after you haue thus cut it you may take the vnthriving grafts, cut off and graft them againe if you may take the vnthriving grafts, cut off and graft them againe if some part of them in this new head, but somewhat deeper then it

I. I.

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was before in the former; and let it also be well and close made up, even from the first setting of it into the stocke: & when you have thus grafted the stocke this second time, you must stil leaue remaining and not pul away the sciences which put forth of the plant so grafted, until you see whether the grafts doe put forth new wood or no; for peradventure you might kill the plant, which yet being reserved and kept aliue, you may graft againe the third time, if the second should die or milcarrie.

*How to order
graftes after
they haue put
forth new wood.*

After the grafts haue put forth new wood, of some two or three foote length, if they againe put forth sciences more then neede, and those about the parts which you desire to cherish and to bring to large growth, then cut away those superfluous sciences, and that very close, even in the yeere that the grafts were grafted, but let it be at such time as the sap is in the wood: likewise it will not be amisse to cut off some of the principall members of the shootes and grafts of the first yeere, if there be too much put forth, and to ingraft them in some other place: and about fower or five yeeres after that they haue bene grafted, and therewithall the grafts well and close grown to the plants; yet once againe goe ouer your former worke, and take away after the same manner whatsoever you perceiue of idle remainder: for it is enough for one tree to haue one good member sorte to make his stocke or bodie of, and especially those which haue bene grafted small vpon a graft, and thus it prooueth a fairer and better tree in the end. But and if the tree were grafted after it had bene growne great, and that with many grafts, you may well afford it larger allowance, according as you shall finde requisite and needfull, for the better couering againe of the clefts and cuts made in the plant.

*To order and
handle trees
that are growne
up.*

When your trees shall begin to grow, you must gouerne and guid them well for three or fower yeeres or more, namely vntill they become to a good shape and fashion, cutting their top on high and their small branches of superfluous wood, so long as till they come to the height of a man and more, if well it may be done, and dresse them well and set them in good order in their principall parts and members, and that in such manner as that one branch stand not too neere vnto another: neither yet that they may take hold one of another when they shall grow great: and some also must be cut away if that the tree should be too thicke of boughes within, that so the sunne may shew his force by hauing passage and enterance thereinto.

*Trees growing
ouer to grow.*

If it come to passe that trees being yet young do cease to grow in thicknes, you must cleaue the barke of the stocke in fower all along, or else in five places, according as the tree shall be of thicknes, and after that in a short time you shall perceiue it grow maruellously.

You must take from trees the drie leaues, which haue shot vp within

within them the nests and eggs of caterpillers, and other such like little beasts, which are giuen to consume, waite, eate and spoile the leaues, tender parts, and fruit it selfe from off the tree: and besides do oftentimes cause to drie away, as also to die the whole tree, especially peare trees and apple trees, as being more subiect vnto this vermine, than the other sorts of fruit trees. And it is needfull furthermore to rid the stockes of all galls and breaches which the wormes or pismires haue made there, because that vpon these occasions might follow their death and ruine.

Trees may be cut from the first of Nouember vnto the ende of March: and you are to giue order that there may no gashes be made of great depth: and if you cut off the sciences or shootes of the tree which bringeth forth no fruite, and that it be in the decrease and last quarter of the Moone, it will cause it to become fruitefull. And when the tree which you haue grafted shall haue growen great, you may take away his sciences and leaue remaining your grafts alone.

For the matter of watering of trees, they must not be watered except in time of very great drought, and then not vpon their foote and stock but in compasse about them, and this againe must be moderately done, because trees desire to be moistened rather by amending of them with fat and well manured earth, then with water: also we see that the fruites which grow in places that are not watered, are ordinarily more sauorie and keepe longer then those whose earth and soile is drenched with water, howlocuer that sometime the drines thereof be such as that it doth hinder and keepe the fruit from coming to his perfect growth and accustomed greatnes.

If that trees for some yeeres together doe beare more fruite then ordinary, in so much as that it is as much or more in number then the leaues, you must in such case rid them of the third or halfe part: in as much as those behind will not onely grow fairer, but because also that the yeere after, it will bring forth more; then and if those should be let alone it would doe.

The fuen and fortieth Chapter.

Of the curing of fruite trees.

All things that draw their force and take their growth from the earth, haue some perceuance of that which is good for them, as those things by meanes whereof they liue: so they haue certaine speciall and particular diseases growing vpon them by reason of thinges that are contrarie vnto them, as either old age, or want, or ouer great abundance of that which should nourish them. Wherefore it is no maruell if trees and euery one of them doe nowe and then suffer inconueniences, and such as if they be not quickly helped

helped and relieved, they will not faile to die.

All trees which through force of winde or otherwise shall be clo-
uen, shiuered, or shiuen must be cured with mire, sheepes dung and
swines dung.

Weedes growing about trees, doe sucke the nourishment of
the earth, and they must carefully be weeded out, and the rinde of
the tree must be smoothed with a hedging bill, but not in ouerthwart
manner.

When a tree groweth not in thicknes and is long in putting forth
of branches and in rising on high, after that you haue vncovered it at
the foote, at such time as hath beene said before, you must cleane a-
round many of his rootes, but those not of the chiefe and principall, and
put vnto them swines dung mixt with other earths, and sometime
powre downe in the place the lees of strong wine, round about the
rootes: likewise if it be growne exceeding mosse, then you must cleane
it of the mosse, with a great wooden knife, taking heede that you
hurt not the barke. And in Summer time when the earth is too wet, it
will be good to dig the earth about the foot and rootes of those trees,
which were not vncovered at the rootes in winter, & to mixe therewith
something to better the earth withall, whether it be dung or some
good mould from some other place.

You shall make the barren tree fruitfull, if you hang amongst the
boughes a bag full of the seede of Roses, Mustard seede and the foote
of a Weasel.

The file is a disease in trees that fretteth their barks: wherefore you
must cut away this infection very neat and cleane at the end of Win-
ter with a very sharpe toole, and after put vpon the wound or cut the
dung of oxen or swine and binde it to with old clothes, and keep them
also very close and fast with ozers, till it being thus fastned, may con-
tinue a long time, euen while the plaisters can be kept on and made
cleane thereto.

There are but a few trees but they are subiect vnto the wormes:
and some more than others, as apple trees, pearce trees, and all such
as containe within them a sweet iuice: some others lesse, as the bay
tree, and others which beare sowre and bitter fruites. Sometimes
these wormes grow of the oldnesse of the tree; sometimes of having
taken a blow. Therefore against such wormes as vse to breede in the
barke of the tree, in the place where you shall see the barke swelled
or hounen, you must race it with a knife, and pearce it euen vnto the
wood, that so the infecting humour may issue out and with some hook
or crooke you shall pull out the wormes and rottennes that is within,
and that with as much speed as you can: after this put into and vpon
the cut an emplaster of oxe dung or swines dung mingled and stamped
with sage and some quicke lime, wrap it well and tie all fast, and
there

there let it remaine and abide so long as it can indure.

The lees of wine or groundes of oile, being cast vpon the roots of the trees that haue the raundise, or else are otherwise any way sicke doth them great good.

There breed in trees certaine small beastes almost like to weevils, and they are somewhat blewish or blacke, and certaine of them
haue long and sharpe pointed peakes or bills, these doe great harme
to grafts and other yoong trees: for they cut off yoong sciences, which
are yet but tender and put forth not past the length of a finger: you
must at the height of the day, when you shall see them there, lay
your hand vpon them very softly without stirring the tree: for they
let themselves fall downe when one goeth about to take them, because
they cannot quickly betake themselves to flight, and if they let not
themselves fall into your hand, then reach vp and take them vpon the
sciences with your other hand.

For Snailles and anres, lay ashes or saw dust of wood, or the meale of lupines at the foote of the trees, and when the raine hath fallen vpon it stir it vp againe and put also new vpon it: otherwise, set certaine small vessels full of water at the foote of your trees: or else powre
lees of wine round about them.

When a tree letteth fall his fruit, you must compasse his stock about with luorie as it were with a crowne, or else with a plate of lead, or, which is best, you must vncover the rootes of the tree and pearce them, and put into the hole the wedge made of the wood of a ceruise tree.

To hinder the rust from hurting of your trees, you must smoke them with straw in the spring time and that round about.

When a tree looseth his flower, or that the leaues doe fall from it, you must vncover the roots and lay beane straw wet in water round about them.

The best is to looke to caterpillers in the time of winter before the trees be leaued, and if you finde any remnant or remainder of them behind, or their pallaces or round gathered bunches, take them away with your caterpillar crookes made for the purpose before they be hatched. Cut not the woode when you cannot come by them with your hand, or, as little as can be, and cleane your trees well and thoroughly in euery place, that so there remaine not any eggs, then looke vnderneath at the feete of your trees, and see that there be no young ones, which can spin, and haue betaken themselves thither, and ledded themselves betwixt the sciences and the rootes. If there remaine any clewes or round bottomes of them in the spring, or that some blasting or small raine hath bred some young ones, then marke at the height of the day, their repaire, in which place you shall see them together vpon heapes, whether it be vpon the armes of the tree or

Shiuen or shi-
uered trees.

Weedes about
trees.

The small and
dwarfish tree.

The barren
tree.

The file in trees.

Wormes in
trees.

weevils.

Against snailles
and ants.

The tree that
looseth his fruit.

Against
rusting of trees.
The tree that
looseth his
flowers.

Against cater-
pillers.

or vpon the branches, from which you must either with olde clothes, or else with some large and great leaues held in you hand beate them, and kill them euerie one, weighing hard vpon them with both your handes, and oftentimes haue recourse thither and spie if you haue not let some of them fall vnto the ground: but beware there spurt nothing from them in your face, and to the ende they may not breed any more, you shall tie and make fast the branches of the fallow about the foote: these branches will serue likewise to make this vermine fall downe stauke dead. There breedeth likewise a little worme, which the inhabitantes of *Burdeaux* call *Quayre* betwixt the wood and the barke, which catch trees in such sort as that it causeth them die. These you must kill with an iron wyer probing for them one euery side of the tree.

*The ouer fruit-
fulness of a tree.*

When a tree beareth too much, it must after that it hath bene vncovered at the rootes, haue diuers of them (so they be not of the principall) clouen, and the water that is within them let out, if there be any at all in them, and this will be as good for them or better, then letting of blood is for a man: for by this medicine the life of the tree is renewed.

*The disease of
the barke of the
tree.
Lame trees.*

The sicknesse of the barke of the tree, cometh of the moisture of the place where the branch is planted, and likewise on the contrary, trees become lame when they be planted in too drie a place. To keepe same yoong trees in the kernell nurserie, and to cause them to thrive the better, they must be covered a mans height with stubble or with straw, but the couering must be borne vp with poles laid long and crossewise.

*To hasten a
tree his bring-
ing forth of
fruit.*

To hasten and helpe forward a tree in his bringing forth of fruit, which is long before it beare any thing, you must make a hole with a wimble in the thickest branch of his roote, without boring of it through: and in the hole which you haue made put a staffe and stop it vp with wax: after ward couer the foote ouer againe and the tree will beare the yere following.

*The drynes of
a tree.*

As concerning trees that haue bene lately planted and begin to wither away, if you cause them to be digd and watered you shall much helpe them: and withall they must be kept from heat in providing something which may make them shadow, and against the cold they must be covered with straw.

*To kill wormes
that trouble
trees.*

Swines dung will kill wormes, as also mens vrine put in the hole where the wormes are; and quicke lime in like sort: but and if the barke be hurt then let it be clouen in many places, and likewise in the foote of the tree a little, in such sort as that the humour may run out.

*The breeding of
wormes.*

The moisture oft times will cause wormes to breed in fruites that haue kernels: and therefore at such time, you must pearce the tree with a wimble, and that throughout if you doe well, and as neere the

roote

roote as is possible, to the end that the humours breeding the wormes may passe away.

If apples or any other such fruites fall from the tree, cleaue the roote, and put in the cleft a great stone or a wedge of wood.

*The falling of
apples from the
tree.
Fruits rising
upward.*

If fruits grow vpward, wash the foote of the tree with purcelane water or vineger; or powre about it lees of wine: or take two partes of oile olive and one part of blacke pitch, mingle them together, after ward annoint them, or put ashes to the foot of the tree, or else some vessel full of water about it, or some hoope cut and annointed with Petroleum: or a little corde drest ouer with swines blood, wherewith quicke siluer hath bene mixt.

To kill ants from about a tree, you must vncover the earth about the tree, and put in place some chimney foote, and that a reasonable quantitie. Take also of the sawe dust of the oake, and lay good store of it at the foote of the tree, and the raine when it falleth will either cause them to depart, or else they will die; as for other accidents which may annoy and hurt trees, as haile, fogs, or milles, flies, frogs, and such other inconueniences, see in the second booke and the hundred and tenth chapter.

To kill ants.

The eight and fortieth Chapter.

*To keepe and preserue the fruites of trees, so be taken and
eaten in their due time and season:
and out of it.*

Al such skill as man is to haue resteth not alone in the well ordering of the fruit tree, and carefull maintaining of it: but he must know withall, the keeping & preseruing of the fruit, either to sell it when the time is good and fit, or else for the vse of his householde and familie, especially in places where the most delicate and daintie fruites doe grow, as in the countrey of *Tourraine*, which for this and such other considerations, is called the garden of *France*: wherefore we will intreat briefly of the manner of keeping of fruites, and we will begin with the almond.

*To preserue the
garden of
France.*

Almonds are ripe when they begin to cast the husks. If you wash them in salt brine, you shall make them white and to indure long, but yet the more if you drie them also: if you see that it cannot cast his huske, lay it vpon some straw a certaine time, and shortly after it will cast it: to keepe it long lay it in a drie place where the South winde bloweth not.

Ripe almonds.

Chelnuts will be good to keepe vnto the spring time, if you first dry them in the shadow, and after lay them in dry places vpon heapes, or in vessels couered with sand: or and if you mingle them amongst common nuts, for by this meane they will be robd of their excrementous

Chelnuts.

mentous humour. But chiefly to keepe them long, you must gather them when they are reasonable ripe, in the old of the moone, and lay them in sand in some coole place, or in some vessell well stoppt. Some do spread them vpon hurdles, or burie them so in sande, as that one of them touch not another. Other some set them in ranks in baskets or panniers full of straw. You may trie if they be sound, by casting them into cold water: for if they goe to the bottome then they are sound, but and if they swimme about the water, they are corrupted and naught.

Sound be found.

Cherries.

Cherries will keepe long, if you gather them from off the tree before the sunne rise, and afterward lay them orderly in a vessell, hauing in the bottome of it a bed of sauorie: and that by laying a bed of sauorie, and a bed of cherries, and a bed of sauorie and a bed of cherries, and lastly a bed of sauorie, watering them with sweete vinegar. In like manner they will last long if you order them after the saide manner, couering them with rose leaues in a barrell: they are likewise either dried in the sunne, or stewed in their owne iuice, and preferred with sugar to keepe a long time.

To keepe citrons.

If you annoint your citrons, gathered with the leaues vpon their boughes, with well tempered platter, you may keepe them sound a whole yeere: and if you hide them, and couer them with barley, they will not rot: or if you do but close them vp close in any vessell whatsoever, or else if you do but couer them with small straw.

To keepe the cornelle berrie.

The cornelle berrie (commonly so called) must be put in a bottle of glasse which hath a wide throte, and when they are in, the bottle must be filled vp with very good and liquid honie, or else with sugar in steed of honie: after this the iuice rising of this sugar wherein they are preferred, is a singular thing for the staying of the fluxe of the bellie, and the procuring of appetite.

For the staying of the fluxe of the belly.

To keepe quinces, dip them in the lees of wine, or which is better, make them vp in new earthen pots close shut, and put the same into vessels full of wine, or else dip them in the wine: and by this meanes the quinces will remaine fresh, and the wine a great deale more pleasant. Some keepe them in straw or barley, or the sawe dust of woode, or figge tree leaues. Other some couer them with leaues and lome made of porters claie, & afterward drie them in the sunne: and when they would vse them they breake the claie, and taking out the quinces finde them such as they put them in. Some put them all whole in honie. But note by the way, that you must not keepe quinces in a house where there is other fruite, for what by their sowerne, and what through their smell, they spoile and corrupt the other fruits which are their neighbours, or neere vnto them, yea the verie grapes which one would keepe.

The most narrant qualitt of quinces.

To keepe greene figs.

Figs will be alwaies greene and new, if you put them in a pot full of honie wel couered, in such sort as that they do not touch one another,

nor

nor yet the pot it selfe: or else if you put them in gourds euery one by it selfe, and hang the gourd in a shadowed place, where the fire or smoke cannot come: or if you put them in a glasse pot well stoppt with waxe. Drie figs will not corrupt if you lay them vpon hurdles in an ouen, after the bread is drawne out, and after put them in a new earthen pot, that is not glazed.

Walnuts will continue a long time sound, if they be couered with straw, or with their dry leaues, or shut vp in a coffer made of the wood of walnut tree: or if they be mingled amongst onions, whereunto they do this pleasure, as that they take from them the greatest part of their acrimonie, or sharpnes. Some say likewise that they will be kept greene a whole yeere, if when they are gathered greene, they haue their coate taken from them and be dipt in honie: and thereupon also such honie becommeth singular for them which haue vlcers in their mouth or throte to make gargarismes of for the same.

To keepe walnuts sound.

Pomegranats will keepe, if at such time as when they are ripe or almost ripe, you writh the little stalke by which they hang vpon the tree: or if presently alsoone as they be gathered, they be couered all ouer with porters claie, tempered in water, and afterward set out to the sunne in sweete oile, in a broad mouthed pot couered and hung at the floore of some chamber in a close place where the froit cannot come: or else set in some caue vnder the earth: but see that they grow not mouldie there. In the meane time for the gathering of them, you must touch them softly with your hande, that so you may not crush them: they keepe very well also in sawe dust of oake wood, in salt water, or salt brine. Or else you must dip them all ouer in boiling water, pulling them out againe presently, afterward drying them vpon sand or small grauell, or in the sunne for the space of eight daies. Some hide them ouer head and eares in a heape of corne in the shadowe, vntill that their rinde be hardned.

To keepe pomegranates.

Apples after they haue beene gathered in weather not rainie or cloudie, but faire, must be kept spread vpon their eies, not vpon their tailes, vpon a table couered with corne straw, in a colde place, but not in a caue (for in such a place they would loose their fauour) and where the windowes are turned toward the north, which likewise must in faire weather be set open: or vpon strawe, or in barlie, or in a pot done ouer with waxe within, and close couered: or in an earthen pot not pitched, but hauing a hole in the bottome, and yet close couered aloft, and so hung vp in a tree all winter, in which case the apples will continue such as they were put in. Some wrappe them euery one by them selues in figge leaues, and after couer them with lome of white porters clay and with dry lome, and set them in the sunne. Some after they haue gathered and made choise of the soundest, healthiest, and fairest apples, not being yet altogether ripe, doe set a hogthead in the ground,

To keepe apples.

ground, round about which they set these fruites, and cover them afterwarde with a bed of strawe, laying againe another bed of apples thereupon, and couering the same as before, they continue thus vntill the vessell be full, which then they take out of the earth againe, and stop it euery where close, that so there may no aire get in thereat. The Normans lay them vpon heapes, minding to make their cider thereof: In the countrey of *Orleans* and *Touraine* they vse to dry them in ouens, for winter and spring time banquets.

Medlars are kept in small pitch vessels, or put in pots amongst grapes.

Oliues are preferued in salt brine, or in a composition of honie, Vineger and salt: some adde thereunto penniroyall, mints, anise, and masticke tree leaues: others some the leaues of the bay-tree, and others the berries of the bay tree.

Peares will keepe a long time, if their tailles be pitched ouer and so hanged vp. Others put peares into a new earthen pot and powre into them cuted wine, or wine from the presse, or common wine as it is meete to be drunke, vntill the vessell be full. Others keepe peares couered with file duit, or with the saw duit of wood: some put them amongst the drie leaues of the walnut tree, or else in an earthen vessell which is scarce baked, and powre in thereinto wine able to be drunk, and the new prest liquor of grapes, and stopping vp the vessell well and close doe so keepe it. Some lay them in pits, in a place neere whereunto there passeth a running water. And some diuide into quarters the Eusebian, rhodine, and bell fashioned peares, and taking their kernels out of them, drie them in the sunne, that so they may haue them good in the spring time.

Mulberries that are close stopt vp in a glasse vessell doe keepe verie long, so that therewithall they haue powred vpon them some of their owne iuice.

Citrons and oranges are kept in some caue vnder the earth separate one from another, or in salt brine made of veriuice, or veriuice without salt, or in manner of a preferue with salt, as the oliues are kept.

Peaches are kept in salt brine or in sweete vineger: or else their stones being taken away, they are dried in the sunne, after the manner of figs. Some do preferue them with honie.

Ceruises are preferued in sweete wine: or else when they be gathered, the hardest are taken and set to soften in vessels of earth full or almost full, couered ouer afterward with plaister, and set in a pite foot depth, in a drie place, and in the face of the sunne, and after couered with earth. You may likewise cut them in pieces in the midst, and afterward lay them in the sunne to drie.

Damaske plums shall be put in vessels, and cast vpon them new or sweete wine, stopping the vessels verie diligently and closely.

The

To keepe medlars.
To keepe oliues.

To keepe peares.

To keepe mulberries.

To keepe citrons and oranges.

To keepe peaches.

To keepe ceruises.

To keepe damaske plums.

The nine and fortieth Chapter.

A brieue discourse of making of drinckes of the iuices of fruits.

IN such countreies as the vine cannot beare fruit in because of the cold distemperature and churlish roughnes of the aire, and whereas notwithstanding there growe singular good fruites and in great abundance in recompence of the same (as in *Britaine*, *Normandie*, the countrey of *Mans*, *Chartraine* and *Touraine*) although there be the meanes to make wine of a certaine kinde of corne, called bier: yet by reason of the lesse cost and charges, as also by reason of the greater profit, they vse to make diuers sorts of drinckes of fruits: and to giue them their seuerall and particular names from the seuerall and particular fruites whereof they are made: As for example, that which is made of apples, cyder or cyter, and so the Normans and other countreies bordering thereupon doe call it, as hauing a smell or other excellent qualitie resembling the citron. Perrie which is pressed out of the peares, and ceruise wine, quince wine, pomegranate wine, mulberrie wine, gooseberrie wine, and iloe wine, which are made of the iuices of these fruites pressed out. And heere we are to obserue that all fruites are not fit to make wine of; but onely those which will not putrifie easily, and haue great quantitie of wine iuice within them, of which kinde these are whereof I haue now spoken. For of cherries there is not any wine to be pressed, because their iuice doth easily corrupt and putrifie very quickly: neither yet of almonds, common nuts, filberds, pine nuts, or other such fruites, for they yeeld an oylie and not a wine-like humour. But for as much as we are not determined to speake in this place of all these sorts of fruit drinckes, but onely of them which are called cider, perrie, and carasie, which next vnto the iuice of the vine, are the most profitable and necessarie liquor for the life and health of man: we will set downe before hand a certaine summarie, and as it were a transition and plaine declaration of and vnto as well the making: as also of and vnto the qualities and vertues of the saide cyder, perrie, and carasie, and will referre the Reader vnto the Latine booke now long agoe looked for from *Monsieur Paulmie* Doctour of Physicke at *Paris*, therein to read and learne the intire and perfect knowledge of this so pleasant and delightful drinke. And to begin with our purposed matter, I intend not here to stand about the finding out of the first inuentour and deuise of this drinke: onely I will say that as *Noe* carried away with the pleasant taste of the iuice, which he pressed out of the grape of the wilde vine plaued by him, was the first inuentour of making and drinking of wine: so a certaine Norman hauing his taste woonderfully pleased with the delicate and daintie taste and relish

relish of the iuice of apples and peares, inuented the making of cyder and perrie: I say a certaine Normann, for this is in base *Normandie*, called the countrie of *Neuz*, where this drinke had first his beginning.

The way in general to make such wines.

The way then to make these kinds of drinckes generally, is to gather the fruit not all out ripe, and after to let them ripen some certaine time in the open aire, or to drie in the sunne, for the spending and waisting of their waterie humour, then to breake and crush them with millstones or such other heauie instruments, and lastly to presse them out: but withall you must obserue this speciall qualitie in certaine apples, which the longer they are kept and the ripper they be, the better and greater store of iuice they yeeld, though then indeede it be somewhat durable.

On the contrarie, wilde peares doe yeeld more liquor and of a better taste, and withall of longer continuance, then doe the tame and garden ones. When the iuice is pressed out from the fruit it must be put into caskes for to boile therein a certaine time, and to be ordered after the manner of the ordering of the iuice of grapes, as we intende to declare more particularly.

How Cyder is made.

The drinckes made of fruites that are most commonly used, are cyder and perrie, which as they are pressed out of diuers sorts of apples and peares, so are they differing as well in taste as in goodnes. For to make your cyder, you must see that your apples be not wilde ones but garden and tame ones, growen and bred in orchards carefully and diligently dressed, kept, husbanded and ordered all the yeere long, according to that care and diligence which we haue said to be needfull before in speaking of the orchard, and yet without hauing any great regard vnto the place where the orchards are planted, and doe grow, as whether they be gardens, greene plots, arable ground, or other such like places, alwayes provided and forseeke that the ground be good and well seasoned. And about all things such apples must haue a firme, solide, and fast flesh, accompanied with great store of iuice, of a pleasant smell and delighsome taste, and of a beautifull colour: such are these that followe, the hercot, ruddocke, maligar, rambur, fatrewife, gattler, clanger, great eye, greening, curtaine, grollegraft, rucke, dong, sower, and sweete net, barbarian, rangelar, and adodill. The subrt start, hony-melle, and garden globe, notwithstanding that they be rare and singular apples, and of a more pleasant smell & delighsome taste than any other sort of apples, yet are they not so fit to make any kind of, as well in respect of the tendernes and delicate of the flesh, as for the little and scanty

What apples are fittest to make wine of.

cient store of iuice which they yeeld, not worthie the putting into the presse to make any quantitie of cider of. And hereto you may put an other reason; namely, that these apples are not so plentifull, neither grow they in such store as others do, and therefore it is better to keep them to eate, or to imploy them in brothes or sirup of king *Sabor* and *de succu pomorum*; then about the making of any common drinke.

The most common time to gather apples is about mid-September, after they haue beene partakers of sommers heate, and receiued some small raine and gentle windes from September: some being very ripe; others yet not altogether ripe; principally those which haue a faster and lesse delicate flesh: the greatest part whereof (being kept sometime) yeeldeth greater store of iuice, and better concocted and digested by the worke and operation of their owne naturall heate. In the gathering of them there is necessarily to be used cudgels and poles, except it bee that we lay our hands to them, which we haue a purpose to keepe: there must in this business also be chosen such a day as is faire, drie, cleere, beautifull, and full of sunne shine, for if they should be moist with any raine or dewe, they would rot in their garners.

The time to gather apples.

Being gathered, they must not all of the sodaine be taken in hand to be made into cyder, but they must be suffered to take a heate in heapes; (as the Normans call it) and bee kept some three weekes or a moneth, more or lesse, according to their consistencie and kinde, seeing vnto it in the meane time (at their owne perill) that they rot not: as also they may be laide on great heapes in gardens, or vnder some roose open to the aire when it freezeth not, or when it freezeth to couer them with straw newly threshed, or else with some mattreses or featherbeds to keepe them from the frost. Some during the time of the frost couer them with linnen clothes steeped in water and wrung out, and these being frozen once themselves, doe keepe that the aire cannot passe vnto the apples to freeze them: the best of all is to provide them warme garners, the floores being laide neither with plaister nor tiles, but with strawe, hauing the windowes very close, the dores firme and fast shut, and all the creuites or chinks perfectly stoppt to resist the entrance of the cold aire. And notwithstanding all this, yet you must not tarry and waite vntill they be thoroughly ripe, and almost vpon the rotting especially: but you must take your time somewhat before that they be come to this exact maturitie & height of ripenes, for else your cyder will not prooue durable, but withall will gather great quantitie of lees, and grow covered with much white mother swimming aloft: if they be frozen, then trouble not your selfe with going about to make cyder, for hauing lost their naturall and accustomed smell and colour, they haue also lost all their force and vertue, and so it is not possible to make any thing of them but a rawe,

M m

weake,

weake, vnpleasant, waterish, vndurable, and soone sowing licour. When as therefore the apples shall be well prepared, and come to a good scantling of ripenes, not such a one as is exact, but rather of the first or second degree of ripenes, and that they shall yeeld and breath out a very pleasant and sweete smell: then it shall bee high time for you to go in hand with making of your cyder. Which opportunitie if you forellow and still stay longer for their further and exact ripening, they will wither and fall away, and the cyder that you shall presse out of them will become waterish, weake, and sowre out of hand.

The manner of
pressing out the
drinke made
of apples.

There are diuers waies vsed in pressing out this drinke made of apples in the countrie of *Nen*: some do stamp them, putting them in fats, & afterward fill them vp with great quantitie of water, letting them ferment, boile, and purge, so long as vntill the water haue got the force and strength of the cyder. Others stampe them in a mortar, and after powre them together with a great quantitie of water into some fat, not giuing them any time of concoction and purging: but these two waies are not so much worth; this thirde is better then them both. First, you must breake your apples in peeces, and after presse them out: the way to breake them in peeces, is to put them in a presser made round, and containing in compasse some seauen or eight fadome, the said compasse and round being contriued after the manner of a trough of two foote broad and deepe at the least, in these troughes shall be put & conained the said apples for the better staying and keeping of them in close together. Within these troughes there shall turne about one or two great milstones of stone, or of some hard, massie & weightie wood, fashioned like a wheele, carried about with one oxe or horse, or two, so as shall be sufficient for power and strength, as we haue said in the making of oiles. When the apples shall be sufficiently broken, you must gather into heapes the same, and cast them into tubs for the purpose, and there let them worke for a time as wine doth, and when it hath wrought, then you must drawe out the iuice or liquor (call it as you will) which shall haue runne out of the substance without being prest, and turne it vp into vessels, whether they be pipes or hogsheds, olde, or altogether new, provided that they haue not taken any ill taste of any vnfauorie liquor: the best vessel or caske of all other is that wherein there hath beene wine, and especially white wine, for the sauer of the wine doth make this iuice more acceptable, and more affected. The cyder that commeth voluntarily without being prest, is the best and sweetest, though not as waies stronger then that which hath abode the presse: that likewise is better and more excellent which is made without any mixture of water: It is true indeed, that when apples haue a verie fast and solide pulpe, and haue not so much moisture, but withall some sharpe relish, that then it will not be amisse to mingle some small quantitie of water

with them to make them breake the better, as also after that they be broken by the force of the turning stone, euen whiles they are working in their fats, or before they be put into their fats a working, euen at their going to the presse, there may water be mixt with them, to prevent that the cyder bee not too ranke, neither yet too sowre or greenish. The grounds of the working fat shall be laide vpon the presse interlaced with long strawe, to keepe the saide stamped apples steadie and staied, that they slip not to and fro when they are prest, (the apples by reason of their roundnes: not being able to stay and abide vnder the dore and other boardes of the presser, except they be kept in vpon the sides with some thing) and that which shall run out vpon the pressing of them, shall be turned vp into caske, and put to the former: or else, which is better, turne it vp by it selfe, as is done by wine, without mingling of it with that which did run out vnprest, the prest being the stronger, though the vnprest be the more pleasant and sweete. The drosse or grosse substance remaining after the pressing, shall be put againe into the fat and stamped, and sufficient quantitie of water powred in amongst, and it shall be let so rest, steepe, and boile together for the space of fower and twentie houres: after which, there shall be made thereof spending cyder, or small drinke for the household. For the making of this household drinke it shall be after the rate of gathering of one vessel thereof from so much drosse as made fower vessels of the best.

When the cyder is turned vp into caske, you must let it boile within the caske by the bung hole of the caske left open, and thereby to purge it selfe of all his froth, scum, and other impurities, after the manner of wine: and when it is thus well purged, you must bung it vp very close, and so leaue it to boile againe within his vessel: but you must see that at this time the vessel be not topped full, least in the boiling it breake the vessel. And indeed this kinde of cyder is a great deale more strong then that which boileth all his boiling with the bung of the vessel open, but somewhat more fuming, and not so pleasant as the other, and it must lie in some cellar for the winter time, but in some caue in the summer.

Cyder as concerning the taste, doth resemble and become like vnto wine, for at the first it is sweete, afterward being fined it is somewhat sharpe, and when it is altogether fined, it hath their a sharper relish, but yet altered from his former verdure, euen after the manner of wine, as being more pleasant when it is in fining, then when it is fined.

The Cyder is better to keepe then perrie, and there are Cyders found of two or three yeeres olde, as good in their place, as any wine that is made: it is true indeed that it is subiect vnto the same accidents that wine is, and it must be as heedfully regarded in the pearcing

off it as if it were ripe, nor giuing it any aire in the drawing of it if it be possible, or if you giue it any at all, to giue it when the foier is halfe out, causing the aire to recoile before the fountaine be stopp'd & shut. So soone as the cyder vessell is emptie, you must looke that the lees be not let stand in it any long time, because that it would breed an infinite number of wormes, which would make it to haue an ill smell & stinke in such sort, as that it would neuer be good afterward to keepe any cyder. And thus much for the making and keeping of cyder. Now we will speake of the making of our choise of the apples.

To haue excellent Cyder you must make it of sweete Apples, and that but of one or two sorts, and both of them in his kinde very good, of a pleasant taste and sweete smell, and you must breake and stampe them euerie sort by it selfe, but put them together vnder the presser. That which is made of sweete apples mixt amongst some sowre ones, is not altogether so excellent good, and yet in the heat of sommer to be preferred before the most excellent cyders, in that it is more cleare, heateth lesse and quenche thurst better. And of a certaintie experience hath taught it that the cyder made of sweete apples, hauing a soft and tender flesh, is more apt to sowre, if that there be not some sowre ones mingled amongst them: because that such sweete apples haue but a weake heat and easily overcome and wasted. But such sweet apples as haue a fast flesh, and thicke iuice, stand not in need of hauing any sowre apples mixt with them, so the helping of them to make good cyder. It is true that sweet apples yeelde lesse cyder then sowre ones, but yet in as much as the sweet haue the softe iuice and the thicker, therefore their cyder is the better, lasteth longer, nourisheth the body more, and is a longer time in fining: but on the contrarie those sweete apples which haue much iuice, doe make much cyder: but this cyder is not so good, nor making so good nourishment, notwithstanding it be sooner fined and ready for drinking. Sowre apples doe yeelde much iuice, that is waterie, thinne and loone fined, but nourishing a very small.

The cyder that is all neare and of it selfe without any mixture of water doth fine and become cleare more slowly then that which is made with water: in like sort it retaineth his smell, and taste a longer time, and all other the vertues and qualities of the apples whereof it was made: for water added but in small quantitie, after six monethes once past, or if somewhat longer, yet after one yeere it causeth the cyder to sowre: and then so much the sooner as there shall be the greater quantitie in the mixture, as in the household or ordinarie drinke. Wherefore such cyders as you would haue to last long, must be made without water, and vnder the presser mixe your water with them when they are drawne out of the vessell to drinke, if then you haue them too strong for you: and this also is the same course taken with wine,

wine, especiallie when such a sicknes hath seized vpon the party, as craueth a thin, weake and waterish drinke.

Cyders differ one from another especially in colour and sauour or relish. For as for their colour some represent the scarlet as it were like vnto claret wine, and such is that which is made of apples that are red within and without: such also will last long, and fine not vnder the colour of high clarets, and haue a taste resembling the same somewhat a far off, but afterward comming neere to the resembling of hippocras. Others are of the colour of muscadels and resembling the same also in relish. The greatest part of the rest draw neere to a yellow colour, and some of them cleare as the rocke water.

As concerning their relish & taste, all cyders if they be good should be sweet, or a little bitter or sowre, whether they be new or old. And it is as true that some of them haue no more relish then water. Some are of an euill taste and that either of themselves, or of the ground, or of the vessell, or of the straw, or of some other such strange cause. The sweete, as well the new as the olde and fined, are the best of all and nourish most. But it is true withall that the newe doe swell vp a man and cause obstructions: the fined cyders are good for such as haue weake lungs, or those which are subiect to the stone, or haue vlcers in the reines or bladder. Such as are bitter and hold out bitter, are naught: But such bitter cyder as after becommeth sweete is the best of all and lasteth long. Such as are greenish if they continue the same colour alwaies, are not of any valew: but if in time they change this greenenes into a manner of sweetenes, then they prooue good and last long.

You may also make cyder of wilde apples, but such cyder although that it last longer then that which is made of tame and garden apples: yet is it not so pleasant nor profitable for the stomacke.

Good householders doe not loose the drosse of their pressings, but as we haue said cast them into vessells, and with a sufficient quantitie of fountaine water, make cyder for the household: many make no account of it but cast it out to the dunghill, assuring themselves that it drieth and maketh barren the place where it commeth. In such places as where they haue not the benefite of millstones, pressers and other implements for to make cyder, they stampe apples but not of all sortes, but onely wilde ones with a stamper, and afterward put them thus stamped into vessells with a sufficient quantitie of water, and this is called cyder-pinot.

As concerning the faculties and verues of Cyder, they must be measured and iudged according to their taste, age, continuance and abilitie to last, and the manner of making of them. The taste is not to be tried onely by the sauour and relish of the apples whereof they were made, which were either sweete or sowre, or harsh, or of mee tastes

then one, or without any taste at all: but likewise of the age thereof, in as much as cyder if it be kept, changeth his taste, together with the time, and getteth another relish after that is fined diuers from that which it had, whiles it was in fining, or that it had when it began to fine, after the maner of new wine, which when it commeth to be old, purchaseth and getteth diuers qualities together with the time. Such cyder therefore as is sweete, because of his sweetenes which commeth of temperate heate, heateth in a meane and indifferent manner, but coole in least of all, and againe it is the most nourishing of all cyders, & the most profitable to be used especially of such as haue cold and dry stomackes, and on the contrarie but smally profitting them which haue a hot stomacke, whether it be more or lesse, or stomackes that are full of humiditie, very tender and queasie, and subiect vnto cholericke vomits: so that in such complexions as are hot and cholericke it is needfull as with wine, so with cyder to mixe water in a sufficient quantitie; with sweete cyder when they take it to drinke; especially when such persons haue any ague withall, or and if it be the hot time of summer, foreseene that he that shall then drinke it thus be not subiect to the paines of the belly or collicke; because that sweet cyder pressed new from sweete apples is windie by nature, as are also the sweete apples themselves: this is the cause why Physicians counsell and aduise that sweete apples should be roasted in the ashes for them which shall eate them, that so their great moistnes and waterishnes, which are the originall fountaine of their windines, may be concocted by the meanes of the heate of the fire: vpon the same occasion it falleth out that neither sweete apples nor sweete cyder can be good for them that are subiect to distillations and rheumes, because of their windines, and for that likewise, that as the Arabian Physicians doe iudge, they breed great store of windines in the muscles and sinewes, which cannot be discussed but with great paine and continuance of time. Amongst the sweete cyders the best and most hollesome are those which are made of these apples, the heruer, sweete kenne, curtaine and rangelier, because these apples are very sweete, of a golden colour, good smell and long lasting.

Sowre cyder, whether it were made such by reason of the sowrenes of the apples, or become such by reason of the space of time, in as much as it is very watry and somewhat earthie, as also very subull and pearcing, and yet therewithall somewhat astringent and corroboratiue, becommeth singular good to coole a hot liuer and stomack, and to temper the heate of boiling and cholericke blood, to stay cholericke and aduise vomiting, to assuage thirst, to cut and make thin grosse and slimie humours whether hot or colde, but chiefly the hot. Such drinke falleth out to be very good and conuenient and to serue well in place of wine for such as haue any ague, for such are subiect

Sweet perry.

Sowre cyder.

to

to a hote liuer and hote blood, for such as are scabbed or itchie, for such as are rheumaticke, vpon occasion of hote humours, and it needeth not that it should be tempered with water. Of sowre cyders those are the most hollesome which are made of sharpe sowre apples as of rundockes, ramburs and sowre kennets.

The cyder that is harsh and rough, in as much as it is verie cold and drie, is not good, but after a long time, as namely not before that it haue lost his harshnes, changing this his great coldnes and drines into a meane and middle coldnes accompanied with some moisture, drawing thereby neere vnto some kinde of sweetnes or tart and pleasaunt sharpnes, as we see it come to passe in fruits which yet whiles they are not ripe, haue a certaine kinde of harshnes in them, but coming to be ripe, change by little and little their harshnes into an eagertartnes, and after into a pleasant sweetnes: wherefore such cyders would not be drunke till of a long while after they be made, or if that great necessitie should compell, then to alay them with a sufficient quantitie of water: for otherwise they would but cause colliuenes, the strangurie, shortnes of breath, and an infinit number of obstructions: yea they would procure manifold crudities in the stomacke, guts, and principall veines; yea they would ouerthrow a weake stomacke, beget a grosse, cold, and flegmaticke blood in the liuer, send vp manie thicke vapours vnto the braine, which would offend the head, and hurt the sinewes and ioints: but it is as true, that they bring this commodity with them, as to comfort the languishing stomacke, the queasie stomacke, and that which hath altogether lost his appetite, such as commonly betyde women hauing newly conceived, and strange appetites; for which this cyder is verie fit and conuenient: as also to stay excessive vomiting, all sorts of fluxes of the belly, all distillations, also falling downe vpon the ioints: it quieteth the beating of the hart, and cutteth off faintings: it helpeth digestion drunke at the ende of meate, so that as we haue said it be alayed with a little water, to diminish and reforme the heatines and slownes to pearce and passe away which is in it, following the counsell of Galen, who teacheth three manner of waies to vse sowre and binding apples and pearces without any preiudicing of the health: the first way being to boyle them in water that so they may get more moistnes and softnes: the second to set them in the breath and vapour of boyling water to moisten and ripen them: and the third being to cut them in the midst and to take away their core, and in place thereof to put honie or sugar, and then afterward to roast them amongst the hot ashes. These kinde of cyders are made principally of the apples called small ruddocke, of wilde apples not grafed nor hesbanded, of apple bequer, reller, and such other hauing their coates diuersly spotted.

Cyders without all taste become such by reason of their great Ciders without water- anie taste.

waterishnes, and are easily corrupted, and that not onely in their vessels; but also being drunken and vsed for drinke: and therefore there is no reckoning to be made of such.

*Cyders of mixed
sort.*

As concerning Cyders hauing seuerall tastes, as eager and sweet, harsh and sweet, or any such other medlay: the eager sweete are much better and more wholesome then the harsh sweete, because they are not onely more pleasant, but also more speedily passing, pearcing, and cutting then the other; which by reason of their harshnes ioyned with some sweetnes and causing a thicknes and heauines in them, abide and stay long about the principall partes, where they may cause crudities and many obstructions.

As for the age and lasting of cyders, such as are newe made and continue as yet troubled, not being fined, are not wholesome, and cannot be drunke without hurt vnto the stomacke, without headach, and an infinite companie of obstructions and other accidents tedious to the health. For such as are verie sower and beginne apace to turne tart and eager, they are not lesse hurtfull then the former, and therefore they must not be vsed but when they are well fined, and in their middle age, as we see it obserued in wine.

As concerning the compounding of them, those are the best, most holefome and easiest to be digested, which are made of verie ripe apples, gathered in due time and not ouerlong kept, which are likewise made of one onely kinde of apples, or else of many kindes, but either agreeing in taste, or else being of diuers tastes; yet are such as may be tempered together, and make a more pleasant taste, then if they were alone and seuerall; as for example, if one should mingle amongst sweet apples, such as were eager and sharpe, such a medlay would make a farre more pleasant cyder and more profitable, then if either of the said sorts were alone. The cyder likewise that is made of apples onely is better then that which is made of apples and pearces stampred and pressed together: better in like manner and more wholesome are those which are made without water, then that which is made with water, seeing water maketh it to loose his naturall taste, maketh it sower and corrupt, and that it will not laste or indure long: wherefore it is better not to mixe any water at all with it when you make any; but rather at the time of drinking of it to delay it, and powre in some water if necessitie require it, and according as there shall be any of the occasions lately mentioned.

The worst of the Cyders is that which is made of wild apples, stampred and cast into a vessell with fountaine water in sufficient quantitie; and yet woorse then this is that which is made of the drosse remaining of the first pressing: as that also which is onely cast into a vessell with sufficient quantitie of water: wherefore seeing that cyders how pleasant & excellent soeuer they be, affoord no such nourishment vnto the bodie

bodie as is verie profitable for them; as we will handle more at large hereafter: he that will be carefull of his health shall vse none but the best cyders. We will speake againe of the faculties of cyder in the sixth Booke, in the same place where we shall speake of the faculties of wine.

How perrie is made

Perrie is made of diuers sortes of pearces: sometimes of rough, harsh, sower, and wilde ones, neuer husbanded, planted, grafted, or otherwise hauing had anie labour or paines taken with them: such perrie will keepe long, euen three or fower yeares, and be better at the ende then at the beginning. Sometimes of garden, tender and delicate pearces, such as are the Eulebian and the Marie pearce, the roset, halting, rimolt, mollart, greening, butter pearce, the laques du four pearce, the little conie pearce, the perplexed pearce, the alabaster pearce, the two headed pearce, the dew pearce, and the wood of Hierusalem: and such perrie is pleasant for a certaine time, but after it is once come to be fise monethes old it becommeth voide of all taste and dead: the best and most excellent perrie is made of little yellow waxe pearces, and such as haue bene thoroughly dressed and husbanded, as the little muske pearce, the two headed pearce, the pearce robart, the fine gold pearce, bargamot, tahou, squire, and such other pearces, which haue a fast and solide flesh and hard coat.

The amiot pearce is commended aboue all the rest, whereof likewise is made the perrie, called waxen perrie, because it resembleth the colour of waxe, but which otherwise is called carise, verie pleasant and delightfome, but notwithstanding indifferent hard, and not so easie to be corrupted as the later. Some doe also sometimes mingle diuers sorts of pearces together to make perrie of. But of what sort of pearces soeuer the perrie is made, the pearce trees must be carefulle and diligently husbanded and ordered, according to our former deliuered precepts. In what ground soeuer that the pearce trees growe, as whether it bee in orchard, garden, arable ground, or other such like, so that the saide ground be such and so well seasoned as is requisite to bring forth pearces in abundance, and such as be good pearces must be gathered to make perrie of, some before apples and some after with cudgels or poles. Some when they are ripe, as the amiot, the tahou and the squire, and to breake and grinde the same with a turning millstone so soone as they be gathered, in such manner as hath bene said of apples; other some must be gathered before they be ripe, as the pearces of Grosmeuill, and others which haue a hard flesh, rough core, and are heauie, as those which by reason of their hardnes and heauines cannot ripen well vpon the tree. Such as these are not to be imploied to make perrie of till they haue laide to ripen and mellow, that so they may become the tender and softer to get the greater

per quantitie of iuice out of them.

Whether they bee pears to be gathered early or late, pressed they must be, and the like implements and meanes vsed about them in making the perrie, that were vsed in the making of cyder, for after the same manner must you proceed, in sometimes mingling water with it, when there is neede; as also in the manner of the vsing of it in the working, boiling, and purging of it, in the tunning of it vp into vessels, in appointing it a place to be kept in, in the governing of it, and such other necessarie care for the defending of it from all things that might hurt it, and that it is subiect vnto, even in as great measure or rather greater then you vsed about cyder, especially in respect of the colde and frost which perrie cannot in anie sort indure: in so much as that all winter long you must keepe the windowes of the cellar or caue vnder grounde where it lieth close shut and well stoppt with strawe, or some such other thing to driue away the cold: besides, that perrie is not so good for keeping as cyder is, except it bee the carise, or that which is made of the peare Grosmeuill, or such other pears as haue a harde flesh and skin, the perrie whereof may be kept two yeeres vndrawn, and after they be perced or drawne of, fixe weekes, foreseene they be well ordered and gouerned. Perrie maketh as great, yea greater feeling then cyder, whereof you must free the vessell presently after the perrie is drawne forth, for otherwise there will breede an infinite number of wormes in the vessell which will infect it. The good householders do make a sort of perrie for the household of the drosse of the pears comming from pressing, and that by casting of them into some vessell with sufficient quantitie of fountaine water. Some others cast away the said drosse as a thing altogether vnprofitable. In all other things perrie is to be ordered after the manner of cyder.

The vertues
of perrie.

The faculties and qualities of perrie must be considered of and weighed in such manner as we haue laide of cyder, that is by his taste, age, and making. The taste of the perry dependeth for the most part of the relish of the pears out of which it is pressed, and those are either sweete or sowre, or harsh, or of mixt tastes, or else altogether without taste; according to which relishes you are to finde out the vertues and qualities of perrie, following such forme and manner as we haue largely laid downe in the handling of cyder: it is true that to speake particularly of the good qualities of perries, the most holefome, profitable & of best iuice are those which are made of the pears called the waxen pears, the same being pressed out in the sommer time, and foreseene also that it be drunken to soone as it is fined: because it is not to be kept, being a very delicate and tender iuice, and therefore apt to corrupt easilie and very soone. Next vnto this in goodnesse is the perry made of peare Robert, and muscadell pears, provided that they be drunken also to soone as they be wel fined and their lees settled, but
then

then also they must be drunken with water, and but in a reasonable and meane quantitie, for otherwise by the pearcing smell, and subtilnes thereof, it causeth great paine of the head oftentimes. The perrie called Carise, or made of the kersey peare, though it be one of the best, and most excellent, and of those which are last pressed, is yet to be drunken after it is well fined in a mediocritie, and alaid with water to repress the fuming smell of the same, which easily would take hold of the braine. There is no cause why you should greatly esteeme in respect of your health of the perries which are pressed out of wilde pears, and all such as are vnhusbanded, vntamed, of a sharp taste, fat, reddish; or of those which are pressed out of diuers sorts of pears, not agreeing together either in taste or otherwise, neither yet of such as are made of apples and pears mingled and pressed together, as neither of that perrie which is newly put vp into the vessels and not fined, or that which had water mixt with it when it was made, or that which is made of the peare called the wood-peare being stampd and put into vessels with a sufficient quantitie of water. To be short, whatsoever we haue said of cyder it may be applied vnto perrie for the most part: and yet notwithstanding all this we are not to confesse the perrie to be anie whit inferiour vnto cyder: for although in some countries, as in Britaine and Normandie, they make special account of cyder, and do more esteeme of it both for the taste, lasting, abundance, & profit thereof, then they doe of perrie, notwithstanding if necessitie should driue a man to conferre the one iuice with the other, comparing the sweete cyders with the sweete perries, the sowre with the sowre, the sharpe with the sharpe, and the mixt tastes with the mixt tastes, it would be easie to iudge that the perrie is more holefome and profitable for the stomacke and whole bodie then the cyder: for beside the astringent, binding, strengthening, and corroborative vertue that it hath to benefite the stomacke withall, and that comming from his terrestrious and earthie temperature, which all sorts of pears do most consist of; whether they be sweete or sowre, rough or otherwise relished: there is yet further in the perrie a certaine secret and vn-speakeable vertue for the ouercomming of poison, and principallie the venome ingendred in the stomacke by eating of mushrooms, which indeed is the perries naturall qualitie, as left it of the pears from which it is pressed. Againe we see by experience that the vse of the pears is euerie where more commended then the vse of the apples, and that for this cause there is more carefull heede and charge ioyned for the keeping of the pears, then of the apples, as those which for that cause are wont to be preserved in sugar or honie: they are also dried in the sunne, dried in the oven, and made vp in composition to serue in time and place. It is true that cyder moistneth more then perrie: but in recompence of that the perrie doth relieue and
refresh

refresh a man more, and in cooling of him comforteth withall, save that it stirreth vp more oft the paine of the belly and the colicke then cyder doth, especially the fowre or harsh perrie, in such as are subiect vnto the colicke: and the cause is, for that it passeth not away so speedily by vrine through the belly, but staith longer time in the stomacke, and about the principall parts, then cyder doth, as we haue declared in the treatise of the pearo. For which cause it is better to drinke it at the end of meate then at the beginning, so that the partie haue not anie vomiting or fluxe of the belly, following the counsaile of *Discorides*, who saith, that peares eaten fasting bring harme and inconuenience.

Lo heere in my opinion what we are to iudge of the qualities of cyder and perrie, as well in particular, as in comparing of the one with the other.

It remaineth that we examine what kinde of drinke the perrie and cyder are, and whether there be any such excellent qualitie in them as may match them and make them equall with wine, that so famous and highly esteemed drinke, seeing that a Physition of our time could not content himselfe with matching of them together, but went further, and preferred them before wine in euerie thing: but this might happen (possibly) by his being more affected towards his countrie, or by being caried away with a paradoxicall iudgement, then vpon anie sincere minde to finde out the truth of things. But for the deciding of this controuersie we haue thought good to set downe our iudgement thereof in our booke written in Latin, and intituled *De Salubri Dieta*, that so we may not in this place passe the limits of our farme and countrie house.

The making of Cernise drinke.

Cernises must be gathered halfe ripe, euen so soone as you see any of them to fall from the tree: suffer not them to mellow and ripen except a very little, for when they be ripe they are not woorth a farthing to presse out to make drinke of: you must breake them lightly in the trough of the presser, let the iuice worke together in the fat after it is prest, and when it hath wrought, turne it vp, and lay it in some cellar or caue, and keepe it long: for the cernise drinke the longer it is kept, the better it is: you shall know his goodnes, by his hauing lost his sharpenes and vnpleasantnes, & turned the same into the taste of wine which is of a white colour: Or if you will not stay the full ripenes thereof, then delay it with sufficient quantitie of fountaine water when you will drinke it. This drinke though it be the first that was put in practise, as the patterne after which all other fruit drinke haue beene made, and of which and not of any moe *Virgill* maketh mention in his *Georgicks*: notwithstanding it is so colde a friend to the

the health, as that it is not to be much set by: It is very true that for want of other remedies in case of necessity the country man may serue himselfe with this wine, when he findeth himselfe heauilie oppressed with the fluxe of the belly, whether it be that which is called the bloudy fluxe: or any other kinde thereof.

Drinke made of Sloes.

The good householders of the low Countreies of Normandy, being such as will not loose any thing, and thereupon being more careful to get goodes, than to keepe their health, so soone as Autumne is come cause to be gathered by their people, great quantitie of sloes, ripe or not ripe, they powre them into vessels with sufficient quantitie of water, they stop vp the vessels without touching of them. Before a moneth be at an end this water thus infused doth represent the colour and taste of a sharpe vnpleasant and wilde wine, which notwithstanding serueth the thirtie laborers and hindes to quench their thirst in the great heate of burning agues: This drinke is called *Piquette*.

The fiftieth Chapter.

Of preserving of fruits.

For to make Marmalade, provide your quinces very ripe and yellow, make them cleane and the seedes taken out, boile them in fresh water in some skillett, so long as till they begin to open and burst (if you thinke it not better to cut them in quarters) afterward force them through some searce or strainer that is very close and cleane, and so long as till nothing remaine but the grosse parte to eight pound of pulpe thus passed and forced through, put three pound of fine powdred sugar, boile them together at a little cole fire, mixe them well by stirring them diligently with a broad spatule of wood, and let that your boile continue till they bee sufficientlie boyled: which is when you see that it cleaueth altogether to cleane vnto or hang vpon the sides of the vessel, as being the very marke of the perfect and sufficient boile: if you be disposed to put any spice in it, as cinnamon, cloves, nutmegs and ginger, you must do it in the end of the boile of them, and then also stirre it well about with the spatule. After the same manner you may preserve or make Marmalade of peaches, peares and other fruits. *To make gellie*
If you would make a laxative marmalade such as is used at Lyons, looke into the 26. Chapter of this booke.
To make good and excellent gellie of quinces, cleanse your quinces that are very ripe and yellow, taking out of them their kernells, then

then cut them in small quarters without paring of them, for the skin doth increase the smell, whiles you are thus making of them cleane and cutting them in quarters cast them presently into a basen full of water: for if they be not cast into water so soone as they be thus chop in peeces, they will become blacke: boile them in a great quantitie of water, vntill such time as they be almost become like pap meate: when they are sufficiently boiled, straine this water through a new linnen cloth that is good and thicke, and that euen all the decoction and so strongly as possible you can. To this decoction thus strained adde the fourth part of fine sugar: cause all to boile vpon a reasonable colefire, so long as till in the end you perceiue it very neere perfectly boiled, then make a small fire that so it may not burne to the sides, for that would make the gelly to be of an euill colour: and you shall know when it is perfectly boiled, if you finde it cleauing like glue vnto the ladle, and therefore you must then put it in boxes.

To preserve
walnuts.

To preserve walnuts: gather walnuts whiles they are small, tender and greene with their rinde and all, and make many small holes therein, and after lay them to steepe in water eleuen or twelue daies more or lesse, cleanse them from the skin that lieth vpon the shell without shaling of them, and boile them in clarified sugar a long time, still putting vnto them more and more clarified sugar, because the long boiling will make great waste: in the end put them into vessels with cloves, ginger, and cinnamom, but lesse of cloves then of any of the rest, because they would make them ouer bitter. Another way to preserve them, is to take greene walnuts about the moneth of May or of Iune, before that their pilling become hard, pill them and let them steepe nine daies (more or lesse according as you shall perceiue them to become tender) in pure water, which must be changed euery day three or foure times: boile them yet afterward to make them more tender: being boiled, drie them in the shadow of the sunne, or wipe them drie with a linnen cloth, afterward pricke them with cinnamom and cloves: In the end set them a boiling in clarified sugar, so long as till the sugar be boilde vp to the consistence of a sirupe, afterward put them in tinne or earthen vessels made for the purpose, together with the sirupe wherein they were boiled. Others do them otherwise. They gather the walnut whiles it is greene, they prick it vpon a spindle or some such like instrument of wood, not of iron (for iron would make it more blacke) and let it steepe in water often changed, and then boile it till it be tender, being tender they cast it by and by into very cleane cold water: being cooled they cleanse it from a little skin which sheweth itselfe aboue the shell, and drie it with a linnen cloth, and finally prick it about with cloves and cinnamom, they put it thus in vessels and couer it with sirupe to keepe it in: if it happen that after some small time the sirupe become too thin, then they boile

it againe and put it againe into the vessell: this is the way to keepe walnuts alwaies greene according to their naturall colour. In steede of sugar or hony to make liquid preferues, you may for neede vse of hony or sugar, such as we will intreate of in the fifth booke: which cure or boiled wine is of no lesse sweetnes and goodnesse then hony or sugar.

To preserve pills of cytrons or oranges: chuse great pills of citrons or of oranges, or of Assyrian citrons cut in foure or six peeces: cleanse them from their inward skin and pippens, steepe them in cleare water for the space of nine daies, changing the water the fifth day, when the nine daies are past, put them againe in cleare water to steepe vntill they become sweeter, and haue lost their bitterness and withall appeare cleere and transparent, which is the signe of their sufficient watering: afterward boile them in a shell of brasse that is cleane, or in a leaden vessell so long as till they be tender; when they haue cast out all their waterishnes, put them to steepe in a Iulep made of one part of sugar and three of water for the space of foure and twentie houres, afterward make them to boile at a little fire so much as is sufficient: take them out of the Iulep and put them in a glasse vessell, and putting vpon them the Iulep of rose water thicke inough of consistence, that so it may afford them as it were a crust: you may if you will aromatize them with a little Amber and Muske.

To preserve whole peaches, you must pill them and cleanse them as carefully as may be, and after boile them whole or cut in quarters, in a sufficient thin Iulep, not to boile them to the full but only to boile out their waterishnes wherewith they abound: and then after this in a better boiled Iulep, to boile them vp to the full, till they be become through tender and soft, and finally to put them vp into some earthen vessell, and to couer them with the sirupe wherein they haue boyled. For their longer keeping you may aromatize them with cinnamom or muske: This manner of preserving of whole peaches is generall for the preserving of all other grosse fruites, as pearce, quinces, apples, Abricots, small peaches and timely peaches.

To preserve cherries, you must choose the fairest sower cherries that you can, full ripe (for if they be not full ripe in boiling them toward the ende, you shall finde nothing but skin and bone) cutting off their starts at the halfe, and afterward boile them in their owne iuice with sugar in such proportion, as that for euery pound of cherries you haue halfe a pound of sugar, taking away the scum still as it shall rise in boiling of them: when they shall be sufficiently boiled, you must put them in glasse vessels, and powre vpon them the sirupe wherein they haue boiled: notwithstanding if the sirupe should still seeme waterish, boile it more perfectly. Otherwise and better; put apart some quantitie of your faide sower cherries which you shall presse to haue a sufficient quantitie of iuice: in this iuice so soone as you haue pressed

pressed it out, melt your sugar (& not in any other liquor) boile them together presently, and in boiling scum them: when the iuice is well scummed, clarified, and become red without taking it from the fire, or making it loose his boiling, put the cherries therein to boile, as long as needeth, without any stirring of them, but looking well to the scumming of them with a spatule: stirre them not from off the fire till they be perfectly boiled, and that you shall discerne if you see the sirupe dropt vpon a trencher to fall into drops that do not spread abroad, for then it is exactly boiled: and you must put vp your cherries into their glasse vessels good and hot for to be kept. In this manner you shall preserve plums, ceruises, gooseberries, and such other small fruits.

*Paste of plums
& other fruits.*

For to haue paste of plums, first boile the plums with a little water, stirring them oftentimes, that they may not burne to, afterward strain and force them through a searse, and weigh them, that so you may put thereto for euery pounce fower ounces of sugar: set all vpon the fire to boile againe, and stirre them well, not giuing ouer vntill all the scumme be consumed and spent: which done, make them readie as they are where you will, afterward lay them in the sunne to dry three daies, and then shut them vp: and in case that they grow moist, or that there spring forth any water out of them, you must lay them in the sunne againe. This patterne of making this paste, may serue generally for the making of paste of any other fruites, as peares, apples, cherries, & peaches, saue that you must haue respect vnto the quantitie of sugar, which shall bee more or lesse according to the more or lesse moistnes of the fruits, which you are determined to make vp in paste.

To keepe peaches and other fruites.

To keepe peaches or other fruites: take peaches or other fruites which you would keepe, when it is faire weather and dry, and opening them in the middest, take out the stone: then lay them all one day to dry in the sunne, or in an ouen after that the bread is drawne out: afterward take sugar well boiled and purified, and annoint them ouer, and lay them againe the day following in the sunne, and so annoint them ouer againe, and so oft as they shall dry; and vntill they haue gotten a sufficient crust, and after keepe them at your pleasure.

To keepe oliues.

To make oliues readie against a day: take greene oliues and cut off a little from the one side, after lay them in water with lime, and good sifted ashes, (but take withall, that you must haue twice so many ashes as lime, and let them steep in that sort the space of 24. houres) after you shall take them out and wash them fower or fife times in warme water: afterward you shall put them in a stone or glasse vessell with salt water, and this you shall change euerie three monethes, and mingle amongst them common time, wild thyme, aniseed, or theribis and boughes of fennell: and thus you may keepe them a long time.

To preserve of oliues.

To preserve oliues: lay whit oliues to steepe sixe daies in a vessell of

off sea water; and vpon them poure the iuice of grapes as it commeth from the presse, but fill not the vessell too full, to the end that the sweet wine when it shall boile, doe not shed ouer: and when it hath boiled, you must stop the vessell: some do put a handfull of salt in first, and after it the must of new wine, and last the oliues, and when the new wine hath boiled they stop vp the vessell. Otherwise: dry them in the shadow in a place that is open for the winde to enter, then put them vp in an earthen vessell filled with hony, mixing therewithall some spices.

The one and fiftieth Chapter.

The manner of making of oiles: that there are three sorts of preparing of oiles, and how you must make oile oliue.

In treating in the second Booke of the oliue tree, wee promised a briefe discourse of the making of oiles, a thing certainly very profitable for our countrie house, inasmuch as oile is no lesse profitable for mans life, nor of lesse fruit and increase vnto a good husband then wine: then it shall not be from the matter, if (after we haue spoken largely of gardens and orchards, and specially of the ordering of oliue trees, and other herbes and trees whereof oiles are prepared) wee briefly doe specifie the waies of making of oiles.

And to lay something of oile in generall, oile may be made three waies: the first by expression, which is most common, and the chiefest of the rest: the second by impression; and the thirde by distillation or resolution, after the manner of distilled waters: we will onely speake of the two first in this place, reseruing the third for the discourse which we intend to make concerning distillations in this booke: although in very deepe we haue not purposely resolved to speake exactly of the making of oiles, because this belongeth not to the husbandman, or his hinde, but onely vnto a good apothecarie.

The manner of making of oiles by expression belongeth not onely to oliues, but also to many other fruites and seedes: as common nuts, almonds, nutmegs, linseed, hempseede, and such other, whereof we will speake heereafter. Notwithstanding in asmuch as the oliue doth yeelde more oile then any other fruit or seede, it hath deserved the name of excellencie aboue all the rest; for the fat and vntuous liquors of other fruits and seedes, are not like to haue any other name bestowed vpon them, then that which of right appertaineth vnto the liquor which is pressed out of the oliue: for which reason when we speak of the oile of the oliue, we onely say, oile: but when we make mention of other oiles, we adde the name of the fruit or seede whereout it was pressed: as oile of nutmegs, oile of sweete almonds, and so of the rest. Wherefore we will begin to describe the manner and fashion of making

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making the oyle of oliues.

When therefore you haue first gathered your oliues, and disposed of them in such manner as we haue spoken of in our second booke, in treating of the oliue tree, consider diligently if the place where the oyle is to be pressed and made, be furnished of all necessarie things: that is to say, of fats or vessels to put your diuers sortes of oyles in, of scoopes of iron, to draw and emptie out the oyles: couters to cover the vessels; great and small spunges: pots to carrie out the oyle in bands and cordes of hempe and broome barks, and of many other things which must be prepared and made readie before you come to the making of the oyle, in like manner as is vsed before the gathering of grapes. The millstones, oyle mills, and pressers must be cleane, as all the rest of the instruments serving to make oyle: you must likewise haue made sufficient provision of wood to make good fires, thereby to chase and heate the roome a good while before hande, where the oyle shall be pressed, if peradventure it be not warme enough by his naturall situation: for all oyle liquors doe dissolve and runne the more freely by the helpe of heate, as they doe keepe in and cease to depart through colde. And for this cause it were requisite that your presser stood vpon the light and cleerenes of the south sunne, that so you may stande the lesse in neede of fire and candle, when you go about the pressing out of your oyle.

All these things thus prepared, cause your seruants and workemen to cull out and cleanse your oliues, when they are cleane let them be carried forthwith to the presse, vnder which they shall put them whole in new willow baskets (for the willow giueth great beautie vnto the oyle) to the ende they may be pressed with as much leisure, and as soflie as may be. It is true that it would be good before they were put vnder the presse to haue them troden with teete, inasmuch as the oyle troden with the teete is alwaies better, sweeter, clearer, and more delightfull to eate in salades, than that which is pressed out: but seeing the treading of them is harder to doe than to presse them, the common making of oyle is in the presse: wherefore before you put your oliues vnder the presse, it will not be amisse to breake their skin and flesh with turning millstones, and that but gently, to the end that the keruall which spoileth and corrupteth the taste of the oyle be not third: and after ward to solten and grinde them most strongly in the presse, putting in thereto of salt foure pound to euery bushel of oliues, and after to presse the bones or stones of the oliues by themselves. He that shall empty the oyle out of the vessell whereinto it runneth from the presse, shall make three sortes of oyle, separating so many one from another: for it would be great losse to mingle the first pressing with the second, but yet more to mingle it with the third, because that that which runneth from the presse being yet scarce strained or mooued,

What is necessary before the making of the oyle.

Millstones, Oyle mills, Pressers,

The south sun necessary for the oyle presser.

The willow giueth the colour of the oyle.

Three sortes of oyle of oliues.

ued, is of a far better taste then the second; and is called virgins oyle, being verie beautifull and goodly and fit for to vse with meate: the second being fitter for ointments and such other like vses: and the third for to burne in lamps. And yet further it will bee verie good when the oyle shall be a litle settled in his tubs, to poure it out of them into others: for the more that oyle is stirred and stirred, so much the more cleare it is and without lees.

The tunnes and vessels wherein the oyle is to be put, must be well dressed with pitch and gumme, made verie cleane (if they be olde) with warme lee and dried with a spung, receiuing the oyle not till thirte daies after that it is made, that is to say, at the time when the lees are fallen to the bottome: in like manner the vessels and sakes of goates haire must be well mended for the receiuing of the oyle into them, according to the manner which we haue set downe in the first Booke, in the Chapter of the Goat-keeper.

The cellar where the vessels for oyle are to be set, shall be in some cold place; for as all liquors do dissolve and become more fluent by heate; so they keepe fast and close in; and stay their courses by the working of cold: and so oyle of it selfe is kept verie well in a cold and drie place, because heat and moisture are his viter enemies. This is the cause why the oyle makers giue in charge about all things that there be no fire nor smoake made neere vnto the presses and cellars of oyles; because the taste of the oyle is spoile by smoake and soote: so then it is meete if possibly it may be that the oyle cellars be situate towards the North, quite on the other side from the hot windes, as also that the oyle be put into glasse vessels or earthen pots, such as are the pots of Beaunais, especially the oyle that is made of greene oliues that are not ripe, and is called oyle Omphacine.

If in the time of winter oyle doth freeze together with his lees, you must put into it twice boyled salt, for it dissolueth & thaweth the oyle, and cleareth it from all manner of mischiefes that can happen vnto it: neither neede you feare that it should be salt: for though you should put much salt into it, yet the oyle would take no taste of it.

To keepe oyle from becoming ranke; melt waxe with oyle in equal quantitie, and therein mingle fried salt, then put it all in a vessel of oyle; and this same composition serueth also to mend it if it be already ranke, and so cast into the vessell performeth the same.

If the oyle be troubled, put it at the sunne or fire, or else cast into the vessell boyling water; provided the vessell be not weak and in hazard of bursting.

If the oyle be full of fithines, drie salt and cast it hot into the vessel; the pine not burned, or the lees of oyle dried and parched and cast into the vessell of oyle doth the same.

If oyle haue got any stench or other euill smell, poune greene oliues

oliues, and cast them into the oyle without their stones: or else cast in the crums of barley bread mingled with grained salt: or else infuse in the oyle the flowers of melilot.

Putrified oyle.

If the oyle be corrupt and putrified, hang in the vessel a handfull of the herbe coriander and cast in besides of the same diuers times, if you perceiue that the putrefaction is not taken away: or which is better, change the oyle his vessel: you shall likewise amend this fault, if you take grapes, and after you haue taken out the kernels, stampe them, and make them into lumps to put into the vessel, and ten daies after change the oyle his vessel.

Clere oyle.

Oyle will be verie clere, if you stampe the barke and leanes of an oliue tree with salt, put it all in a litle knot or nodule, and hang the same in the vessel.

Sweet smelling oyle.

To make sweete smelling oyle: take virgins oyle, which is that which first runneth downe from the presse without the weight of the presse forcing it: into it cast of the fine powder of bay tree leaues, the rootes of aller and cypres, the rootes of corneslag, or some other sweet smelling things, such as you are disposed, all being dried and made into fine powder, stirring the vessel well: afterward put in salt finely powdred, and set out the vessel in the sunne for the space of fiftene daies: or else set a vessel well covered (for feare that the oyle should spend it selfe) in a caldron of boyling water, let it staie therein the space of three houres to boile at a litle fire: after take it out and let it rest some time, vntill you perceiue all to be incorporated together, then straine the oyle and reuerie it in some vessel well stopp'd for your vse.

Good oyle in the vpper part of the vessel.

Furthermore, you must know that as the bottome in honie, and the middest of wine, so the vppermost part of the oyle is alwaies the best: the reason shall be deliuered in the treatise of wine in the sixth Booke.

The vertues of oyle.

As concerning the properties of oyle, it hath a singular vertue applied outwardly as is to be knowne by the answere of *Democritus*, who being asked of the meanes to liue long, and to preserve ones bodie in good estate and plight, said, If you arme your selfe without your bodie with oyle, and within with honie. And this is the cause why *Hannibal* gaue in charge vnto his souldiers passing the mountaines, that they should arme their bodies with oyle to keepe them from the iniuries of the cold: in like manner the men of auncient time to make their bodies the more nimble and readie to all actions and motions, caused al their bodie ouer to be annointed with oyle before they were to goe into the bathe: in like sort also their wrastlers and champions, before they entred the combate did annoint all their bodie ouer with oyle, not onely that they might not be so easily taken hold of in wrastling: but also to haue their whole bodie the more nimble and obedi-

ent,

ent, and their members the more lustie and strong.

As concerning within the bodie, oyle hath no lesse vertue then without: for that, if it be taken inwardly it softneth the bellie, subdueth the malignity of venoms, and causeth vomiting speedily: furthermore, if any venome or burning haue pitcht and settled it selfe vpon the skin, and begin there to exulcerate or worke his further mischief; for the staying of the fiercenes and malignitie thereof, there is nothing better, then to lay a litle liniment of new oyle thereupon.

Oyle powred vpon wine or any other liquor, keepeth it from spending it selfe: In like manner the vintners wise enough to keepe white wine from waxing red, are wont to cast vpon it a pint of oyle oliue.

Oyle is altogether enemie to plants, especially gourdes and cucumbers, which die presently if a man place neere vnto them any vessel of oyle; or if that he which dresseth them be oylie, as we haue said in the second Booke.

The lees or grounds of oyle are good to make a mortar with to lay the floores of corne garners, because such a mortar chalet away the floores of corne: lees also are good to keepe instruments and iron tooles from rusting: oxen are helped to a good appetite, by hauing their fodder besprinkled with oyle lees: oyle lees are good to annoint the bottoms of chests wherein clothes are to be laide, for they driue away mothes: they are good also to giue light vnto the family with some wood: to keepe sheepe from being scabbed, if they be annointed with the lees of oyle, as also heale such as are already scabbed: to cause wood to burne and flame without any smoake.

The two and fiftieth Chapter.

How the oyles of other fruits and seedes are made by expression.

There are manie other seedes and fruites which doe yeeld an oylie liquor by expression, and that after the manner of the oliue, that is to say, royall walnuts, filberds, nutmegs, almonds, both sweet and bitter, the Indian nut, anacardies, peach kernels, the kernels of pine apples, abricots, cherries, plums, pistaces, linseed, rape-seede, mustard seed, hemp seed, the seede of poppie, henbane, burnet, citrons, oranges, apples, pearces, gourdes, melons, citruls, and other such like, whereof we will speake particularly, to the ende that we may giue to know what course is to be taken, and what manner and order is to be kept in euery particular.

The oyle of sweete almonds is thus prepared. Pill the almonds after that they haue slept some time in warme water: pound them in a mortar of stone or marble with a wooden pestle, and make them

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vp in lumps or little loaves, which you shall kneade and worke with your handes at the vapour of warme water a long time, if you like it not better to warme them vpon hote ashes, or hote sand for the space of an howre, or in the sun the space of fve howres: or else put them in a glasse vessell which shall be warmed at the vapour of boiling water in a caldron: after put them in a haire cloth or hempen bag, for to presse in a presse that hath his planke hollow and bending downward: or betwixt presses whose planks you haue heated: but heere in this you must note, that the almondes are not alwaies blanched before their oile be drawne, because many times a mans leasure will not serue him to doe it: though indeede it be the best way to pill or blanch them, that so the oile may come the more neat and pure: and to pill them rather with a knife then by the meanes of water either warme or cold, for feare that through the mixture of water, there be caused to come forth great store of waterish and vnpleasant oile. After that the almondes haue bene thus pressed, you may bake the droffe vnder ashes and vse them in steede of bread: you must obserue that such manner of preparing of oile of sweete almondes is onely to be vsed when such oile is to be taken at the mouth, to stay and take away the throwes and gripes of women newly delivered of child: or else to mitigate the paine of the collicke or of the reines, taking it in a drinke of two ounces of white wine, or with Aqua vitæ: And this oile is drawne oftentimes without fire or any other heate whatsoever: sometimes the almondes are fried to giue them a light drying, and after the oile is pressed out.

The droffe of
sweete almondes.

Womens throwes
Paine of the
collicke and kid-
neies.

Oile for to make
liniments.

Oile of sweete
almondes for
perfumers.

The oile of bitter almondes is made of almondes fried in a frying pan, and stirred oftentimes that so they may not burne to, after which they are to be pressed out so strongly and long, as till they will yeld no more: After this manner a man may presse out two other sortes of oile out of sweete almondes: one appropriated vnto liniments to be applied vnto the outward partes of the bodie that are pained: the other seruing for perfumers: which two are made of old sweete Almondes sound and whole, and verie oylie by reason of their age: they must be first fried in a frying pan, & after pressed with waight or presser being close wrapped in a bag or haire cloth. The oiles of Pistaces, common walnuts, filberts, Indian nuts, the kernels of pine Apples, cherries, feedes of gourdes, cucumbers, melons, *Palma Christi*, the seede of hempe, lyne, pionie, heubane, wilde saffron, stauesacre, and other fruites and oile feedes are pressed out after the same manner that the oiles of sweete almondes: euermore looking to it that the expresseion be not without the heating of the thing preiled, either by chafing and warming it selfe at the fire, or else by heating the planks betwixt, or the weightes vnder which they are to be pressed.

Oile de bay.

Oile of Baies is thus prepared: Take ripe bay berries and new, pound

pound them and make them into masses or small lumps: boile them a sufficient long time in water in a caldron, straine the decoction and let it coole, gather the fat that swimmeth about, and keepe it for oile: or else let all the water run out at some hole which shall be in the bottom of it, and the fat which stayeth behinde is the oile. Some doe not boile the masses of bay berries, but presse them from vnder a presse, and let the oile fall downe into a vessell standing vnderneath with water. Otherwise: mixe an equal portion of bay berries and oliues, pound them together and presse out the oile. The oile of baies is souveraine to put an clisters for the paines of the collicke, and to make ointments of for cold tumours, the palse, shaking of quartaine agues, and cold affeets of the sinewes. After the same manner you may make the simple oile of mirtles, Iuniper berries, of the fruit of the masticke tree, turpentine tree, and Lúie: which is also very singular for cold distillations, and benumbed members. Sometime men take an equall portion of Iuniper and bay berries, and steepe them in wine, pressing out the oile there of afterward. You may likewise boile bay berries in oile and presse them out after: or else without any other mixture or preparation, you may put ripe and greene bay berries in a bag, and by weight or pressing draw out their oile.

Colicke.
Cold swellings.

Oile of mirtles,
Iuniper, masticke
tree, turpentine
tree, and inio
berries.

Oile of nutmegs is thus made, lay nutmegs on heapes, bray them with a wooden stamper, afterward presse them out from betwixt the planks heated: or else diuide them into little heaps and steepe them three daies in very good wine, after dry them in the shadow of the sun two whole daies, then heate them reasonably in a frying pan vpon the fire sprinkling them with rosewater, and presently presse them out. You must note that in this manner of drawing of oile, which is done by expresseion, men are forced many times to sprinkle the matter with water or wine, to draw out the oile both more easily and in greater quantitie: so we see it practised sometimes in the expresseion of sweete almondes, that when they are too dry there is some small quantitie of water put vnto them: but vnto other things some wine, as in oile de baies, nutmegs, Iuniper berries and such like.

Oile of nutmegs.

The three and fiftith Chapter.

How to make Oiles by impressiõ.

Oiles made by impressiõ are commonly compounded of oile Oliue, because it is more temperate then others, easilier to be gotten and retaining more exactly the quantitie of ingredients whether hote or cold. It is true that very often in place of oile oliue some take the oile of sweete almondes, filberts, cammomil, or such other according as the occasion of things require, as you may know and vnderstand by particular description of such oiles.

Oile made by
impressiõ.

Three things to be considered in making oiles by impression.

Oiles of flowers.

To make oiles by impression in *Maries bath*.

Whatsoever it is, there are three things to be considered in the making of oiles by impression: the heate, which is the efficient cause of the making of the oile: the qualitie of the ingredients, and the quantitie of them. As concerning the heate, whether it be of the fire or of the sun, or of other things which yeelde heate; it must be measured according to the qualities of tendernes or hardnes which shall be in the substances and matter: for flowers doe not stand so great a heate as fruits or rootes; whereupon it cometh to passe that for the composition of such oiles, men are oftentimes contented with the heate of the sun, or with the heate of boyling water; otherwise called *Maries bath* or the double vessell. And I for mine owne part am of this minde, that for the making of these oiles there ought not any cole fire to be used, nor yet any other kinde of fire, but rather the helpe of *Maries bath*. For as by the gentle and milde heate of *Maries bath*, all the partes of the ingredients are kept and the oile well prepared and digested: so by the heate of a violent and forcible fire, there followeth rather the exhalation or combustion of oile things then any digestion. The preparing therefore of such oiles as haue neede of a greater heate then that of the sun, will be a greater deale the better, if you put the matter, out of which you draw the oile, in a glasse or tin vessel for to be infused in oile mingled with wine or water, or other convenient licour, or without licour, according as the nature of the ingredients and the present thing requireth. After that this vessell borne vp with the small slips of broome or straw, hath infused three whole daies in *Maries bath*, that is to say in a caldron full of water somewhat boyling (or (which is better) the vessell not infused, or standing in the water, but rather receiuing onely the vapour of the boiling water that is in the caldron,) those three daies being spent, you may presse out the things, which you shall haue infused, straining and forcing them through some strong strainer and thicke linnen: and afterward to put in other new ingredients if it be needfull (that is to say) vntill the licours which you haue mingled with the oile, or the humiditie and moisture which may rise, of the ingredients be consumed, and that the oile may seeme to haue gotten out all the strength and vertue of the ingredients, and then to straine and force them as before. This is the way that is to be taken for to prepare oiles well by impression. It is true that with lesse cost and a great deale sooner they may be prepared: in putting the matter into some great braile pan vpon a cole fire, causing it to boile with a small fire vntill the licour put vnto the oile or the moisture of the ingredients be consumed: and after straining of them after the manner that hath beene said before.

To know if the oile be made.

Furthermore it will be discerned that the oile hath exactly drawne out the vertues of the ingredients, and that the licour mingled

mingled with the oile or moisture of the ingredients is consumed, if with a spatule or stick of wood you cast some few drops of the said oile into the fire: for if they be al on a flame by and by, it is a signe that it is pure and neate, but & if it spatter, there is yet some waterish moisture remaining in it, furthermore as it is boyling in the caldron it will be spattering and casting vp bubbles, so long as there remaineth any of the liquor or moisture: but after that it is spent and boiled away, it will be quiet and peaceable: likewise a droppe of oile dropped vpon your hand, if there be any moisture in it of waterishnes, it will shewe it sufficiently, for it will swim and ride aloft vpon the same.

As concerning the qualitie of the ingredients, it consisteth principally in this, that the ingredients are either hot or colde, or tender or tough and hard. If they be colde, there is need that they should be oftentimes blisted and changed in the oile, for the better imprinting of their colde qualitie in the oile, for although that oile olue be temperate, notwithstanding it inclineth more vnto heat and a fire nature then otherwise: so that it is requisite to change the ingredients often, and to put new in their places for that cause; yea, and in regarde thereof to wash the oile in some common water; as we will further declare in speaking of oile of roses: if the ingredients be hot, it is sufficient once onely to change them for the composition of hot oiles, and that by reason of the affinity and agreement betwixt the oile and the hot things.

If the ingredients be hard, and not easily digested, and imparting their properties vnto the oile, they must be infused before they be boiled, and also there must be put vnto their decoction some liquor, as wine, or some convenient iuice or other liquor, as wel to helpe their digestion as to keepe them from burning, or getting some loathsome smell: but and if they be tender, they craue sometimes a simple infusion in the heate of the sunne, or vpon a slow fire without any boiling: and this way fitteth flowers: sometime a light boiling without any infusion, as many aromaticall things.

And as concerning the qualitie of the ingredients, you must observe that oiles by impression are made, not onely of the parts of plants, but of liuing things, their parts and excrement, wherein there must not be any shifting, changing, or renewing: and besides these, there is no other thing to be obserued, except that if the beastes be small, that then they be kild in the oile, as is used in oile of scorpions, serpents, frogs, and pismires: but & if they be great, they must be first killed, then bowelled, and lastly boiled in the oile, as is done in the oile of foxes.

Touching the quantitie of the ingredients, by which the oiles made by impression are called simple or compound, you must haue regard to see that when the oile is compounde, that this order be followed: that

that is, to take the ingredients of greatest and hardest substance, and to infuse them three daies: afterwarde those of lesse substance two daies: and those which are the most tender, subtile, and aromaticall one daie, and one night: and then afterwarde to boile them in order, straining them but once, and reseruing your gums to mixe and dissolve with the said strained oile, according as it shall be requisite, if it be that any gums do go into any such oiles.

The fower and fiftith Chapter.

A description of the oiles made by impression.

Oile of roses.

Oile of roses is thus prepared: Take of oile of newe oliues, so much as you shall thinke needfull, that is to say sufficiently to infuse your roses in: wash it diligently, as well to coole it & make it more temperate, as also for to make it the more pure, if in case it should be any whit salt or feculent, and thick of the lees. Such washing is made with an equall portion of water and oile, stirring them together in a vessell, vntill such time as they be mingled and incorporated, and then so leauing them till they separate themselves one from another againe: which being come to passe, there shall be a hole made in the bottome of the vessell where they are to let the water runne out: after there must other water be put in to beate with the oile as before, & this shall thus be gone ouer three or fowre times: but and if there be any haste to be made in this washing of the oile, then the vessell shall be kept in some warme place, to the end that the oile and water may be the sooner seuered: and you must note that the oile is not to be washed on this fashion, except it be for cooling oiles, as oile of roses, violets, & such like: it is very true that there will be no need to walsh any oile at all, if you haue the oile of greene oliues called *omphacine*. This washing of oile being finished, haue in readines a sufficient quantitie of blown roses, put them to infuse in this washed oile, in a vessell hauing a narrow mouth, like a pitcher or a glaile bottle, or some one of thine, and filled vp within a quarter of the toppe, and afterwarde well closed and stoppt: set them in this sort in the sunne or some warme place for the space of seauen daies, boile them afterwarde in a double vessell in boiling water, as we haue said, or else boile them in a brasse kettle vpon a small fire without any flame for the space of two or three houres: when the oile hath boild and wasted one part of the moisture that was in it, it will be conuenient to straine it through a strong strainer, and thicke linnen cloth, and after to put into it new roses againe, doing as you did before, and that for three seuerall times: in the end after it hath bene strained, some put into it as much water of the infusion of other roses, infused in water, as there is oile; then you shall serue it in the sunne for the space of fortie daies, which infusion may be seuered

red from the oile afterwarde as the water wherewith the oile was washed. Notwithstanding it may be sufficient to take the infusion of the roses in oile onely, without the putting of other water in the infusion. Some mingle now and then in the decoction of roses a little wine, or iuice of fre^{Two sorts of} roses to keepe the oile from burning, or that in boiling it should not get any loathsome smell. You must further note, that some ^{oile of roses.} prepare and make two sortes of oile of roses: one oile of ripe oliues, and roses all opened and spread, which are the better if they be red: the other oile is made of roses being yet in the bud, with the oile of greene and vnripe oliues: or if you haue not any of this oile *Omphacine*, you shall make it with common oile and veriuice boild together, to the consumption of the iuice. This is more cooling, astrigent, and repercussive: the other more digestive, discutient and anodine or asswaging of paines.

Some there are which sometimes make this oile of roses without ^{A new kinde of} oile of oliues, putting red, carnation, or muske roses to putrifie in a ^{making of oile} vessell set in dung for one whole month being close couered. And ^{of roses.} this kinde of oile is very fragrant and sweete.

This manner of making of oiles may be followed in the com- ^{Oile of cammo-} pounding of oiles, either colde or temperate and simple, such as are ^{mill, melilote.} the oile of violets, cammomill, melilote, yellow or red violets, of the ^{Yellow violets.} leaues and flowers of dill, lillies, the yellow taken away, of cornestag ^{Cornestag.} flowers, of elder tree flowers, white mullein flowers, ielsamine flower, ^{Elder tree flowers.} popie flowers, or of the leaues & heads of poppie, of lettuce leaues, ^{White mullein flowers.} and white water lillie flowers, to the compounding of which oiles, you must note that for want of oile of greene oliues, you may take the oile ^{Lettuce.} of sweete almonds newly drawne, or of filberts, if it haue bene first ^{Water lillie flowers.} washed.

Oile of quinces: take whole quinces with the rindes when they ^{Oile of quinces.} are very ripe, but cast away their kernels, then stampe them and infuse them in oile *omphacine* in the sunne five daies, or else in oile washed as we haue said before: afterwarde boile them with equall portion of the iuice of quinces in a double vessell the space of fower houres: renew the flesh and iuice of quinces three or fowre times, the old being made away, set them in the sunne againe and boile them: afterwarde straine all, and keepe it in a vessell for your vse: you shall draw greater store of the iuice of your quinces, if you crush them well, and bruse them, rather then if you cut them in peeces.

Oile of masticke: you must take oile of roses, or oile *Omphacine*, or ^{Oile of masticke.} oile of quinces, three pound, of god wine eight ounces, of masticke powdered and put vnto the rest toward the end (for it will not indure much boiling) three ounces: boile them all together to the consumption of the wine in stirring it oft, to the end that the masticke may be melted and mixt with the oile.

Oile.

Oile of elder
tree.

Oile of the flowers of elder tree : fill a glasse bottle full of washed oile, or oile *omphacine*, put therein a sufficient quantitie of elder tree flowers, set the bottle in the hot sunne fixe daies, after that presse them out and put in others new; continue this all the time of sommer whiles the floures of elder tree are in force: this oile is singular to comfort the sinewes, allwaie the paine of the ioints, and to cleanse the skin.

Oile of S. Johns
woort.

Oile of saint *Johns* woort : infuse for three daies the crops of saint *Johns* woort in very fragrant wine : after that boile all in a soft and gentle sort in *Maries* bath, and after this some small space straine them out lightly : infuse againe in the same wine as many daies and nights the like quantitie of the tops of saint *Johns* woort, boile them and straine them as before : afterward put vnto the liquor of Venice turpentine three ounces, of old oile fixe ounces, of saffron a scruple, mixe them, and in the said *Maries* bath boile them vnto the consumption of the wine : you shall keepe that which remaineth in a glasse or lead vessell, for to vse as hot as you can applie it in maligne vlcers, especially those of the sinewes, and in the leane and cold parts, in the prickles of the sinewes, paine of the teeth, conuulsions, tumours, and distillations. Some do make this oile after the simplest and singelst sort, making onely the flowers of hypericum, which they infuse all the sommer in walnut oile in a glasse vessel, and setting it in the hot sunne, keepe it.

Oile of rue.

Oile of Rue : Take the leaues of rue somewhat dried, (because they are subiect to a superfluous kinde of moisture) set them to infuse in oile a whole sommer : Or better, change and renew them euerie eight daies, straining and pressing them out at euerie change : Sommer being gone, boile them not, but straine, presse out and keepe them in a vessell : after this manner are made the oiles of the mirle tree, wormewood, marierom, southernwood, thyme, cammomill and such like : vnto which there is sometimes added the like quantitie of iuice, or flowers or leaues mingled with oile : and so they are refer in the Sun.

Oile of spike.

Oile of spike. Take true spike, or for want of it, lauander, to the quantitie of three ounces, of marierom and baie tree leaues two ounces : of the roots of cypres, elicampaine and zyloaloe of each an ounce and a halie : of nutmegs three ounces : infuse euerie thing by it selfe in an equall quantitie of wine and water : the infusion accomplished boile the whole together in a sufficient quantitie of oile in a double vessell, the space of foure or fve houres : this done straine it all and keepe the oyle for your vse : that is to say for the colde ach of the stomacke, reynes, bellie, matrix and other parts.

Paine of the
stomack, reynes,
bellie, and ma-
trix.

Oile of foxes.

Oile of Foxes : Take a liue Fox, of a middle age, of a full bodie, well fed and fat, such as foxes be after vintage : kill him, bowell him and skin him, some take not out his bowels, but onely the excrements

ments in his guts, because his guts haue much greafe about them: breake his bones small, that so you may haue all their marrow : this done set him a boiling in salt brine, salt water, and sea water, of each a pint and a halie, of oile three pintes, of salt three ounces, in the end of the decoction, put thereto the leaues of sage, rosemarie, dill, organie, marierom and Iuniper berries after that he shall be rotten sodden, that is to saie, so as that his bones and flesh doe part cleane asunder : straine all through a strainer and keepe it in a vessell to make liniments, for ach in the iointes, the sciatica, diseases of the sinewes, and paines of the reynes and back.

Take earth wormes halfe a pound, wash them thoroughly in white wine, then boile them in two pound of oile oliue, and a little red wine to the consumption of the wine, straine and presse it out all and keepe the oile : yet further it would be good to put into this oile, some other wormes & leaue them there so long as the oile lasteth. This oile is singular good to comfort the stiffe sinewes, and for the ach of the ioints.

Oile of Serpents : Take whole serpents, put them in an earthen vessell well leaded, fill the same with May butter, and couer the same with a couering the ioyntes being well luted, but notwithstanding having a small hole aboue : set the pot neere vnto the fire that it may boile halfe a day, to the end that all may be thoroughly boiled : then straine it through a linnen cloth, afterward pound it well in a mortar, and make an end of straining that which shall be in the bottome of the linnen cloth : mixe together both these expressions, letting them coole, and referuing them in a glasse vessell to serue your vse for distillations or rheumes, and for palsies. Some take vipers and cutting off their heades and tailes (as is done in the making of Treacle) they boile them in oile, and vse the oile for rebellious ring wormes and first buds of the leprosie.

The fve and fiftieth Chapter.

A reuiew or suruay of Oiles made by distillation.

THE third manner of making of oiles hath bene said to be by distillation or resolution, of which we will speake, after we haue spoken of the distilling of waters : but besides that, there is another manner of drawing of oile (though in certaine things it be done by expression) which commeth verie neere vnto this third kinde of making oiles by distillation : and it is practised in eggs, wheate, mustardseede, haye, barlie, tartar, brimstone and others.

Oile of Eggs : Take the yelkes of egges roasted hard in water, or which is better, vnder the hote ashes, about thirtie, rub and chafe them a long time betwixt your hands, after frie them in a leaden pan, or in an earthen one well leaded at a soft fire, stir them and turne them

oft with a ladle of wood yvonne. At such time as they begin to be soft and red, after presse them with the backe of the hand. After which is done, put the betwixt two presses to force out their oile as is done with oile of Almondes: you shall have great store of oile to rub out, which is very good to take away the spots of the skin, to heale ringwormes, to cause haire to grow againe, to cure the chaps and chancres, to cure the chaps of the lips, hands, feete and fundament: to take away the scaries left after burnings, and principally for the vlcers of the membranes of the braine. Some in the making of this oile doe not boile the egges hard, but fric them raw, and after by pressing them together in a bag betwixt two presses, or under a presse, they presse out the oile.

The oile of wheate.

Ringwormes, fistulaes, Chaps in the skin.

Oile of haire.

Ring wormes, S. Anthonies fire.

Oile of Tartar.

Oile of wheate: Prethe wheate together betwixt two plates of iron reasonably glowing and fire red, or very hote, or betwixt a marble stone and a thicke hot plate of iron: receive the oile into something which distilleth from it: or else take away from wheate his pill or rinde, and distill it after the manner of the Philosophers oile: this oile applied hote, taketh away the spots of the skin, healeth ringwormes, fistulaes and chaps in the skin, and the scall or skurfe in little children: the oiles of barley, mustard seede and other oile seedes are thus prepared and made.

Oile of haye: Set on fire a quantity of haye, after quench it againe by and by, then lay it upon coles, and while it is smothering and smacking, spread it upon a plate of iron; and there will gather upon it an oile liquor, which is called oile of haye: and this is singular good for ringwormes, and Saint Anthonies fire, scabs and roughnes of the skin.

Oile of tartar: Take tartar, that is to say the dried lees of wine which sticketh vnto the scames or hollow places that are within the wine vessell, not that which is in the bottome, because it is verie dreggish and filthie, neither yet that which is left on the vpper part of the vessell, for that is too frothie and scummy, but that which cleaveth round about vnto the staves of the vessell wherein there hath bene verie good white wine, rather then red: make it into fine powder, and make it sitt in a linnen cloth infused in very good white pinger: or not infusing it, calcine it, and put it in a hypocras bag or in an oxes or swines bladder: afterward boile it under hote cembres, until it become white: you shall know it is sufficiently limned, by the growing of it cleare: and a little beeing of yvonne being is yvonne given it therewith. Now when you have thus limned it, take it out, and some hold it for a good space: you shall allow it in the water, scumming it often: powder it yet once againe, and then put it in the bottome of an hypocras bag, which is to say, of a bag which hath a sharpe and narrow bottome, and is so small

shall hang vp on high at some staffe in a caue or other colde place for the space of eight daies, until it be resolved into oile: and if the oile doe not drop of it selfe, then grate it hard and presse it out, putting vnderneath some glasse vialle, to receive the licour that shall distill, which is not indeede properly an oile, but a very sharpe water, or a reddish humours. This humours is good for all sorts of itching, ringwormes, skurfs, scalles, and other such diseases of the skin: it maketh the face white, cleane and yvonge: it taketh away wrinkles and spots, comming of a melancholike humours: it maketh the haire of a straw colour; hindereth the falling of the haire, and causeth it being fallen to grow againe: it whiteth the copper and silver: and taketh away the spots of lunnens, if they be rubbed with this oile hid.

Oile of brimstone: hang in some high place with a wire, or doues taile of iron, a glasse vessell in fashion like a bell or balen, covered about with potters earth, of a cubite widenes, vnderneath which neere the length of a cubite, you shall place another vessell of glasse being broad and very large, able to holden such, such like as is the dish or balen usually served with ewers: in the middlest whereof there shall be a little vessell of earth in forme of a little pot which shall containe the brimstone, which must be of that which is called quicke and virgins brimstone, and not artificiall brimstone: when you intend to make your oile of brimstone to distill, you shall take a shidre of iron of foure fingers thicknes and fire it: this you shall cast into the small pot with brimstone, to make the said brimstone burne and flame: the smoke comming forth of the godet will ascend vp to the vessell hanging aboue, wherein after a short time it will be turned into oile, which oile will thence distill into the vessell below. Gather this oile and releeue it in a vessell well stoppt, for to vse for the caring of gangrenes, fistulaes, vlcers of the mouth & ringwormes if you do but touch them with this oile vpon the end of a feather. It is singular good against rebellious vlcers comming of the pocks: some giue it to drinke with balme water in the morning vnto such as are but scarce cured and recovered of the pocks, to the end it may drive out the disease. The oile of brimstone may be made otherwise: boile brimstone in aqua vite, until there begin an oile substance to swim aloft: gather this liquor with a wollen or linnen cloth, or with a little spoone: you must sometime renew your aqua vite, until you haue gathered oile enough: if preterly after bathing your selfe you annoint with this oile your bodie infected with quicksilver, you shall expell and draw forth the said quicksilver.

But concerning all these oiles, see more in our booke of secret remedies and medicines.

The feuen and fiftieth Chapter.

A description of certaine artificiall balmes.

IT is well and sufficiently knowne how that now the true and naturall balme is no where to be found, and that in place thereof the industrie and skill of man hath inuented oiles which approch and draw neere in vertues and faculties vnto the true balme: now therefore be it in like manner knowne that these oiles are made either by distillation or impressiō: and that we will speake onely of some certaine ones which are made by impressiō; ceasing to speake of those which are distilled for them which meddle in drawing out the quintessences of thinges, as you shall further perceiue by our Booke of secret remedies.

Balme of the maruellous apples: take the maruellous apples either with or without kernels, but verie ripe, put them in a vessel full of common oile either olde or new, or of the oile of sweete almonds or linseed, and infuse them a long time in the sunne, or in Maries bath, or in horse dung that is verie hot, or in the earth in a vessel that is well couered ouer with sand, & let it remaine there one whole yeere, or else two, which is the better; you may likewise make this oile of the leaues and little cōds without the fruite: some with the apples put together with the oile of sweete almonds or linseed oile do ioine of liquid varnish one ounce for euery pound of oile: such an oile is a singular balme for all wounds, inflammations of the breasts, and for the appeasing of outward paines and ach; for the bursting of yoong children; the vlcers of the matrix, and to procure conception, if after that the woman is come out of the bath made for the same purpose, shee annoint her secret parts therewith and drinke of the powder of the leaues with white wine: it is also singular good for the paine of the hemorrhoides being mingled with linseed oile, or the oile of sweet almonds. We haue spoken of the maruellous apples in the second Booke, where we haue declared how that the herbe whereupon they grow is called *Balsamina*, because it hath the vertue of balme. The oiles of the flowers of rosemarie, white mullein, Paules betonie, Nicotian, and ground iuie, being thus prepared as we haue spoken of before, haue like vertues with balme.

Another balme: take the fruit of the elme, the flowers of hypericum, and the buds of roses, put al together in a glasse bottle with oile of oliues, stop vp the bottle close and leaue it in the sunne, vntill you see the same all of it in such manner consumed as though it were rotten: afterward straine it and keepe the oile for your vse.

Another: take gumme elemie fower ounces, oile of wormes, oile of roses, and hypericon, of each two ounces, of venice turpentine, two ounces;

Balme of the
maruellous
apples.

Balsamina,
Oile of the
flowers of
rosemarie,
White mullein,
Nicotian,
Paules betonie
and ground
Iuie.

A balme.

ounces; mixe also together and incorporate them vpon a coale fire, afterward keepe it in little bottles.

Another balme: take the flowres and seedes of hypericon fower handfuls, bruisse them thoroughly, and set them in the sun the space of ten daies in a glasse bottle with fower pound of olde oyle of oliues, afterward presse them out carefully, & put againe as many more flowres and seedes of hypericon into the bottle, let it be in the sun againe tenne whole daies: after presse it out all againe, and put thereunto as followeth, of oyle of dill and of venice turpentine, of each a pound and a halfe, of aqua vitæ halfe a pound, of mummia, wood of aloes, mastick, myrthe, & iuic gum, of each an ounce & a halfe, of the rosen of the pine tree three ounces, saffron halfe an ounce, cloues, nutmegs, cinnamon, of each three drams: mixe all together and boile them three howers in Maries bath in a glasse bottle close stopp'd, that nothing may breath out. Then set the bottle in the sunne the space of ten daies, reseruing the oyle afterward for paines of the eares, woundes, fisteculaes, cankers, *Paines of the eares.* *Cankers.* *A balme of elme flowers.* *Noli me tangere*, and to annoint the backe bone a little before the fit of the ague come which beginneth of cold.

Another balme: take the fruit of the elme, within which you shall finde a liquor like vnto oile, put it whole into a strong violl, which violl you shall stop verie close and burie for the space of fifteene daies in horse dung that is verie hot by reason of his being verie rotten, then set it in the sunne for a certaine time, and after gather the cleere part that shall swimme aboue, and this will be vnto you a singular balme: Otherwise: gather all the liquor that you finde in the fruit of elmes, put it in a strong violl, adding of the flowers of hypericum and common oyle: stop vp the violl verie close, and burie it in horse dung that is well rotted, leaue it therein a sufficient time, and afterward taking it out, you shall haue a singular balme. See further in our Booke of secret medicines concerning balmes.

A brieue discourse of the distilling of waters.

The eight and fiftieth Chapter.

Of the profit and commoditie of distillation.

Notwithstanding that distillation be the worke rather of a Philosopher or Alchymist (otherwise called an extraeter of quintessences) then of a farmer or matter of a countrey farme: notwithstanding the profit thereof is so great and the vse so laudable and necessarie, as that the we take not the chiefe Lord of our countrey house to be furnished with all such singular commodities, as we desire if he lacke the knowledge and practise of distillation; nor that I would haue him to make it a matter to trouble himselfe much withall, and to be at much coit and charges therewith, as many (not well aduised)

Oo

men

In leasure to
take the oppor-
tunitie of lea-
sure to go about
distilling.

men be now adays: but onely that he would take his time thereat his best leasure and without any great expence: or els to leave the same to his wife or his farmers wife: for indeed such occupation is far better beleeving either of them then him: for as much as the mistresse or darie woman hath the portie affaires and busineses belonging to this our countrie farne and lying within the doores resigned and put over to her. Therefore let it not seeme strange in this point, if after our briefe treatise of oyles, wee discoure somewhat briefly and according as accountrie thing requireth of the manner of distilling of waters and extracting of oyle quintellences; out of such matter as our countrie farne shall afford: which we would should serve for the vse of the farmers wife, as well to relieue her folke withal, as to succour her needie neighbours in the time of sicknes: as we see it to be the ordinarie custome of great Ladies, gentlewomen, and farmers wiues well and charitably disposed, who distill waters and prepare ointments, and such other remedies to succour and relieue the poore.

The nine and fiftieth Chapter.

What distillation is, and how many sorts there be of distillation.

The inuenter or
first finder out
of distillation.

I Will not trouble my selfe here with setting downe the partie which was the first inuenter of distillation: as namely, whether it were some Physician of late time, who hauing a desire to eat stewed peares, set them a stewing betwixt two dishes vpon the fire, and hauing afterward taken off the vpper dish, and finding the bottome thereof all set with pearly sweat, retaining the smell and sauour of the stewed peare it selfe, inuented thereupon certaine instruments to draw out from all sorts of herbs, cleere & bright aerie waters: it is better that we set our selues to worke about the declaring of what distillation is, and what things they be which may be distilled.

Distillation.

Distillation or the manner of distilling, is an arte and meanes whereby is extracted the liquor or moisture of certaine things, by the vertue and force of fire or such like heat (as the things themselves doe require) no otherwise than as we see here below, that by the force and power of the sunne, many vapours are lifted into the middle region of the aire, and there being turned into water fall downe in raine. True it is that the word, Distill, sometimes reacheth further, and is taken not only for things that are distilled by the meanes of heat, but without heat also, as we see it done in such things as are distilled after a straining manner, that is to say, when the purer and thinner part of certaine waters or liquid iuices is separated and extracted from the more muddie and earthie part, by the meanes of a felt, or by

by the meanes of a peece of cloath fashioned like a little tooong or border: or out of sande and small gravel: or out of earthen pots not yet baked: or out of vessels made of the wood of iuie: or out of glasse made of ferne. Sometimes likewise things are not conuected distilled without heate, but with cold, as namely, when the things which you would haue distilled are set in cold and moist places, as oile of tartar is wont to be made, as also oile of myrthe, dragons blood, orters, and other things. But howsoeuer, yet I would not hate the mistris of our countrie house to busie her braine withall the sortes of distillation, but that she should content herselfe onely with that which is performed by heate. True it is that it is more and more requisite than she should know the diuersities of heate, to the end she may procure such a heate as will best fit such matter and thing, as she is in hand withall, or to go about: for some things craue the heat of a cleere fire, or of cole, or of the sun, or of hot embers, or of small sand, or of the filings of iron, or of the stoke of olives: others craue the heat of horse dung, or boiling water, or the vapour of boiling water, not of wine boiling in the fat, or of vnquenchd lime, or of some bakke or other putrified thing. And for this cause she shall make and obserue foure degrees of heat, the first whereof shall be called warme, like water when it is halfe hot, on the vapour of boiling water, and in this there is no feare of any hurt it can do. The second is a little hotter, but yet so, that it is may be well indured without any annoyance or hurt, such as the heat of ashes or embers. The third is yet hotter then the second, and so, as that it may annoy and hurt one grieuouly, if he should hold any part or member therein any long time, such is the heat of small sand. The fourth is so vehement, as that it cannot without great paine and very hardly be indured, and such is the heat of the scales of filings of iron. The first degree is fit to distill fine, subtile, and moist things, as flowers and cold simples, as endiue, lettuce, and such other: the second for distilling of fine, subtile, and dry things, of that sort are all fragrant or smelling things, as pepper, cinnamon, ginger, cloves, and many simples, as wormewood, sage, &c. The third, for to distill matter that is of thicke substance and full of muce, of which sort are many rootes. The fourth is proper for the distilling of mettals and mineriall things, as allom, arsenick, &c. By this meanes it will come to passe that the mistres of our countrie house shall not haue any thing so rough so hot, out of which she will not be able to draw the waile humour, and so distill cleere and bright waters: as she may draw the waile humour out of the wood of iuie, and distill thereof a cleere water.

Distilling by a
silke, sande,
unbaked earthen
pots, vessels of
iue, glasse of
ferne.
To distill by
cold.

Diuers sorts of
heat.

The sixtieth Chapter.

Of the first and best convenient time to distill in: and of the
facilities, vertues, and durablenes of
distilled waters.

O o 2

Euerie

*Distilling time.
The knowledge
of the ripenes of
the matter to be
distilled.*

E Verie thing is to be distilled in the time wherein it is best disposed, and best fit, that is to say, rootes, herbes, flowers, and seedes when they are ripe: but living thinges, and the parts of them, when they are of middle age; as we shall have occasion to declare in his place. Nowe as concerning the ripenes of rootes, herbes, flowers, seeds, & fruits, we refer you to our second Booke, where we have sufficiently at large laid open at what time every one of these things is to be gathered. But it is to be noted, that necessity sometimes compelleth vs to distill drie plants, and then it will be good to macerate and steepe them in some convenient liquor or decoction; answerable vnto the vertue of the things, by that meane in part to renew and bring again their youthfulness, and to endow them with such moisture as they brought with them when they were first gathered from off the earth, as will further declare by and by.

*The vertues of
distilled waters.*

As concerning the vertues of distilled waters: it is most certaine, that such as are distilled in *Maries bath* retaining the taste, smell, and other qualities of the matter whereof they are distilled, haue not onely equall vertues with the plants & matter whereof they are distilled, but become much more pleasant to the taste, and delightfome to the eie, then the iuices or decoctions of the said matter would be. It is true that the waters distilled through leaden, tinne, brasse, copper, or such other like metallike alimbeckes, (as we shall by and by speake of) doe loose the best and most subtile parts of the substance of their matter, by suffering the same to vanish away in and into the aire, and so they doe not prooue of so great vertue as their plants. But howsoever it is distilled, waters are more pleasant vnto sicke persons, more readie for vse, better for medicines for the eies, to make epithemes of for the heart and liuer, to make painting colours of, to put into perfumes or other sweete things, as well for the vse of physicke as for the delight and decking of the body, then the decoctions & iuices of plants, and for that cause there is reason they should be distilled with greater heed and care.

*The lasting of
distilled waters.*

It is true that waters distilled in *Maries bath*; especially those which are distilled in the vapour of boiling water, are not of long continuance, and hardly will last aboue a yeere: likewise you must renew them euery yeere by distillation, circulation, or by distilling of them againe, putting them into the still with some new matter: vpon the cake or drossie part, left vpon some former distillation, or else to distill them by a filtre, whereof we shall speake heereafter.

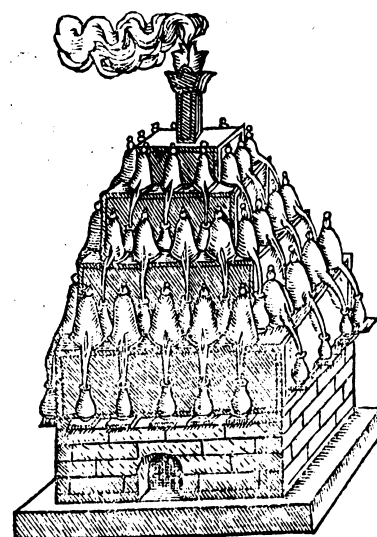
The one and sixtieth Chapter.

*What manner of vessels and instruments they must be
wherein waters are to be distilled.*

Two

Two vessels are needfull in distilling, which may be called by the common and generall worde, Alembicke: the one of them is properly called the containing vessel, because it receiueth and containeth the matter that you would distill, some call it the bodie or corpulent vessel, or the gourd: the other is ordinarily called the cap, head, or bell, being that wherein the vapours are gathered and turned into water. This vessel hath sometimes a pipe, in shape like the bill of a birde, through which the water passeth drop by drop into a vial or other like vessel: and sometimes it hath no beake or spout, and those are used in circulation. But these instruments doe differ much as well in forme and shape, as in matter: It is true, that the first that were inuented were of lead like to a bell, and did couer another vessel of brasse that was full of matter to be distilled: this fashioned one is well inough knowne and used euery where, because it draweth out more store of water then any other. Afterward there was another fashion inuented, by which many vessels (euery one hauing his leaden head or couer) are heated together with one onely fire, set in a furnace made after the fashion of a vault: to the end that with lesse cost and labour one might draw and distill a great quantitie of water: the figure and forme you may heere see and behold.

*What distilling
vessels were
first inuented.*



Oo 3

But

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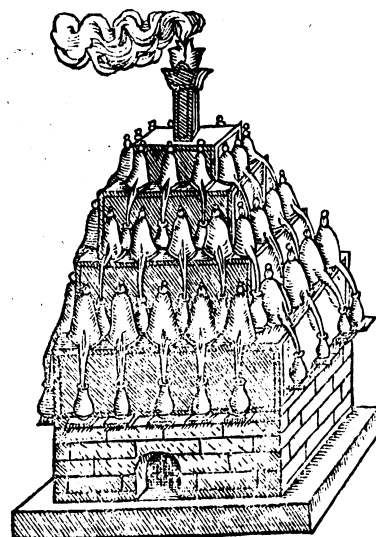
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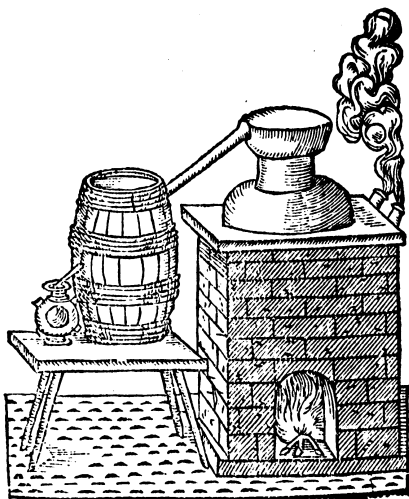
*What distilling
vessels were
first inuented.*



Oo 3

But

But inasmuch as waters distilled in lead do not retain their smell or taste at all, neither yet any of the rest of their qualities of the things whereof they are distilled; but doe rather smell of the smoake, or of a stinke of burning: as also, for that waters distild of sharpe, biting, and bitter plants, do no whit resemble the same in the taste of their bitterness and sharpenes, but rather become vnflauorie sweete: further in asmuch (as *Galen* witnesseth) as the water which runneth through pipes of lead doth stirre vp oftentimes the bloudie fluxe in those which drinke it, because of his nature, which is of the substance of mercurie: adde vnto these that inasmuch as we ordinarily see the waters distilled through lead to become oftentimes (with the sharpe and vehement vapour which it maketh by the reason of a certaine salt dissolving it selfe from the head) spoild and made white and thicke as milke: I say, for and in respect of all these reasons, there is inuented another instrument called the bladder, whose vnder vessell and capouering the same, are both of brasie, and both of them standing ouer one furnace: which instrument is not onely good to distil aqua vitæ in made of wine, or of the lees of wine or of beere: but also of all other sorts of plants powred in thereto, with a good quantitie of common water. Moreover it is requisite that the head should haue a great beak or spout which must passe through the inner side of a great easke full of water, to the end that the vapours breath not out, but grow thicke and turne into water. The fashion is as you may see.



The

The later and better aduised Physicians haue deuised a fashion much better then the former, which is to distil waters in Maries bath, that is to say, in the bath of some boiling water, or ouer the vapour of the same: for it is very certaine that such waters are without all comparison better, inasmuch as they do exactly retain not onely the smell but also the taste and other qualities of their plants: which hapneth, because the bath of the boiling water by his moisture, retaineth, keepeth in, and preferueth the more subtile parts of the plants, and by this meanes hinder and staie them from resoluing and breathing out, as it cometh to passe in those which are distilled by a violent fire, of wood or coale, which is the onely cause that there is so great difference betwixt the waters distilled in an alembicke of lead and those that are distilled in Maries bath, as is betwixt gold and lead: because they do not onely retain the proper qualities of their plants, that is to say their smell and taste; but likewise they become cleare, pure and bright, without smelling any thing of smoke or burning: on the contrarie the other alwaies taste of some stinke of the smoke, which doth not onely prouoke a lust to vomite, as well in such as be healthfull, as in them that be sicke, but also procureth great hurt vnto the parts of the breitt, stomach, liuer, and other inward partes, by reason of some ill qualitie, wherewith they are infected by the vessels in which they are distilled. Which is easily perceiued by the water of wormwood distilled in a leaden alembicke, for it becometh sweete and not bitter, like vnto the plant: and in like sort in all other manner of waters that are distilled of plantes, and are of a hot temperature, and sharpe or bitter taste. For the leaden alembicke receiving vpon his superficiall part the vapours of herbes which are hot in effect and operation, is easily corrupted in that his superficiall part, and turned into a very subtile ceruse, which afterward mingleth it selfe with the water, and bestoweth vpon them an vnflauorie sweetness: which is easie to be gathered and knowne by the white residue that setteth in such waters, especially if the alembicke wherein they are distilled be new: for the vessel which hath serued a long time hauing gotten by long space and being much distilled in, as it were a platterie crutt or hardnes ouer all the parts of it, is not so easily altered by the vapours, nor turned into ceruse. And indeed it is no maruell if the vpper face of the lead be changed into ceruse by the sharpe vapour of the plants, seeing that ceruse it selfe (as *Diocorides* testifieth) is made of plates of lead hanged ouer the vapours of vinegar & spread vpon hurdles made of reedes: but there betalleth no such accident to waters distilled in Maries bath: for the bitterness of their taste is manifestly perceiued, as also their sharpenes, sowrenes, tartnes, harshnes, eagernes, and taiknes, if they be distilled of bitter or biting plants, or yet of any other tastes and qualities: and this falleth

*Waters distilled
in Maries bath.*

*An old leaden
alembicke is
better then a
new.*

*The making
of ceruse.
The cause that
maketh waters
distilled in Ma-
ries bath to re-
tain their ver-
ities.*

*Waters distilled
in the in-
strument called the
bladder.*

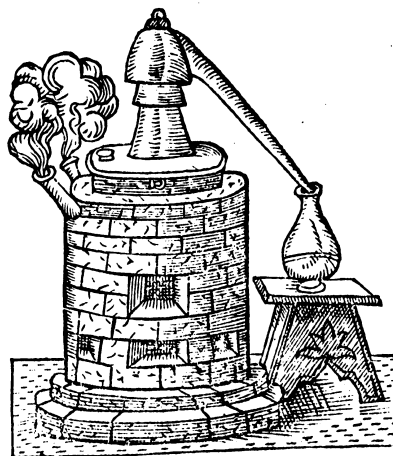
*The waters
distilled over
the vapour of
boiling water.*

*The durableness
of waters distil-
led in Maries
bath.*

our so because the head of the Maries bath is of glasse, which cannot infect them with any strange or vnnaturall qualitie. Moreover the waters that are distilled in the vessell called a bladder, which is made as we haue said of brasle, as wel the head as the body, but yet overlaid within with tinne, are much better and of greater vertue, then those which are distilled in an alembicke of lead: because the fire of the furnace cannot burne nor infect with any smoke the matter that is within, seeing they are couered ouer and boile in water: but notwithstanding they doe not thoroughly retaine the vertues thereof, because of the mixture of the water, which smothereth and dulleth their force and vertues. Wherefore we must needs commend as best the waters which are distilled in the double vessell or ouer the vapour of boiling water, especially when as therewithall they are of a hot facultie. It is true that amongst them, that sort is better which is distilled ouer the vapour of boiling water, then that which is distilled by putting the body containing the matter into the boiling water, because it extracteth and draweth out the subtil parts therein a great deale better: albeit that both the sorts thereof are excellent good, neither is there any hurt at all in them, saue onely that they are not of so long last and continuance: but to helpe this in such things as neede shall require, it will be good to distill one and the same thing often, that so you may haue them good.

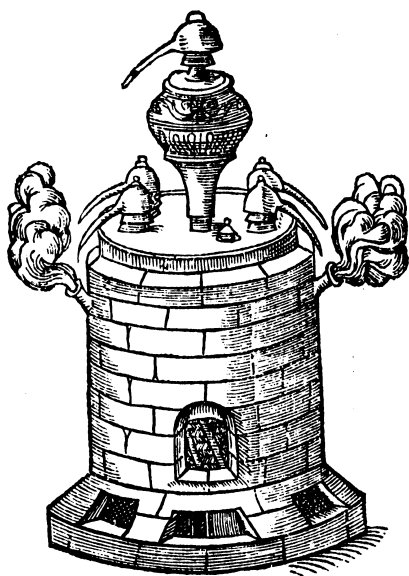
But to come to our third kinde of instrument which we haue called the double vessell or Maries bath, it consisteth of two parts, the one is a great vessell of brasle made in manner of a biese pot, verie great and raised high, furnished with a couering, and it is set in a furnace and containeth in it boiling water: The other is the alembicke, whose body is likewise of brasle, so set within the couer of the caldron, as that the one resteth vpon the other, and that the one cannot be put in or taken away without the other: the head is of glasse or tinne, or of baked earth: in the couering there must be a hole and so as that it may be alwaies close shut, it would be at one of the corners, and the vse of it is, to powre boiling water into the caldron, when the water within is diminished after long time of boiling. The fashion of it is as you see.

There



There is another sort of double vessell which containeth foure alembickes, whose bodies set within the bath may be either of glasse or tinne, and their heades of glasse: besides these foure there is an other standing higher then the rest, and is heated onely of the vapour of boiling water which riseth vp on high vnto it through a pipe, and this alembicke maketh a better water then the other foure. All these vessels being well coupled and incorporated together, doe rest vpon the caldron or great brasle pot being sufficient large and wide, and tinued ouer within, and so closely set one with another, as that there may not any vapour breath out, in like manner all these instruments and vessels be so well ordered and contriued as that they may seeme to be but one body, saue onely that the heades of euery one must be so as that it may be separated from the body and put to againe, when you haue any neede to distill water. The fashion of it is such as is here to be seene.

There



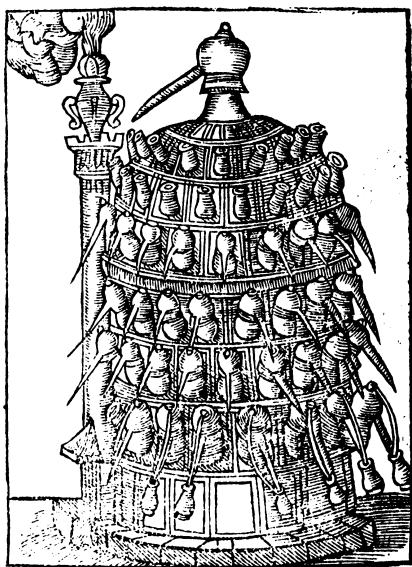
There are some that haue yet seene an other sort of double vessel, and that a very excellent one: whose bodie is tinne, like vnto a great vrinall, of the length of three good fecte, very wide and large below, and somewhat narrower aboue. The bottome or belly thereof is set two good fecte in boiling water, and the top standeth out of the water, a foote good, and that in a round hole made in the midst of the couer of the chaldron. Vpon the top of this bodie is placed a head of tinne, conered and compassed also with an other vessell of tin likewise and much more large, this is to containe cold water, running into it through a bras pipe or cocke, it is to stand vpon the top of a shanke, and that for to coole the alembicke continually, that so the vapours rising vp thither may thicken the better, and bee the sooner turned into water. And bicause it is not possible, but that the water which is contained in the vessell which compasseth the alembicke, should become hot in succession of time through the heat of the alembicke: this vessell hath a small pipe or spout, at which the water so heated is vsed to be let runne out, turning the little pin of the cocke: and it is fild againe presently with cold water which is made to run downe into it from a vessell on high: but to the end the labor

of emptying it so oft of his hot water, and putting in againe of cold may be remedied, thinges may be so carried as that from the vessell which standeth vpon the top of the pillar there may be colde water continually running into the vessell compassing the alembicke, and then it being once become hot may be let out as is said before. And to the end that the chaldron which containeth the bath may alwaies keepe full at one measure and quantitie of water, which otherwise is sure to diminish by the continuall and vehement heate of the fire of the furnace; there is at the foote of the pillar an other vessell full of very hot water which is to be conueighed into the bath by a cocke or pipe. And this water is heated in his vessell by the same fire that the bath is heated, in as much as the wall of the pillar is hollow and emptie even as low as the bottome of this vessell. This sort of double vessell is fit to distill waters withall in great store and abundance, by reason of the cold water which thickneth and turneth by and by the vapours into water. The shape and fashion is as you see.



The Venetians distill their water in such an instrument: the furnace is round and containeth on euery side round about it many earthen

earthen vessels, glased within and fashioned like vrinals, well luted with mortar of potters claie, and euery one covered with a head of glasse or baked earth: to their snoutes there is fastned a viole with a good thicke threed, to receiue the water that distilleth, this furnace is heated as we see, after the manner that the Germanes doe heate their hot houses and we our stoues. And if it happen that the fire should be too hot, you must not put any thing into the vessels, till such time as the heate be somewhat abated, for feare that the plants, flowers and such other things should be burnt: the mouth of the furnace must be alwaies stopt and fast shut, to the end that the heate may beate inward for the heating of so many vessels. For the attending and ordering of this furnace there are required many seruants, some of them to looke to the fire, others to cast the herbes into the boddies, and others to put the heades vpon the bodies. By this likewise there may great store of waters be distilled, as some hundred pintes in a night and a day, and these waters are a great deale better then those which are distilled in leaden alembicke or stillitories or yet of other mettals, because they are not infected with any fault or infection, which is a common copation of those which are made of metall. This is the shape & form of it.



There

There are other instruments, the bodies whereof are of brasie, iron, or other mettall, hauing a long thicke, and strait necke, on the top whereof resteth also a head of brasie, made after the fashion of a broch steeple, and is compassed round about as it were with a bucket of coole water, to the end that the vapour may be conuerted the sooner, and in greater quantitie into water, and that the water may not taste or smell of the fire. Some in steede of this long necke and head, haue a pipe of plate or other mettall, very long and writhen or wound about, in forme of a serpent, (and for this reason is called a serpentine) or made of many parts, consisting of direct angles, and these passing through a bucket or some such vessel full of water.

There are yet many other sorts and fashions of instruments to distill withall, whereof I meane not to speake at this time, contenting my selfe with those which I haue mentioned, as being of more common vse, and fit onely to distill waters: of which it is our purpose onely to speake at this present.

Furthermore, seeing the water doth take his essence and consistence, and other like qualites from the head of the stillitorie, it is good to make choise of the best heads that one can: the best are of glasse: next those of earth, glased within and without: thirdly, those of tinne: fourthly, those of copper laid ouer with brasie: fifthly, those of brasie laid ouer with tinne (but the vessels of copper and brasie haue these two discommodities, the one that they make their waters red, and the second that in copper and brasie there is a venomous qualitie, more then in any other mettall) sixthly, those of iron, especially when a man would distill any thing that is harde to be distilled, and which must be applied outwardly, and not taken inwardly. Such as are not afraid of the cost, doe vse vessels of golde or of siluer: but seeing all are not of one and equal efficacie, it is best to rest contented with glasse vessels or earthen ones well leaded, either with glasse or the fat which is called earth of *Beauvais*, rather then with lead or any other mettall: notwithstanding those of earth are the best: the second, those that are leaded or glazed, or of thicke fat earth: next those of tin. Those of glasse must not be of brackett mettall, but of cry- stall earth well armed, which, seeing they cease not to be brittle, how well soeuer they be armed, must be heated by little and little, whether it be in *Maries* bath, or in hot ashes, or in a furnace fire: and in like sort when your distillation is ended, to let them coole by little and little. And for as much as the head is loose from the body, it will be good to set them together with a hempen cloth which hath been dipped in the mortar of wisdome, which for the most part is made of the whites of egges, beane flower, and a little masticke. The vessel whereinto the water is receiued, and thereupon called the receauer, shall be a glasse violl hauing a long necke, and the beake or spout of the

the head must go into it : and these two in like manner may thus be fastned and cloied together with the saide mortar of wisedome, least the water which shall distill, should evaporate very much : notwithstanding that we see sometimes some receiuers of the fashion of vinals, which are not made fast vnto the beake of the head at all,

The threescore and second Chapter.

What manner of furnaces must be prepared for the distilling of waters.

For the distilling of waters.

THE fashion of the furnaces for the distilling of waters is diuers, as well in respect of the matter to be distilled, as in respect of the vessels which are vsed in the distilling thereof. As concerning their matter some are made of vnburnt bricks, only dried well in the sunne, because they are better to be handled, than those that are thoroughly burnt, & besides they may be cut with a toole, and brought into what fashion one will ; and fitted with fat earth : other some are made of plaster onely : some of fat earth onely : but the best are made with cement, whites of eggs, fat earth, and flockes of wooll : others of beaten bricks, hards, horledung, sinewes of oxen and fat earth. But as for their fashion, it must be answerable vnto the vessels that are set therein : and so some be wholly round, and those are the best and most profitable ; others are foure square : others are raised high like steeples ; others after the fashion of vaults ; some after the manner of houes, all which you may finde out by the sight of the cie in the patternes set downe before, and from which you may gather more instruction and more certaine direction, then by all the descriptions that we can possibly make. Such furnaces as you may see with your eyes, must haue two bottoms, the one lower to receiue the ashes of the coales or whatsoeuer other matter that the fire is made of : the other higher which must containe the burning coales, and must be made after the fashion of a gridiron, hauing barres or rods of iron passing throughout from the one side to the other, quite ouerthwart the furnace ; or else diuided into many small holes, that so the ashes and small coales of fire may fall through to the bottome belowe the more easily, and not staie behinde to choake vp the fire that shoulde heate the still ; the vnderfloore may haue one or manie mouthes, for the more conuenient raking awaie of the ashes which shall be gathered there on a heape, but as for that aboue it must haue but one onely of a reasonable bignes to put the coales or wood in at ; but in the roofof it, it must haue two or three small holes to giue aire and breath vnto the fire, at such time as you minde to amend it. Euerie one of the mouthes shall haue his stopple. For want of a furnace or matter for to make

make one, you may fit and set your vessell, caldron or bowle vpon a brandrich and kindle your fire vnderneath.

The threescore and third Chapter.

How the matter must be prepared before the waters be distilled.

IT is not inough that the furnace and instruments for distillation be made readie in such sort as we haue said, for the matter to be distilled must in like manner be prepared before that it be put into the still. This preparation is of three sorts, that is to say, infusion, putrifaction, and fermentation. Infusion is nothing else but a macerating or steeping of the thing intended to be distilled in some licour not onelie that it may be the more apt and easie to be distilled, but also to cause and procure greater store of iuice to be in it, or else to helpe them to keepe their smell, or else to bestowe vpon them some new qualitie, or to increase their force and vertues, or else for some other ends, as we will handle them in particular and onely one. It is true that this preparation is not necessarie for euerie matter, for some there are that neede not any infusion or steeping, but rather to be dried before they be distilled, by reason of their too great and excessive moisture : other some content themselues with being watered or sprinkled ouer lightly with some licour, as is done in the distilling of drie roses and cammomill which are wont to be sprinkled onely with common water. Some spread them all a summers night in faire weather vpon a linnen cloth to take the deaw, and after they be moist to distill them. Such as are steeped and infused, lie in the sunne, or are held ouer the fire the space of some halfe hower, or many howers, a whole night, a whole day, two daies, three daies, one or mo monethes, according to the nature of the medicine, the diuers intention and purpose of the physition, and the present necessitie. Sometimes we presse and wring out things, which wee infused before the distillation ; and making our distillation afterward of the iuice onelie that we pressed forth : sometimes againe wee distill the whole infusion, that is to saie, both the infused matter and the licour wherein it was infused. Wherefore in this preparation which is made by infusion, you must diligently obserue two things, the time of the infusion, and the licour in which the infusion is made. The time of the infusion must be measured according to the diuersitie of the matter : for those things which are hard or solide, or drie, or intire and whole, deserue a longer time of infusion, then those which are tender, newe or bruised : whereupon it cometh to passe that rootes and seedes require double time to infuse, the leaues and flowers a single and lesier time, and so consequentie of such other matter or things. The licours wherein infusions

Two things to be considered in infusion. The time of infusion.

usions are to bee prepared, must not onelie answer the qualities of such matter as is to bee distilled, in such sort as that hot matter and things be infused in hot licours, and the cold in cold; but likewise the scope and drift intended in the thing distilled, which is the onelie cause of the vsing of varietie of licours in the making of infusions: and these are for the most part raine water, fountaine, or rose water, and they either raw or distilled, crude or distilled iuices, distilled waters, aqua vitæ, raw or distilled vineger, wine, raw or distilled vrine, whay raw or distilled, mans blood, swines blood, and goats blood distilled, or vndistilled. For this respect things that haue small store of iuice, as sage, betonie, balme, and wormwood: or which are verie fragrant as all sorts of spices, all sorts of odoriferous herbes, all aromaticall rindes or woods, as cinnamom, would be infused in wine to the beggering of some reasonable store of iuice in them which haue but a little, and to keepe the aromaticall fragrantnes in those which smell sweete, which might otherwise euaporate and spend through the heat of the fire, they best & most precious parts, they being of so thin and subtil a substance. It is true that the best and surest course is not to infuse spices or aromaticall things, neither in wine, nor in aqua vitæ, but rather in common water: because in distilling of them, as prooue will make triall, the vapours will rise too soone, and leaue behinde them the vertues of the aromaticall things: whereas water will not goe vp before it haue them with it. Such matter and things as are hard and metallous, as pearles, corall, shels of eggs, crytall, emeraldes, lacynts, and other such are infused commonly in raw or distilled vineger, or else in vrine distilled or vndistilled: but such waters are not to be taken inwardly, but onely to be applied outwardly. In like manner when it is intended that a water shall haue an opening qualitie and pearce deepe or swiftly, the matter thereof may be infused in raw and crude, or in distilled vineger; as for example, the waters distilled against the stone or grauell, or to take away the great obstructions of the liuer spleene and matrix. When you desire that the water should retaine and keepe in good sort the vertues of the matter whereof it is distilled, it may for the better infusing of it, be distilled in his owne iuice, or in some iuice obtayning the like vertue. Things are likewise sometimes infused in bloud, either of men, swine, or goats, for the increase and strengthening of their vertues; as the water vsed to be distilled for to breake the stone, whether it be in the raines, or in the bladder, may first haue receiued an infusion made in the blood of goates. As much is to be thought of the whay of goates milke, wherein things are wont to be infused to draw waters of, which are to serue in cleansing of the cervix of the raines or bladder.

Generally, regard must be had that all infusions be made in such liquor, as will strengthen and increase the vertue and force of the things

What kind of things are infused in wine.

What matter or things are to be infused in vineger or vrine.

Infusions in the blood of man, a swine, or male goat.

Infusion must be made in such liquor as will increase the force of the things distilled.

things intended to be distilled, as also that such matter before it be set to infuse be sired, stamp small or bruised, putting into it sometime the twelfth part of salt, as vnto those that are too moist, as flesh, blood of men or other beasts, as well to keepe them from corrupting, as to helpe forward the separation of the humour that must be distilled.

Sometimes the things to bee distilled are suffred to putrefie, and then afterward distilled: yea sometimes the verie putrefaction it selfe is the waie and whole worke for distilling of such things, as we will declare hereafter.

Fermentation is accomplished and performed vpon the matter of infusion alone, or the whole infusion together, in the heat of the sunne in the dog daies, or else in some furnace or horse dung: it requirerth manie daies continuance as fower or more, and by how much this fermenting and preparing of the thing is the more substantially performed, by so much the greater quantitie of water will be distilled and drawne out.

The fower and sixtith Chapter.

Generall precepts about the distilling of waters.

After that the matter is in this manner and fashion prepared as wee haue saide, there remaineth nothing more to be done, but the putting of it into the stillorie: and herein you must carrie your selfe verie wisely and discretely, in obseruing certaine generall precepts for the ordering and directing of the whole worke vnto a good and perfect ende.

First prouide that your furnaces bee set in such a place, as where they may not indanger the setting of your whole house on fire; as that they also may not be subiect to haue any thing to fall vpon them.

If you distill quicksiluer or any other such thing which hath a venemous malignitie come not neere vnto your stils, all the time of the distilling of such matter: for the smoake or fume which they breath out, doth draw vpon a man the palsie, exulceration of the lungs, lethargie, or oftentimes sudden death: as you may see by experience in such as are plummers and imploied in melting of metals.

If you distill in glasse vessels, you must make choise of such as are well baked and seasoned, hauing no bubbles or knots, but equall on euerie side and smooth, thicke, and prooued before hand.

The coales must be through kindled and halfe burned before you put any thing into the still, that so the fume or yet any other noysome qualitie of the coales may not remaine to breath vpon it: or at the least put some few ashes or small quantitie offand betwixt the still and the furnace, that so the coales may not infect the water with the smoake: Likewise the fire is not to be made with wood halfe rotten,

P p

or

The addition of salt.

Putrefaction.

Furnaces must be set in a place where they may not doe or take hurt, when we are so stand far off from the stilles and not so come neere them.

The choosing of glasse stilles.

or that sinketh, or with charcole buried and made in a pit, of coale drawn and digd out of the earth, whether they be of stone or earth, for feare the stilling vessels and water should bee infected and marred with the filthie and stinking vapour thereof.

A gentle fire at the first.

The fire must not be hastie or headlong at the beginning, as well for the safetie of the vessels which might thereby be broken, taking too sudden a heate: as also to the end that the matter distilled may become acquainted with the fire by little and little: and that so farre as till the fire become to the third degree, if need so require.

What quantitie of matter is best to be put in the still.

You must not put into your stills or a limbecke too great a quantity of matter, for so it might runne over and be cast forth againe; and furthermore that vnderneath would be parched and dried away, and that about would remaine as it was put in: but it is rather the safer course to shift them oft, and so by this meanes you shall have greater store and plentie of water.

The water of Maries bathe may not bee hotter then the finger may indure to stay in it: howbeit oftentimes there come things to be distilled in the double vessell, for the distilling whereof if it should come to passe that the heat of Maries bathe should not be vehement enough, then mixe therewith some small sand to increase the heat of the water.

To distill in the heat of sand.

If the glasse still happen to cracke being set vpon the fire, you shall let the spirits from evaporating, if you dip diuers linnen cloathes in the whites of eggs well beaten, and apply them vpon the cracke of the glasse hot one after another: in such sort that so loone as one shall bee dried like a crust, an other be readie by and by to put vpon it, and so to continue.

If you distill your waters in the heate of sand (as manie doe and that verie ofte) or of ashes, or the filings or scales of iron, made in powder, the bodie of the still must be armed (whether it bee of glasse or brasie, or any other matter) with verie fine ashes that haue bene sifted, or with sand, or with the filings of iron finely powdred, in such sort as that the ashes may be higher about the glasse then the matter is within by a halfe foote good. The ashes shall be placed in the vpper part of the furnace, or in a place of hold made vpon the furnace, and heated with a coale fire which shall bee below in the bottome of the glasse. The waters so distilled indure much longer, then those which are distilled in Maries bathe: but in all other points they resemble and are like one vnto an other.

To make a speedier distillation then ordinarie.

If you haue not the leasure to make your distillation in a still, and that yet you would gladly distill some certaine iuice or liquor: then cause your iuice to boyle in some vessell, and over this vessell set a glasse: in this glasse the vapour will turne into water: by this meanes vinegar is turned easily into a water which is verie profitable for the spots

spots and staine, of the cie, especially if before the distilling of it you cause some few slips of rue to be boyled in white vinegar.

Hot things that they may prooue effectually would bee distilled three or fower times, putting and adding vnto euerie time new matter, or else to rectifie them by themselves: but as for cold things, such as the rose is, once distilling is sufficient: for by this meanes it holdeth stil his cooling qualitie in better sort, seeing the force of the fire begetteth heat and sharpnes in things.

To distill one water manie times.

When you would distill one water three or fower times, you must at euerie distillation diminish the heat of your fire halfe a degree, and afterward a whole degree, and so consequently vntill in the end you come backe vnto the first degree spoken off before, and called such a heat as is but warme: the reason is because that the matter becoming more and more subtil at euerie distillation, craveth not so great a heat at the ende as it did at the beginning when it is in his grossest state and condition. But it is contrarily practised in the extracting of quintessences out of any thing: for then the heat is too bee increased and augmented more and more.

The heat required to the distilling of one thing.

In all manner of distillations of waters, you must carefully see to the separating of the flegme, that is to say, the grossest, thickest and most watery part of the humor distilled: and for the doing hereof you must carefully consider of the matter which you distill: because the flegme cometh forth sometimes first, sometimes the least in the distillation as in the distilling of aqua vite: it staeth the lest, notwithstanding that it bee distilled diuers times: in the distilling of the most part of other things it cometh forth first, as in vinegar, hony, and such things: and the thing is discerned by tasting of the first and last distilled waters. And if it happen that the flegme bee not separated in this sort, as indeed it is not in some such, as with which it is mixt: then the next course is to set such waters in the sun certaine daies in vessels covered with linnen clothes, or parchment prickt full of small holes that so the excrementous part by such meanes may be consumed and wasted: or if the sun faile, as in winter time, then you must set your vessel containing your distilled waters in other vessels full of water, and cause them to boile to the consumption of the third part.

To separate the flegme in distilled liquors.

The time of the flegme his coming forth.

The distillation is to be judged to be in good state and case, if betwixt the fall of euery drop you can accompt to the number of twelue: and hence also is the iudging of the force and quantitie of the fire to be learned and fetcht.

When the still is in good temper, and stilleth not too fast nor too slow.

If any man desire that waters should haue some smell, taste, or other qualitie of some thing, as of hony, cinnamom, camphire, musk, or other like sweete, smelling thing, (whether it bee to giue such smell to the thing that hath none at all, or vnto something that hath a bad and vnpleasant smell, as wee will speake of by and by in the water distilled

To giue a good smell or taste to distilled waters.

stilled of mans dung) it will be good to annoint and besmear the head of the still with these things, or else to tie vp the same in some little knot of linnen cloth, and hang them at the verie point of the spout or pipe, to the end that the water distilling through this matter, may retain that smell or other qualitie intended.

And whereas distilled waters by force of the fire are euermore seen to retaine some impressiōs and printes of the heate, it will be good presently after they be distilled, to let them stand sometime vncovered in the vessels wherein you meane to keepe them, hauing yet therewithall regard, that neither their small nor any part of their force do walle or spend: and therefore to take the surest course, it will be best to set your vessell close and fast stopt in some cold place in moist sand to diminish and take away the great heat of the same. Notwithstanding you must marke and know that cold waters, which shall be distilled in Mariess bath, will haue no great need to be so vncovered, but that they rather must be set in the sun in a glasse vessel not altogether full: or else that they with their vessel be set ouer head and eares in hot sand for the space of forty daies, to the end that their flegme and thickest humour may be consumed.

If your distilled waters become troubled, you shall restore them to their clearenesse by putting therinto some one or two drops of vinegar for euery pinte of water.

The fūe and sixtieth Chapter.

Of the particular manner of distilling of herbes, rindes, flowers and rootes.

Distilled waters are of diuers sorts and vertues: some are Physicall or Medicinable, as the water of roses, sage, marierom, and such like. Others are nourishing, as restoratiues, and many both medicinal and nourishing, as nourishing restoratiues: whereinto are put medicinal things. Others are purgatiue, as the water or licour of rubarbe if it were new and Greene. Others serue to grace the face and handes and to make beaunfull. Others for to gratifie the nose by yeelding a sweet smell, as those which are drawne out of spices and sweet smelling simples, vsed also to wash the hands, face, and whole body, and againe all these waters are either simple or compound: but we will first speake of the simple medicinal ones.

Wormewood must be distilled in Mariess bath to draw out his water in such sort as that it may expresse by smell and taste from whence it came: and for the better dooing of it, you must see that you distill it not very new, but somewhat dried and afterward infusing it a little in wine to distill in it Mariess bath, or in hote ashes: Mugwort, agrimony, sorrell and such other like plants, are thus distilled also,

also, but with obseruation had of the generall things specified before. Thus the water of winter cherries is distilled, seruing against the stone and grauell as well of the reines as bladder.

The vttermost pilling of common walnuts, whether it shal willingly or no, may be distilled in the moneth of September: and the water drawne from them, drunke in small quantitie with a third part of vineger, is a certaine remedie against the plague if before drinking of it you cause the partie to be let blood: it is singular good also to make gargilines of, for the vlcers of the mouth: it is good also to foment goutie places withall, and good to colour the haire blacke. Water distilled of the leaues of the walnut tree in the end of the moneth of Maie is singular for to drie and cicatrize vlcers, if they be washed euening and morning with a linnen cloth moistned therein.

To distill strawberries, you must let them putrifie in a glasse vessel putting thereto a little salt or sugar, and then afterward to extract and draw out their water which is verie soueraine against venome: as also to take way spots, to prouoke the termes, and dry vp weeping eyes: it will performe all these vertues in admirable manner if there be mingled with it a little aqua vite.

The inward rinde of the ash tree being distilled doth yeeld a singular water against the plague, if it be drunke in equall quantitie with aqua vite, as three ounces of either, especially if the same drinke in the same quantitie be drunke againe within three houres after: it is good also being dropt into the eares for the noice in them.

The stones of blacke cherries, being broken, or the kernels alone distilled, make a water which doth quite take away the fit of the falling sicknes in yooing children, presently after that there hath bene put into their mouth about halfe an ounce.

The distilled water of newe filberds, drunke the weight of two drams, is a present remedy against the collicke and gripings of the belly, a thing that will not faile, hauing bene prooued and tried.

The water which is distilled of the barke of danewort or elder tree, being oftentimes drunke, doth euacuate and draw the water out of such as haue the dropisie.

The water of betony: you must stampe the leaues of betonie and infuse them a certaine time in wine and after distill them. The water of balme and sage is distilled in like manner. The water of betony is good for the diseases of the head, reines and bladder. The water of balme reioyceth men, keepeth away the fits of the Apoplexie, and falling sicknes, it causeth a good memorie, taketh away the paine of the teeth, breaketh the stone, healeth the dropisie, preserveth from venome such as haue swallowed any spider, if it be drunke presently after.

The water of gentian: Take foure pound of the new rootes, or rather

Troubled waters.

Water of wormwood.

Water of winter cherries.

Water of common walnuts.

Water of walnut tree leaues.

Water of strawberries against venome spots. To procure teares. To drie the weeping eye. The water of ash tree.

Water of cherries stones and kernels. The falling sicknes. Water of filberds.

Water of danewort.

The water of betonie.

The water of Gentian.

The plague.

rather of the dried rootes of gentian: chop them small, infuse them in wine, or besprinkle them onely, then afterward distill them. This water is singular against the plague, all sortes of vendemie, the stone as well of the raines as of the bladder, and to heale inward apoftemes and vlcers.

The water of pillorie.
Paine of the teeth.

The water of pellitorie: Take the rootes of pellitorie new or old, cut them small and infuse them in verie good wine: the water is good for to appease the ach of the teeth, to strengthen them and keepe them cleane, if the mouth be washed therewith in the morning, or else when it seemeth good to doe it.

Water of ciebright.
The water of nicotian.

To make water of ciebright: Take the leaues and flowers of ciebright, distill them: the water thereof doth cleare the sight.

The water of nicotian is distilled as the other going before: but of this we haue largely discoursed in the second booke, & haue shewed that it hath marvellous effectes, against the *Noli me tangere*, cankers, ringwormes, scabs, shortnes of breath, and the dropsie.

The water of Pauls betonie.
Leprosie.
Scabs.

In this sort also you must distill Pauls betonie: the water whereof is singular to heale woundes, scabs and other diseases of the skin. The vse of this water is very excellent for the leprosie, pestilent fevers; obstructions of the liuer and spleene, and exulceration of the lungs. In this sort also is mouf-care distilled, whereof we haue spoken in his place in the second booke.

The water of hyssop.

The water of hyssop must be distilled vpon hote ashes: it is excellent for the paine of the teeth, to prouoke womens termes, for the cough, and other diseases of the lunges.

The water of turneps.

The water of turneps: Take whole turneps with their skinned and all, or else the skin alone, you shall distill a water (especially of the pilling or skin) which will bee profitable to prouoke vrine and sweating.

Water of linons.

Water of linons or the iuice of them doth helpe very profitably in the stone of the reines.

The water of fenell.

The water of fenell: Take the rootes and leaues and distill them, or else boile them in water, afterward put them al hote into a tin or copper platter, and couer the same with an other platter: the liour which shall bee vpon the vppermost platter shall be kept in a viall, to put a drop or two thereof into the corner of the eie, for the diseases of the eie.

The water of parsley.

Water of parsley of the garden: Stamp in a mortar the leaues of parsley, then distill them: it cleanseth the stomacke and comforteth the reines.

Water of smallage.
Leprosie, basill,
mynar, mallow,
etc.

After the same manner are distilled the waters of smallage, basill, buglossie, mints, cammomill, marigoldes, Carduus benedictus, clarie, succorie, capillus Veneris, cheruile, endine, aller, fumitorie, broome, luie, horsetaile, lauander, marieroni, melilot, mallowes, hocke,

hocke, water lillies, nigella, organic, pionie, poppie, pellitorie of the wall, burnet, plantaine, pureclaine, penniroyall, rue, rosemarie, madder, sage, sauorie, scabious, scolopendrium, nightshade, houselecke, willow leaues, groundswell, thyme, white mulleine, tansey, valerian, veruaine, of the flowers and leaues of the stinging nettle, as well as of the dead nettle, and of manie other plantes, obseruing the generall precepts, which we haue set downe before.

This is the manner of distilling cinnamom: Take a pound of fine cinnamom, breake it lightly, and infuse it a certaine time in the distilled water of roses the quantitie of fower pounds, and of verie good white winchalcie a pound, after put it all into a glasse still to be distilled either vpon hote ashes, or else in Maries bath: such water is forcible against all cold diseases, especially of the stomacke, spleene, liuer, braine, matrix, sinewes, faintings and swoonings, to prouoke the termes of women and retained vrine, to stay vomits, to repress the malignitie of all sortes of cold venome, and for the deliuerie of women that are in trauell of childe.

Rose water is distilled, either of new roses or of drie roses, and they are either white or carnation. The fashion and manner of distilling of it is diuers: for sometimes it is distilled by defluxion tending downward, which is called in Latine *Destillatio per descensum*, according to the matter which we shall declare in the sequentie first chapter hereafter following: Sometimes it is distilled by insolation, as we will likewise shew in the same place: sometimes and that oftent, as also best, in Maries bath, and before the distilling of it, if the roses be dry it is good to moisten them with the vapour of some boiling water or some roses. The water which is distilled of red roses, is more cordiall and corroboratiue, as that which is made of white roses is more cooling. Then to distill good rose water you must infuse roses in distilled role water, or else in the iuice drawne from them, and that by the space of two or three daies, your vessel being well luted and stopp, and afterward put them in a glasse still, couered with his head, and they both well luted and fitted one to another, and finally set them thus conioyned in your vessell of Maries bath.

Water of orange flowers, called water of Nasse, being distilled by a bell, is good to procure vomit, as also to make a good smell.

The water of wilde apples and of oke apples vnripe, of chesnuts, and of verinice halfe ripe, is good against the red pimples and harde knobs in the face.

The waters of flowers (as of rosemarie, which is good to reioice the hart: of elder tree, which keepeth the face cleere from sunne burning: of marigolds, which comforteth the eies: and such others) are distilled after the manner of rose water.

The threescore and fifth Chapter.

Of the manner of distilling licours.

WE haue heretofore declared that the singular and rare efficacie and vertue of things distilled, haue in such sort raniſhed and carried away the ſpirits and ſtudies of men, as that there is ſcarce any thing to be found which hath any good propertie and ſpeciall quality in it, but it hath bene brought vnder the yoke of diſtillation. But in this place I call liquor all that which hath a liquid conſiſtence, whether it be iuice, humour, excrement, or any ſuch like flowing thing, as wine, vineger, hony, vrine, iuice of herbes or fruits: and you cannot but thinke that the iuice of herbes or fruits being diſtilled doth afford a farre better water, than that which is diſtilled of herbes, yea or of fruits either: we will begin therefore with diſtilled wine.

*What is meant
by iuice in
this place.*

Aqua vitæ.

*The bladder
ſtille to diſtill
aqua vitæ in.*

*Aqua vitæ
as diſtilled.*

Aqua vitæ is thus diſtilled: (notwithſtanding that all manner of wine is fit to make Aqua vitæ of, ſo that it be not ſowre, ſpent, or otherwiſe tainted, yet indeede the ſtrongest and nobleſt claret wine is the beſt, whether paler and inclining to white, or high coloured and inclining to red:) Take (then) of claret wine a certaine quantitie according to the bignes of the veſſell wherein you diſtill it (which is called the bladder, as we haue declared before, namely in that it is faſhioned like vnto a ſtraight gourd) enen ſo much as may fill it with in one third part of the top, that ſo the vapours may haue ſpace to riſe, then ſet the head vpon it hauing a long ſnout, and this muſt be well cloſed with the mortar of wiſedome (being the ſame which wee haue before deſcribed) to the ende that no vapour may paſſe out thereby: and thus cauſe it to diſtill with the heate of hot, but not boyling, water: or elſe at a reaſonable heate in aſhes or in ſmall ſand, increaſing the fire continually by little and little, and yet taking heede that the wine doe not boile: and to the end that you may haue excellent good Aqua vitæ, you may diſtill it ouer foure or five times: for by how much the oftener it is diſtilled, by ſo much the better will it be, as we haue ſaid already. For the firſt diſtillation it ſhall be enough to draw the tenth part, that is to ſay, often pintes of wine one pinte of Aqua vitæ, more or leſſe: for the ſecond halfe of that which you ſhall haue put in, that is to ſay, halfe a pinte: for the third likewise the halfe or a little leſſe, which ſhould be a quarter of a pinte: in ſuch ſortas that the oftener it is diſtilled you muſt haue leſſe in quantity, but more in value and worth; and therefore in the beginning you muſt either take a great quantitie of wine, or elſe haue many veſſels. It is true that if the diſtillation be well made, the fourth will yeeld the like quantitie of water to that it receiued, and there will be no loſſe in it:

and

and herewith likewise it is to be wiſhed that euery man would be contented without going ouer it any more: becauſe ſo manie repetitions and rediſtillations is a matter of great labour and coſt. In the meane time this muſt be remembered, namely, to leſſen the fire at euery diſtillation halfe a degree, and afterward a whole degree, that ſo in fine you may come to the firſt degree called blood warme. And truly by mine aduiſe the firſt diſtillation ſhould be in the fire of aſhes, and the other in Maries bath. This repeating and going ouer with it by diſtillation after diſtillation ſhall be to take from it his flegme, that is to ſay, his groſſeſt and moſt waterie humour, which reſteth in the bottome, and is accuſtomed to come forth laſt, after that it is well digeſted by being oft diſtilled. Finally it may be gathered that the Aqua vitæ is ſufficiently diſtilled by theſe ſignes: if there come backe the like quantitie of water, if being ſet on fire, it conſume and waſte all away, not leauing any ſigne of moiſture behinde it in the bottome of the veſſell: if a linnen cloth that hath bene dipt in the Aqua vitæ being ſet on fire doe not burne any iote at all, if a drop of oile being put into it, goe to the bottome, if a drop of Aqua vitæ being powred in the ball of your hand, doe waſte away and vaniſh very ſpeedily, if yellow amber being ſet on fire doe burne in the Aqua vitæ, and likewise if camphire being put into Aqua vitæ, be diſſolued of it. You muſt alſo note that Aqua vitæ is ſometimes diſtilled of lees of very good wine, being neither ſowre, nor ſpent, nor otherwiſe tainted; and ſuch Aqua vitæ ſometime is not inferiour but ſuperiour in goodnes vnto that which was diſtilled of the wine it ſelfe: Again if it be often diſtilled ouer, it becommeth more hot and drie, then that which is made of the very wine: but yet indeede that which is made of wine is more pleaſant vnto the taſte, and of a more delightſome ſinell: Aqua vitæ is alſo ſometimes diſtilled of beere, but that is not ſo good as the other of wine. The veſſels for the diſtilling of Aqua vitæ are diuers, that is to ſay a good ſtill, ſitting in aſhes or ſand, or a retort in Maries bath, or the bladder: Aqua vitæ may alſo be diſtilled in a caldron or pot of copper or braſſe made in manner of a beefe pot, couered with a couer and hauing a ſtraight noſe comming out of it and riſing vp on high, and turned downeward againe with a direct angle, and ſo paſſing through a bucket full of cold water. After that the Aqua vitæ is diſtilled you muſt ſet it out into the ſun a certaine time to make it yet more and more ſubtile. After this ſort you may diſtill all iuices and licours, as mans blood, vrine, vineger, the dew, milke, whites and yeelkes of eggs, mans dung or beaſtes dung. The vertues of Aqua vitæ are infinite. It keepeth off the fits of the Apoplexie & falling ſickneſſe, in ſuch ſort, as that they which are ſubiect vnto that diſeaſe in the time of winter, muſt euery morning take a ſpoonefull of Aqua vitæ ſugred, and eat a little bit of white bread: it driueth away venome, keepeth

*Signes ſhowing
that the aqua
vitæ is ſufficiently
diſtilled.*

*Aqua vitæ is
diſtilled either
of wine, or wine
lees or beere.*

*Veſſels for the
diſtilling of
aqua vitæ.*

*Vertues of
aqua vitæ.*

wines

wines from spending themselves, from putrifying, and from growing thicke and troubled: it cureth speedily all the cold diseases of the sinewes, muscles and starued members, if they be fomented therewithall, it killeth worms, and awaigeth the paine of the teeth, &c. See more in our booke of secret remedies.

Distilled vinegar.

The difference betwixt Aqua vine and Vineger in their manner of distilling.

For the distilling of vinegar you must vnderstand, that there is some difference betwixt the distilling of Aqua vitæ and vinger: for seeing that wine is of a vaporious and fierie substance, the chiefeft and principallest parts in it doe run at the first distillation, that is to say, with the water that first commeth forth, insomuch as that that which remaineth and staeth behinde in the vessell tasteth no better than common water, hauing in it no force or vertue. On the contrary, the first that distilleth of vinegar tasteth nothing at all, save onely that it sheweth it selfe somewhat more in his earthie partes by the alteration of his qualitie (for vinegar is no other thing but a corrupted wine, made eager by putrefaction) for indeede his true, naturall and proper qualitie of eagernes and sowernesse, as also the force and strength thereof, staeth behinde with that in the vessell, till after the first water be past. And by this it appeareth that that which remaineth in the wine after the first distillation of it, should be called flegme, as that should also which commeth out first in the distillation of vinegar, be called flegme of vinegar. Wherefore to haue good distilled vinegar, after you haue put it in like quantitie, as we haue said of wine for to make Aqua vitæ into the stillorie, you must let the flegme (that is to say, the warrie humour) distill and set it aside in some vessell by it selfe: afterward when the vinegar shall be consumed vnto the third or fourth part, and that it shall relish in tasting of the distilling drops that the eager parts of the vinegar begin to come, it will be good to set that aside to serue for infusions: and then afterward to increase the heate of your fire a little and so continue your distillation, vntill such time as the water begin to looke red and to haue the consistence of hony or of pitch, and then you may be bold to set it aside for your speciall vse, not in medicine, but otherwise in all things concerning mettals and corrosiues. For this water making the third alteration in distillation, tasteth of adustion, and is called the sanguine part of vinegar. Vinegar would be distilled in the same vessell that roie water is distilled in, especially in ashes or hot sand, rather than in Maries bath: In like manner and after the same sort you shall distill vinegar of roses, of elders, of cloues, and other things. Distilled vinegar is good to dissolue hard and metallous things, as pearles, corall, egge-shells, crystall, and emeralds: notwithstanding gold and silver cannot be dissolved by it. This is the cause, that when Alchymists would distill any metall or stones to draw out their oile: they vse first to dissolue their matter in vinegar or vrine distilled.

Salted

What vessels vinegar would be distilled in.

The vertues of distilled vinegar.

Salted water or sea water is made sweete by this meanes: Fill a Salted water as pot of salt water, let it boile by the fireside, and afterward distill sea water. with a stillorie, as you doe roie water, and the salt will stay in the bottome. And this is also the way to trie what mettals are mixt with minerall waters.

The manner of distilling of hony is such. When the hony is once well purified, put it in small quantitie into a stillorie (for in a great quantitie it would swell ouer, after that it should once feele the heate) distill it in Maries bath with a gentle and warme heate: the water that commeth first forth is the flegme which must bee kept by it selfe for to colour and make long the beard and haire. Afterward increasing the heate a little, there will come forth a water of a yellow, and as it were a golden colour, which you may keepe in an other vessell, seeing it is good to cleanse wounds both shallow and deepe ones: your distillation continuing there will come forth an other water high coloured and more red then the former, and then if you doe well, you shall change the heate of the water into the heate of the ashes or sand, that is to say, that you should remooue your still and set in ashes or sand euen almost vp to the very mouth, and that there be not about three inches in breadth betwixt the fire & your still, continuing to increase your fire and to make it bigger then it was before, and by this means there will come forth a water more clammy then the former, and may be called the oile of hony. After this manner you may distill Turpentine still Turpentine and such other thicke and clammy licours. Indeeede to distill such thicke licours, were better to be done by a retort, rather then in Maries bath, as wee will manifest when we come to speake of the distillation of oiles.

For to distill the blood of a male goate: Take the blood of a yong male goate being well fed, but not that blood which shall come forth first, nor that which shall bee last, but that which shall come forth in the middle: let it stand and settle for sometime, and then cast out the water that shall swim about: after with a tenth or twelfth part of salt stir it well a long time and worke them together very thoroughly; this done put it vp into a vessell well stopp and luted, and bury it in a dunghill of horse dung for the space of fortie daies: afterward distill it oftentimes ouer powring it still againe and againe vpon the drosse or bottome of the distillation staying behinde. After you haue thus distilled it foure or five times, you shall haue a meruellous water, and yet it will be better if it be set in horse dung fortie daies moe after that it is distilled. This water is singular for the breaking of the stone.

The blood of a yong man is distilled in the same sort, but the man must bee of a good complexion and sound body, of the age of twenty yeeres or thereabouts, of a well fed and fleshie body: and it serueth in steed of restoratiues vnto those which are in a consumption:

it

Hony distilled.

To colour the haire.

Turpentine distilled.

The blood of a male goate distilled.

The stone. Mens blood distilled.

It is good likewise against rheumes and distillations falling vpon the ioyntes, if the diseased places be fomented therewithall. Howbeit I doe not greatly approue the distilling of mans blood for any such end, seeing it is an vnworthy and heynous thing and not bebecoming Christians, and a thing likewise which in the middelt of so many other helps may easily be spared. See more amongst our secret medicines.

The blood of a drake distilled.

The blood of a drake is in like manner distilled against poison: and after the same sort may the blood of a calfe, badger or hare be distilled.

Distilled milke. The vertues of distilled milke.

You may distill milke also after the same manner that Aqua vitæ is distilled. It is reported that in Tartarie the water of distilled milke maketh men drunke, such milke therefore must be good and fat, such as is the milke of a heyfer. Some Physitions hold that distilled milke is good against the Jaundise, as also against a quartaine ague, if it be distilled with like quantitie of wine.

The milke of a she-goate distilled.

The milke of the goates is oft distilled, to serue for the cleansing of the vlcers of the reines and bladder; whereunto the milke it selfe would serue a great deale better, if they be fed for the most part with burnet.

The distilling of mans dung. Deepe vlcers.

Mans dung is distilled in a glasse stillitorie in such manner as aqua vitæ is distilled: the water that it distilleth, (especially if it be of the dung of a red or freckled man) is soueraigne good to heale and cicatrize deepe, hollow, old, and rebellious vlcers, and to take away the spots of the eies. Taken also in manner of a drinke, it deliuereth from the falling sicknes, and in like sort if the head be rubd therewithall: it deliuereth also from the stone of the reines and bladder and from the dropisie, and doth them very much good that are bitten of a mad dog, or of other venemous beasts. Notwithstanding whereas such water simply and without any manner of mixture distilled, doth retaine the smell of the said excrement, it will be good to the end to giue it some good taste, to clap to the end of the nose of the still some nodule or little knot of linnen cloth containing muske in it; or else to anoint the head within with the said muske or some other such like thing that is of a good saour. And thus may the dung of kine or pigeons be distilled; the distilled water whereof is good to breake the stone.

The byting of a mad dog. To giue a good smell to the distilled water. Water of cows dung and pigeons dung.

The seuen and sixtith Chapter.

Of the manner of distilling liuing creatures, or their parts.

To distill liuing things.

TO distill the body of any beast, you must first strangle it, that so it may not shed any blood, and after take away all his fat (if hee haue any) & the entrailes: then chop the flesh small, & cast vpon it

it the tenth or twelfth part of salt, and so distill it in Maries bathe, or vpon hot ashes after the manner of roses. Thus the yoong and tender storke which did neuer flie is distilled; but he must first be bowelled and stuffed with an ounce of camphire and a dram of amber: the water that cometh thereof is excellent to make liniments and fomentations in pallies and conuulsions. After the same sort is the pie, frog, snails, ants, liuers, and lungs of calues, of a foxe, and other such like beasts distilled: howbeit, without any such long and tedious preparation they may be distilled by and by after the manner of other waters, as wee will soorthwith declare in the distillation of restoratiues.

The water of a storke.

The water of swallows: take swallows the weight of fixe ounces, and castoreum an ounce, let them infuse a whole night in water and put into a lembecke bee distilled: this water is singular to preferue one from the falling sicknes, if it be taken but once a moneth to the quantitie of two spoonesfulls, and that in a morning fasting.

Water of swallows.

The flesh of beasts is distilled on this manner: cut and chop the flesh small, incorporate and stampe it with a tenth part of common salt: after put it in a vessell (like vnto a gourd) well stopped that so you may burie it in the earth, let and compassed round about with vnquencht lime and dung of horses halfe rotten, to be digested in the same for the space of a moneth or thereabout, during which time you shall water the said vnquencht lime and dung often with warme water to stirre vp their heate, and you shall renew the lime and dung three or foure times euery weeke: for you must thinke that for want of heat, the flesh might putrifie in steed of digesting. And after they haue bene sufficiently digested (which you may know by seeing the grosser parts separated from the more thinne and subtile) the vessell shall be taken out of the dunghill, and the head of a still set thereupon the nose or snout being well lured, and so it shall be distilled in Maries bathe diuers times ouer, powring the distilled water againe vpon the residue or drosse remaining in the bottome so oft as you redistill it. And after the fifth distillation, you shall set aside the water to keepe, if so be you had not rather circulate it, to giue it the nature as it were of a quintessence.

The water of flesh.

As well the whites as the yelkes of eggs are distilled after the manner abovesaid: but they must not be digested in the dung about fise or six daies at the most.

Water of eggs.

The waters thus distilled are more then restoratiues, hauing the vertue to increase the substance of the body and members, as natural flesh and nourishment doth.

The

The eight and sixtieth Chapter.

*Of the manner of distilling of restoratives.**Restoratives.*

Restoratives are prepared after diuers sorts, notwithstanding the most vsuall and best is thus: take the flesh of a veale, kid or weather, cut and chopped as small as possible may be: or else take muscous flesh which is called the whites of capons, pullets, fat and well fleshed hens, after they haue been well hunted and tired, cut likewise and chopped small: put vnto this flesh, calues seete, peeces of gold, or rather the thinne beaten leaues of gold: put all in a glasse still well luted with mortar made of flower, whites of eggs and a little masticke: into this still, you shall cast (for the giuing of some grace vnto the distillation, & somewhat to mitigate the heat that it might get by the fire) halfe a handfull of cleane barley, a handfull of drie or new red roses, which haue beene infused in the iuice of pomegranates or rosewater, and a little cinnamom: place them all in the still, as it were after the manner of little beds, and straw thereupon the powder of the electuarie of Cold Diamargariton, or of precious stones, and a little coriander prepared and finely powdered to discusse and waste all windie matter. If you would make your restoratives medicinable, you may adde thereto things concerning the disease that presseth. As rootes and herbes respecting the head in the diseases of the head, as betony, penny-royall, itachados, organic, sage, and others such like: for the diseases of the reines, the rootes and plants that are good to breake the stone: for the falling sicknes the seed of piony, and mistletoe of the oake: for the quartaine ague, polipody, scolopendrium, and the rootes of tamariske; for the French disease, the rootes of gentian, enula campana, & the wood guaiacum, & so of other things: yet it seemeth vnto me that it were better that the cordiall powders should not be mingled among the rest, for feare that their force, which is thinne, subtil, and verie fragrant should evaporate through the heat of the fire, and that it would be farre better to straine the distillation through a linnen cloth that is very cleane, and which should haue the cordiall powders in the bottome of it: there may likewise be added a quantitie of treacle, with some conserues, as occasion shall be ministred: the matter thus disposed of, it shal be distilled in a stillitory of glasse well luted (as we haue said) and in Marias bathe; or else in ashes, grauell, or hot sand: for by this meane the distillation will taste least of the fire. It will be good before the flesh be put into the still to be distilled, that they should haue boiled a boile or two in a new earthen pot, to take from it the grosse excrements hanging about the same. Againe, it must be remembred, that if there be any gold put into the distillation, that it will be better to put in such as is wrought into leaues

leaues then grosse peeces: because that grosse peeces in respect of their solidnes consume but a verie little and with much adoe. This is *The diuine* called a diuine restorative and must be giuen vnto the sicke party *floratie*, prettie and warme.

An other manner of restorative after the Italians fashion: take a capon or a good hen, which yet neuer laid eggs, let her or him be pulled aliuie that so the blood may be stirred & dispersed throughout the bodie: after you haue pulled them, take out the guts, and afterward stampe bones and all together in a mortar, putting thereto as much crums of new bread as there is stamped flesh, pound all together with a handfull of scabious either greene or drie, and the weight of a French crowne of the leaues of gold; let it all settle a whole night, after distill it, adding thereto three pound of verie good wine, such as is of a ripe grape.

An other manner of restorative: boyle a capon or some such other flying fowle whole and intire, with burrage, buglosse, scariole, endiue, lettuce, or other such like herbes as shall be necessarie in respect of the disease, and when it hath boyled till it seeme as rotten with boyling, take the broth or supping and put it into the stillitory, afterward put therinto also the flesh of partridge, hen or other such flying fowle cut and chopt small, and adde vnto these such other matter, as you shall know to be necessarie for the present disease, as conserues of roses and buglosse, damaske raisins, the powders of the electuaries of precious stones, aromaticum rosatum, and such like things: and finally distill them after the manner aboue specified.

Some there are which will not make any restoratives but of capons flesh the oldest they can get, such they strangle and plucke by feather after feather not vling the helpe of any hot water, then they take out the entrailes and chop them small: adding thereto flowers or conserues of buglosse, burrage, damaske raisins, mundified barley whole, coriander seed, pearles, powder of the electuarie diarrhodon, or some other like vnto it, and the leaues of gold, they distill all together and cause it to be giuen to sicke persons, women in childbed and old folke.

To make a restorative in shorter time and that vpon the sudden, with lesse cost, charges, as also paine and labour: chop your flesh small after the manner already deliuered, put it into a glasse violl or bottle of a sufficient bignes, and in such sort as that all your peeces of flesh be strung or put vpon a double threed and hold one by another, and the double threed whereupon they hang bee without the bottle, which must bee well stopt aboue with a linnen or cotton cloth, wet in a mixture made with whites of egges and barley flower: set this bottle in a caldron full of water, boyling at a small fire, and there let it stande, fower howers more or lesse, vntill such time

time as a good part of the flesh bee converted into moisture: see that the bottle stand in the water vp to the necke, and that it touch not the bottome of the caldron, and withall well stayed vp on euery side, that so it may not slippe or bend more one way than another. When the foure houres are spent, rebate the fire gently, that so the bottle also may coole by little and little, which if you should take all hote out of the water, it would breake presentlie. Aferward vntop the bottle with warme water if you cannot well otherwise, and draw forth the string and the flesh softly, that so the liquor may remaine alone: straine the water after the manner of hypocras, and aromatize it with sugar and cinnamom, that so it may be giuen to the sicke that are wasted. You may after this manner make restoratiues such like as you shall thinke good, either cheaper or dearer, more or lesse pleasant and delicate, and more or lesse medicinable, as occasion may require.

The nine and sixtieth Chapter.

The manner of distilling compound waters.

Compound waters.

Three sorts of common compound waters.

Sage water compounded.

Turnep water compounded.

Water of angelica compounded.

Falling sicknes.

Water of celandine compounded.

Waters are not onely distilled, of one only or simple plant, liquor, or other matter: but also of many mixt together, and such waters are called compounded waters, by reason of the mixture of many things. These compound waters are of three sorts, some are for Physicke, other some for sweetenes, and the other for fukes and painting, as ornaments to the bodie: we will first and before the rest speake of those which serue for medicine and Physicke.

Sage water compounded. Take equall parts of sage and pennyroyall, stampe them in a mortar and distill them. This water taketh away the paine of the bellie, and staieth cold rheumes if it be drunke with a little quantitie of castoreum.

Water of turneps compounded. Take turneps either garden or wilde ones, or both together, the roots of smallage and parley, and anise seede, infuse them all in white wine or vinfeger, and distill the water as good against grauell.

Angelica water: Take equall parts of Angelica, as well the rootes as the leaues, (but especially the rootes) and the flowers of lauander, infuse them in wine, and there will distill from them a singular water against the falling sicknes, if it be taken in the quantitie of two or three spoonefulls.

Water of celandine: Gather in the beginning of the moneth of May the leaues of celandine, veruaine, rue, and fennell, pound them and draw from euery one of them three ounces of iuice, which you shall mix together: put vnto them some buds of roses, of sugar candy three

three ounces, of very good Tutia foure ounces, and as much of dragons blood: distill them all in a stillitory: This water taketh away the rednes and spots in the eies.

Water of the vine: Take the water that distilleth from the vine-stokes at such time, as they are cut, which is in the spring time, distill it with like quantitie of hony: this water healeth itchings, heate, and rednes of the eies: the very water of the vine alone vndistilled doth the like.

Rose water: Take roses three parts, fennell and rue, of each one part, shred them small and mingle them very well together, afterward distill them, and let the stilling water fall into a vessell wherein is a handfull of the foresaid herbes, this water preferueth the sight, if the eies be washed therewith in summer.

Water of eiebright: Take celandine, fennell, rue, eiebright, veruaine, red roses, of each halfe a pound, cloues and long pepper, of each two ounces: bruse them all and distill them in a glasse stillitorie. This water is singular good for a weake sight.

Water of rosemary: Take Aqua vitæ distilled of white wine, the distilled water of rosemary and sage, of each five pound, of sugar two pound: in these infuse of the flowers of sage and rosemary for the space of eight daies of each two ounces straine them and keepe the water to heale the fistulaes of the eies.

Water of treacle: distill in a glasse stillitorie treacle with a like quantitie of Aqua vitæ and vineger: This water is good to touch the vlcers and rawnes of the mouth withall, especially if there be added vnto it a little bole armoniacke.

An other treacle water: Take olde treacle a pound, of the rootes of Enula campana, gentian, cypers, tormentill, of each an ounce, of blessed thistle halfe an ounce, of conserues of borage, buglosse, and rosemarie, of each an ounce, infuse them all together in three pintes of white wine, a pinte and a halfe of cisterne water, and two pintes of rose water: distill them.

Water of cloues: Take equall parts of cloues, ginger, and flowers of rosemarie, infuse them in very good wine, the space of eight daies, distill the whole: this water comforteth the stomacke, asswageth the paines and wringings of the belly, killeth wormes and maketh fat folke to become leane, or maketh fat the leane if they drinke it mixt with sugar.

Water of saxifrage: Take of the iuice of saxifrage two pound, of the iuice of pearlewort, parley, anise, and clorburre, of each halfe a pound, of white vineger eight ounces, distill them all: This water drunke in the morning breaketh the stone.

Water of swallows: Take swallows and dry them in an oven, make them into powder: mixe it with a little castoreum and a little vinegar,

vineger, distill it all: this water cureth the falling sickenes if it bee drunke foure mornings.

Horsetaile wa-
ter.

Water of horsetaile: Take horsetaile, plantaine, red roses, winter cherrie berries, rootes of holihoocks, and scraped licorice, of each an ounce, of bole-armoniack halfe an ounce, of the seed of gourdes and cucumbers, of each three drams, of the seed of white poppie, six drams, of the seed of quinces halfe an ounce: Infuse them all in whay made of goates milke the space of two daies, afterward distill the water: which will serue for the vlcers of the reins and bladder, if there be foure ounces of it taken warme in the morning.

Flers of the
reins.
Corneflag wa-
ter.

Water of corneflag: Take equall parts of corneflag, Ispoe, and southernwood, stamp them thoroughly, and leaue them so a certaine time, afterward distill them: this water prouoketh womens termes, and killeth wormes in yooing children.

Burnet water.

Burnet water: Take the seede of burnet, parsley, smallage, the leaues and rootes of cloiburre and smallage, of euery one equally: stamp all together, after put thereto of dragons blood an ounce, and a little good vineger: set all to infuse together a certaine time, afterward distill it: this water hath a meruellous vertue against the stone and grauell.

Stone,
Grauell.

A singular water for the grauell, which the deceased *Monsieur de Tillet* had great vse of with happie successe: Take the rootes of parsley and fennell made very cleane and the wooddy part taken out, of each foure handfuls, boile them in twelue pintes of riuier water: when they are halfe boild put thereto of the tender buds of mallowes, holihoocks, violets, and sea weede, of each foure handfuls, boile all together to the consumption of the halfe, after straine them through a white napkin: distill them, putting thereunto two pound of venice turpentine.

A water for
the eyes.

A singular water for the eyes: Takecelandine, veruaine, betony, ciebright, rue, and fennell all new and fresh, of each two handfuls, stamp them together sprinkling them with halfe a pound of white wine, presse out the iuice, and afterward infuse in the same pepper and ginger made in powder, of each halfe an ounce, of saffron three drams; of myrbe, aloes, and sarcocol, of each one ounce; of very good honya pound: distill them all in a glasse stillitorie at a small fire, and keepe the water for the spots of the eyes.

An imperiall
water.

Take foure ounces of the pills of oranges dyed in the shadow of the sunne six daies: nutmegs, and cloves, made into powder either of them by themselves of each foure ounces, infuse the said aromaticall powders in a glasse vial with rosewater the space of seuentene daies in the sunne: after cast vpon the said powders, the rindes of oranges, which you shall let steepe there a certaine space of time. Afterward take of new red roses gathered two daies before a pound, of the roete of cyperus halfe a pound, of the leaues of rosemary, Ispoe, balme,

balme, roses of the bush, of each two handfuls, of bay leaues a handfull, lay them all to dry in the sun for two houres, after infuse them in rose water the space of three houres: this done put them all into a still after this manner. In the bottome of the still make a bed of one pound of new red roses, then next a bed of aromaticall powders and the rindes of oranges, in the third place a bed of violet flowers, and in the fourth place, the last and fourth bed of the afore named hearbes, distill them all in Maries bath with a gentle fire. Adde vnto the distilled water two pound of rosewater or thereabout, so that it may bee in proportion equall to the third or fourth part of the water drawne out by distillation. This water taken in the morning the weight of a dram kepeth the bodie sound, lustie and reneweth youth. It is singular for the paine of the head, teeth, belly, gripinges, palsie, conuulsions, apoplexie, faintings and other such cold diseases. This is the water that is so much esteemed in the courtes of kinges and princes, and amongst the great and renowned Ladies.

An allome wa-
ter.
An allome water: take veriuice, the iuice of plantaine and purs-
laine, of each a pound, seven whites of eggs, ten ounces of roch allom,
mingle them together and distill them. Otherwise: take plantaine,
purslaine, sorrell gourds, nightshade, and veriuice, of each a handfull,
poune them groly, mixe therewith ten or twelue whites of eggs, put
them all in a glasse stillitorie to distill, mingling amongst them halfe a
pound of allom, as you lay bed vpon bed: this water is good for can-
kers, for the rednes of the face, and for vlcers, applying linnen cloaths
thereunto, that haue beene wet therein.

Turgine wa-
ter.
You may likewise distill purging waters, in infusing purgatiue me-
dicines both simple and compound, seeing that they be as new as may
be and that in aqua vitæ, wine, milke, whay, distilled waters, or conue-
nient decoctions, and such waters will haue like vertues as the pur-
ging medicines haue; thus you may distill Catholicum, Diaphoeni-
con, confectio Hamech, and Elestuarium de succo rosarum: thus you
may distill rubarbe, agaricke, hellebor, scammonie, and such other pur-
gatiues that are sound and new.

Water of ru-
barbe distilled.
The manner of distilling rubarbe may bee this: take a quantitie of
new and greene rubarb, whether it be a pound or halfe a pound more
or lesse, make it into small peeces, or make it into grosse powder, and
vpon it cast of the iuice of burrage and buglosse, of each two pound,
for one of rubarbe: infuse them all together for the space of fewer and
twentie howres vpon hot ashes, then distill them in a stillitorie in Ma-
ries bath.

This distilling of purgatiue medicines is for such people as are
very delicate and cannot abide the smell of the purging medicine mi-
nistréd otherwise.

The feuentieth Chapter.

*Of sweet waters particular'y described.**Sweet water.*

Sweet waters serue to wash the hands, face, haire of the head, and the beard: as also to make linnens, garments, gloues, and such other things to smell sweet.

Lauander water.

Water of lauander: take the flowers of lauander new or drie, be- sprinkle or infuse them in rose-water, wine, or aqua vitæ, afterward distill them. The water will be sweeter if you drie the flowers in the sun in a glasse violl close stopt & cast vpon them afterward some white wine: and if in the time of want and lacke of distilled water, you would haue a water presently made which should resemble the smell of the water of lauander, cast a drop or two of the oile of spike, into a good sufficient quantity of pure water, and swill them well together in a bottle or glasse violl with a narrow necke: this water though it be not distilled, yet it ceaseth not to haue the sweet smelling sent and sauour, that the distilled hath.

Water of cloues.

Water of cloues: take halfe an ounce of cloues wel bruised, set them to infuse in a pound and a halfe of rose-water the space of foure and twentie howres, after distill them in Maries bath.

The water of sweet smells.

The water of sweet smells: take basil, mints, marierome, rootes of corne-flag, hyssop, lauorie, sage, balme, lauander and rosemarie, of each a handfull: of cloues, cinnamom and nutmegs, of each halfe an ounce, three or foure citrons cut in sufficient thicke slices, infuse all this in a sufficient quantity of rose-water for the space of three daies, distilling it all afterward in Maries bathe at a small fire, the distillation done, put thereto a scruple of muske.

Rose water musked.

Water of roses musked: take the buds of roses, and cutting out the white put them into the stillitorie, and in the midst thereof vpon your roses put a little knor of muske, and so distill them.

Water of spike.

Water of spike: take spike before the flower be altogether blowne, and taking awaie all the wood from it, lay it on a bed within the stillitorie, after vpon that bed, a bed of roses almost blowne, and thereupon some dozen cloues: but and if you haue not spike, then put lauander in his place, distill it at a moderate fire, and with as little aire as possibly you can giue it: and when the distillation shall be as good as finished, besprinkle the matter with a little verie good white wine, and so finishing your distillation, keepe your water in viols well stopped.

Damaske water.

Damaske water: take two handfulls and a halfe of red roses, rosemarie flowers, lauander and spike flowers, of each a pugill, of the sprigs of thyme, flowers of cammonill, flowers of small sage, of peniroyall, and marierom, of each a handfull, infuse them all in white wine the

the space of fower and twentie houres, then put them in the stillitory sprinkling it with verie good white wine, and scatter thereupon this powder following: take an ounce and a halfe of well chosen cloues, an ounce of nutmegs, of beniouin, and styrax calamita, of each two drams, make them in powder: The water that shall be distilled, must be kept in a vessell verie well stopt.

There is also made a very sweet water of cleere myrrhe, if it be new, ^{Water of myrrhe.} gummie, and diuided into small gobbets, and set to steepe in the iuice of roses six times as much in quantity as the myrrhe: it must be distilled vpon hot ashes at a small fire; for and if you should increase it, there would come forth oile with the water: such water being dropt but onely one drop of it into an hundred of well or fountaine water, maketh it all to smell most sweetly.

Rose-water sweetned with muske: take a glasse vessell of the fashion of an vrinall, that is to say, wide below and straight aboue; therein put twelue graines of muske or more, and stoppe it close with good parchment, setting it in the sunne for foure or fiewe dayes: then take an other vessell of the fashion of the first, which you shall fill with roses dried a verie little and stamped: stop that vessell also with a very thin linnen cloth, or with a strainer: afterward put the mouth of the vessell, wherein the roses be, into the mouth of the other wherein the muske is, lute them well together, and set them in the sunne, in such sort as that the vessell with the roses may stand aboue that wherein the muske is, and that in some window or such other place, where the sunne shineh verie hot. And by this meanes there will a water distill downe vpon the muske, which wil be good either to vse alone or mingled with some other. Otherwise: take twentie graines of muske, nutmegs, cloues, galingall, schænanthum, graines of paradise, mace, and cinnamom, of each an ounce: bray them all and put them in a stillitorie with a pound and a halfe of rose water, let them stand so foure or fiewe dayes, and then distill them.

Water of oranges: take the pilles of oranges and citrons when ^{Water of oranges} they are greene, of each halfe an ounce, of cloues fiewe or fixe, of the flowers of spike or lauander newly gathered fixe ounces: infuse all together in six pound of rose water the space of foure or fiewe dayes: afterward distill them.

Water of orange flowers: take flowers of oranges, distill them in ^{Water of naffe} a glasse stillitorie, or in an earthen one well baked and glased and with ^{or orange flower.} a small fire: you may put to them the flowers of citrons if you will. The water must be kept in glasse bottles couered with fine mats and well stopped.

The counterfeit water of orange flowers: take the buds of red roses, the most double that can be found, but take their yellow from ^{The counterfeit water of orange flowers.} them, make a bed thereof in the stillitorie, and aboue it another bed of

the flowers of lillies, after againe another of roses, and then another of the flowers of lauander, and then another bed of roses againe, and betwixt euerie one of these beds cast and sow some bruized clowes, and in the midit of all make a little pit, in which you shall put certaine graines of muske, or ciuet, or ambergrise, or some sort of perfume: afterward distill them all at a little fire: referue the water in little bottles, couered with fine mats and well stopt.

A sweet smelling water.

A sweete smelling water: take marierome, thyme, lauander, rose-marie, small peniroyall, red roses, flowers of violets, gilliflowers, sauerie, and pils of oranges: steepe them all in white wine, so much as will swim aboue the said herbes, afterward distill them in a stillitorie twice or thrise: keepe the water in bottles well stopt, and the drosse or residue to make perfumes.

The one and seuentieth Chapter.

The fashion of distilling water for fukes.

A water for fukes.

Albeit that a good farmers wife must not be too busie with fukes and such things as are for the decking and painting of the body, because her care must wholie be imployed in the keeping and increafe of her household stuffe; notwithstanding I would not haue hir ignorant of the maner of distilling of waters for fukes, nor that she should make vse of them for hir selfe, but that she may make some profit & benefit by the sale therof, vnto great Lords & Ladies & other persons that may attend to be curious and paint vp themselves. Now all such waters in generall serue for three purposes; the one is to smooth and keepe near the skin, as well of the face as of the other partes of the body. The other is to colour the haire of the head and beard: and the third to make white the teeth. Some of these are simple, as the water of the flowers of beanes, of strawberries, the water of the vine, of goats milke, of asses milke, of whites of eggs, of the flowers of lillies, of dragons, and of ealues seete: others are compounded of many ingredients, as you shall know by the brieft collection that we shall make of them.

The vse of waters for fukes.

Water of strawberries.

Water of strawberries: Take ripe strawberries, set them to putrifie some certaine time in an earthen vessel, putting thereto a little salt or sugar, afterward distill them: This water will cleanse away the spots of the face & the spots of the eies caused either of hot or cold humours: it will be more effectuell if you infuse the strawberries in Aqua vitæ, before that you do distill them.

Water of beane flower.

Water of beane flowers: take the flowers of beanes, infuse them a day or two in white wine, in a glasse vial in the sun, after distill them: this water taketh away the spots of the face, if it be washed therewith morning and euening.

The

The rootes of great dragons distilled, maketh a singular water to take away the prints and markes which the pockes haue left behinde them: so doth likewise the distilled water of the roote of wilde wine, of corne flag, sowbread, costmarie, angelica, elicampane, turneps, wilde cowcombers, white onions, gentian, capers, lillies, madder, alkanet, cinckefoile, crowfoote, tatell, and many other hearbes.

Water of guaiacum: Take guaiacum and cut it in small peeces, infuse them a certaine time in the decoction of other guaiacum, and a third part of white wine, after distill them in a glasse stillitorie: the water that shall distill is singular for the taking away of all spots out of the face, especially if you ioine with it in the distilling of it some lillie rootes.

The water that is distilled in equall quantitie of the leaues of peaches and willowes, taketh away the red spots and rubies of the face.

The water that is distilled in equall quantitie of the whites of eggs and iuice of limons scoureth the face and maketh it faire: in steede of this water, if you haue not the fit meanes to distill it, you shall take seauen or eight limons or citrons, which you shall cut into quarters, and after infuse them in white wine in the sun.

An other water: Take six ounces of the crums of white bread, infuse them in two pound of goates or asses milke, mingle them diligently together, and distill them.

Water of snails: Take white snails about thirtie, of goates milke two pound, of the fat of a pig or kid three ounces, of the powder of camphire a dram, distill them in a glasse stillitorie.

Water of the whites of eggs: Take the whites of new eggs about twelue, fine cinnamom an ounce, and asses milke twelue ounces, distill all in a glasse stillitorie: this water maketh a woman looke gay and fresh, as if she were but fiftene yeeres old.

Water of ealues seete: Take the seete of a calfe, and (taking away their skin and hooues of their hooves) cut the rest in peeces, that is to say, the bones, sinewes, and marrow, and so distill them: this water maketh the face vermillion like, and taketh away the blemishes of the small pockes.

A singular water to make one white. Take the dung of small lizards, or of the cuttle fish, the tartar of white wine, the shauing of harts horne, white corall, the flower of rice, as much of one as of an other: beate them a long time in a mortar, to make them into fine powder: afterward infuse them a night in an equall portion of the distilled water of sweete almondes, snails of the vine and white mulleine: and put thereto likewise the like weight of white hony: distill all together in a stillitorie.

Water of bread crums compounded: Take the crummy part of bread.

Q 4

barlie

barlie bread, indifferent betwixt white & black, two pounds, of goats milke three pounds, of white wine halfe a pound, of the fowre great cold seedes, of each two ounces, of the flowers of beanes, or dried beanes & ciche pease, of each two pound, of rice halfe a pound, of the flowers of water lillies and white roses, of each two pugilles, the whites and yelkes of twentie eggs, distill them all in Maries bath, and the water will be a great deale more excellent, if you put vnto the distillation some venice turpentine.

*Water of the
broth of a ca-
pon.*

Water of the broth of a capon: Take of the broth of a capon, hen or pullet three pound, of the iuice of limons one pound, of white vineger halfe a pound, of the flowers of beanes and water lillies of each three pugils, the whites of two or three egges, the weighte of two french crownes of camphire, distill them all: This water is of a maruellous vertue to take away the spots and staines of the face, and other parts of the bodie.

Water of bran.

The water of bran. Take bran the best that you can finde, sift it diligently and afterward temper it with strong vineger, put them into a still, and cast vpon them ten or twelue yelkes of eggs, distill them all: This water maketh the face cleane, glitning and very faire.

A sweet water.

An other water: Take the flower of beanes and water lillies, of each a pound, of bread crums, rice flower, flowers of corneflage, of each six ounces, of hony a pound, of white wine and water of the fountaine of each three pound, let all be well mingled together and afterwarde distill them in Maries bath.

*Another wa-
ter.*

Take the rootes of corneflage and wild cucumbers, of each three pound, of the rootes of holihoakes & lillies of each two pound, of ripe grapes halfe a pound, of beane flowers and leaues of wall pellitorie, of each a pugill, of water lillies and mallowes of each a handfull, of the crumes of barley bread a pound, infuse it all in white wine or in the household store of goats milke, putting to the infusion halfe an ounce of the rootes of turneps, and of the fower great cold seedes, an other halfe ounce, of the vrine of a little girle halfe a pound, let all be distilled together: This water is singular good to take away freckles, scars, the prints of the small pockes, and all other spots of the skin.

*A water to
paint the face
withall.*

A water vied amongst the Ladies of the Court, to keepe a faire white and fresh in their faces. Take a white pigeon, a pinte of goates milke, foure ounces of fresh butter, foure pugils of plantaine, and as much of the rootes and leaues of Salomons seale, one ounce of camphire, halfe an ounce of sugar candy, and two drams of allom: let all settle together and afterward distill it.

An other water: Take of the crums of white bread two pound, of the flowers of beanes one pound, of white roses, the flowers of water and land lillies, of euerie one two pound, of goates milke six ounces, and of the flowers of corne flage an ounce, distill all: this water is good

to

to keepe the hands cleane and white.

Take cōwes milke in the moneth of Maie (in other monethes it is not worth any thing) two pounds, foure orenge, and fūe citrons, milke, roch allom and fine sugar, of each an ounce, cut the orenge and citrons into small quarters, and infuse them in milk, afterward distill them all: this water is good to keepe the colour neat and fresh.

Take a certaine number of eggs, the newest you can get, lay them to steepe in very strong vineger three whole daies and nights, afterward pearce them with a pin, in such sort as that you may cause all the water that is within to come forth, and distilling this water, you shall finde it excellent to beautifie the face.

Likewise to washe the face with the water of almonds, or sheepes or goates milke, or els to lay vpon the face when one goeth to sleepe, a white linnen cloth dipt in these licours, is auailable for the beautifying of the face.

An other water: Take two calues feete, boile them in riuier water to the consumption of the one halfe of the water, put thereto a pound of rice, of the crummie part of one white loafe, kneaded with goates milke, two pound of fresh butter, the whites of ten new laid eggs with their shels & skins, distill it all, and in the distilled water put a little camphire & roch allom: this water maketh the face very faire.

Water of lard: Take such quantitie of lard as you shall thinke good, scrape it as cleane as possibly you can, afterward stampe it in a marble mortar, so long, as that it become like paste, and then distill it in a glasse stillitorie, the water will be white, and it is singular to make the haire of a straw colour and glitening.

Water of hony distilled, as we haue said before, maketh the haire beautifull and long.

Water of capers: take greene capers and distill them; this water dieth haire greene, if after they haue beene washed with this water, they be dried in the sunne.

An other water: take a pound of very good hony, and of the leaues of male southernwood two handfulls, mingle them & distill them: this water is good to make the haire of the head and bearde faire and beautifull.

A water to clesse the teeth: take sage, organy, wilde marierome, rosemarie, and pennie royall, of each a handfull, of pellitorie, ginger, cloues, and nutmegs, of each the waight of two french crownes: put all together, and water them with white wine, afterward distill them.

Another water for the same effect: take long pepper the weight of two french crownes, of pellitorie and stauesacre, the weight of one french crowne: sprinkle them all ouer with halfe an ounce of aqua vite, after put an ounce and a halfe of white honic thereunto, and to distill them.

The

The two and seuentith Chapter.

To distill (as it
is called) per
ascensum.

ALl manner of distillation, which is made by vertue and force of fire and such like heate, is of two sorts; the one is made by raising vp of vapours vp on high, which the Alchymists call *per ascensum*: and there is another which is after the manner of falling of sweat, or defluxion of humours descending downward, & this is commonly called *per descensum*. Waters are for the most part distilled by the way called *per ascensum*: as oiles are for the most part distilled *per descensum*: I say for the most part, because that certaine waters are sometimes distilled *per descensum*, as also some oiles *per ascensum*, such as are the oiles drawne of leaues, flowers, fruites, seede, and other such like matter.

What manner
of oiles are
distilled per
descensum.

The waters that are distilled *per descensum*, are chieflie sweete waters, such as are made of flowers and leaues of a good smell, which being to distilled, do not euaporate or spend their best vapour so quickly by distillation, and thereupon they retaine in better sort and for a longer time their naturall smell.

Rose water
distilled per
descensum.

The way is this: take new roses, or other such flowers, put them in a linnen cloth, spread and stretch ouer a bason of brasie or earth well glazed, aboue this bason set another vessell of brasie or of earth in manner of a round frying pan, hauing the bottome covered with hot coales, but therewithall you must looke that you let not the fire remaine any long time vpon the vessell for feare it should grow too hot, and that the water should smell of burning: this way is better then any other to make a great deale of water in a short time, and without great charges, of flowers and all sweete smelling, cooling, and astringent matter.

The sea onion
distilled per
descensum.

After such sort is the sea onion distilled: cut in slices the sea onion, put it into an earthen vessell which shall haue many small holes in the bottome: let the bottome of this vessell go into the mouth of another vessell made of earth, and lute them both together very well, and let the earthen vessell be set in the earth vp vnto the throat, and then lay it rounde about with coales of fire, thus giue fire vnto the vpper vessell for the space of tenne or twelue howers, it will distill his water downward, which if you mixe with flowre or bread, you shall make pastils, which will be good to kill rates or mice, and that quickly if you mixe therewith a small quantitie of litarge.

To kill rats and
mice.

Another man-
ner of distilling
waters per de-
scensum and
that without
heat.

You may make your distillation of flowers *per descensum*, otherwise without the heate of any fire: take two vessells of glasse, one like vnto another, both of them being made large in the bottome, and narrowe at the top (after the manner of an vrinall) see that the mouth of the one wil fit and go into the mouth of the other, and then lute them well and

and close together, hauing put betwixt them a fine thinne linnen cloth: the vppermost must be full of roses or other flowers somewhat bruised, the other must be emptie: set them in the South sunne where it is verie hot, and so it will distill a water that is very pleasant and sweete.

Thus is rose water (sweetned with muske) distilled, wereof we haue spoken before in the chapter of sweet waters: and thus are the yellow parts of violets distilled, and the water thereof is very singular for the rednes of the eies: and thus are the tender buds and shoots of fennell distilled, being gathered before the fennell do put forth his flowers: the water whereof is very soueraigne for to cleanse away the filth of the eies, and to comfort and amend the sight.

Water of the
yellow parts
of violets.

The three and seuentieth Chapter.

Of the manner of distilling by the filtre.

WE haue before declared the causes of distilling by the filtre, as namely, that they are either the separation of liquors in generall, or else the separation of liquors, of such or such qualities, as the separating of muddie and earthie from the finer and subtile parts, which is the proper and ordinarie way to distill iuices, which haue a thicke consistence presently vpon their cooling after their first pressing out, as namely the iuices of citrons, limons, and oranges: againe, the prudent and expert apothecary when hee maketh syrups of the iuices of citron, or limons, doth first distill and straine the iuices by a filtre, before hee goe about to dispence the syrups.

But the manner to distill by a filtre, is to haue three dishes, bowles, or basons, or other vessells, of such fashion as the matter or liquor that you would distill doth require, and so placed and seated as that they may either stande higher and higher, or lower and lower euery one aboue or vnder another, and the highest to containe that which is to be distilled, and the lower that which is distilled. In the vppermost shall bee one or moe peeces of cloth, or of a felt of sufficient length, and dipt into the iuices, and these must bee broad at the one end, and sharpe at the other: the broad end shall lie in the iuice, and the narrow pointed end shall hang without, by the which the thinner part of the liquor shall rise and ascend, running downe drop after drop into the vessel below, in such sort as that the muddiest and impurest part shall stay behinde in the other vessell: and sometime you must wring out this peece of cloth when it beginneth to become blacke, or that the drop distill but slowly, because of the thicke matter that is carried into it along with the thinne, and hauing washed them to put them afterward againe into the vessell. If a man bee disposed to distill

To distill by
the filtre.

distill one liquor many times, hee may place many vessels after the manner of staires, and in euery one of them except the lowest put a filtre, in the same sort as we haue sayed, for the lait and lowest must serue only to receive from all the rest.

In steed of a piece of felt the apothecaries vse often times fleeces of woollen cloth, otherwise called sharpe pointed hose; thorow which they purifie and make cleere their sirups, apozemes, and iuleps: these manners of distillations may supply the place of that long, tedious, and painfull circular distillation, which fitteth the Alchemists better, than either countrey people, physicians, or apothecaries.

Virgins milke.

Virgins milke is thus made with a filtre; take litarge of golde made into powder three ounces, infuse them in six ounces of white vinegar either raw or distilled, or else in squils vineger the space of three howres in a vessell by it selfe: in another vessell set likewise to infuse *sal nitrum*, or common salt in common water, or in water of plantaine, nightshade, or some other fit for the purpose: distill them by filtre, ech of them apart, and after that they be distilled, mingle them together. This virgins milke is good to heale ringwormes, and saucie and red faces.

A brieue discourse of the distilling of oiles and quintessences.

The fower and seuentieth Chapter.

Of the profit of distilled oiles and quintessences, and what manner of quintessences shall be here intreated of.

After our short discourse of the distilling of waters, limited by the matter which farmers store will afford, it shall not seeme strange or wandering from our scope and platforme laid downe already, to make some sleight and brieue description of the distilling of oiles, to serue as a patterne and guide to the mistresse or good wife of our countrey farme, seeing we are desirous to haue her qualified with all those good partes and vertues, which *Zenophon* the Greeke Authour doth so highlie esteeme of and commend in a good huiwife: and namelie, that of readinesse and charitable prouision to relieue her folke and familie, as also hir neighbours, when the case of necessitie through sicknesse requireth, by such remedies as her gardens or orchards may minister vnto her, with the helpe of a little ordering of them, which shee by her skill and knowledge may betow vpon them. And seeing that distilled oiles, amongst other remedies, are found by experience the most forcible and effectuali, the pleasantest and of most speedie operation, in the ouercomming of all

sorts

sortes of rebellious diseases, but chiefly, woundes, vlcers, aches, swellings, and other outwarde accidents, it shall bee verie commendable and becomming for the farmers wife or mistresse of our countrey farme to haue sight into this kinde of distillation: not that I would haue her to busie her braine about the matter much, or otherwise frequent and accustome it, then as a pleasure and recreation, and so far soorth as the matter of her gardens and orchards only or not much more do minister vnto her. For as for the distilling of mettals, minerals, stones, and other such things which are not gouerned and husbanded with mans handie worke, labour or skill, they belong rather vnto the Alchymist & extractour of quintessences, or other idle or rich persons, then vnto a good husbandman. Now the things that she may extract and distill after the manner of quintessences are these. Of herbes: rosemarie, wilde thyme, rue, calamint, organy, lauander, cammomil, sage, hyssop, basil, smalage, mints, stechados, sauorie, wormwood, louage, thyme, peniroyal of the mountaine, iua arthritica, sauine, and generally all herbes, which are of a hot and drie temperature, and which haue a good and strong smell.

Offseeds: fennell, anise, comin, perille of the mountaine, dill, zantonicum or wormeseed, black and white nigella, sauine, blacke poppie, wild carret, and many other seeds which are of good or strong saour and smell.

Of flowers: lauander, white mullein, hypericon, flowers of oranges, damaske roses, Iesamin flowers, and rosemarie flowers, &c.

Fruits: iuniper, bay, and iune berries, pine kernels, capers, abricots and peaches, &c.

Spices: cinnarhom, black pepper, cloves, mace, sweete costus, angelica, imperatoria, galanga, graines of paradise, nutmegs, ginger, cutebes, cypres, rindes of oranges and citrons, pillings of walnuts and of capers, and many other.

Woods, and barks of woods: rosemarie, sauine bush, iuniper, ashe, guaiacum, elder, the loppings and liffs of trees.

Gummes and thicke liquors masticke, frankincense, myrrhe, beniouin, labdanum, turpentine, starax calamite, pitch, tarre, &c.

Beasts, or the parts, or excrements of beasts: serpents, frogs, scorpions, ants, mans bloud, mans dung, goose greafe, egges, honic, waxe. To be brieue, all things that are of a hot and drie temperature. It is true that of cold things, such as are the herbe and seed of poppie, henbane, and other such: or of moist things, such as those are which haue a fatiue, one may in some manner draw an oylie quintessence, but not without great paines taking and in a long time, and such also which in the end, will not haue the naturall and true force of the herb, whereof it was made, for it will be either lesse cold or lesse moist than his simple, by reason of the impression of the heat, and drynes such as

it.

it is, which the fire hath left it in the time of the distillation; as also for that the oyle which is gathered of cold or moist simples, is rather a watery eager, saltpeterlike or salt liquor, then an oylie substance: wherefore it is better to distill cold or moist simples by putrefaction, then by resolution made by the worke of the fire. To make an ende therefore in a word, the oyles drawne of things by quintessence, or resolution made by force of fire, are an vnctuositie, or radical humour, which is as it were the life and forme that giueth being vnto the simple, whereto it belongeth, and that no otherwise then the naturall forme giueth being vnto all particular things: and wherein lyeth the principall force and vertue of the simple: also as that if it be once separated by distillation, there remaineth no other thing of the substance of the simple that is distilled, but onely his lees, earth, and impurities.

what sh be the
distilled oyles.

The siue and seuentieth Chapter.

What manner of furnaces must be made for the extracting of Chymicall oyles.

THE furnaces which serue to distill Chymicall oyles are of diuers fashions, according to the diuersitie as well of the matter which is to be distilled; as of the vessels which are to serue to distill them withall: and yet the most common and commodious or profitable fashion is this. Build vp a furnace of bricke or of tyle and fat earth or mortar, or of plaister alone, of a round shape (at the least within) to the end that the fire carried on high, may disperie it selfe all ouer in a more equall measure, of a reasonable length and thicknes, & not more then three foot high: and bearing a foot round of compass and euerie way within at the least. There shall be three seuerall spaces or roomes in the whole height, the first of one foote, the second of a foote and a halfe, and in the third all the rest of the furnace. In the first roomethere shall be a grate of iron to lay the coales vpon for the making of the fire: in the second room or loft, there shall be two rods of iron, distant the one from the other about fower fingers, whereupon shall rest an earthen vessel of the fashion of a earthen pot or pan, and after such forme and manner as we will declare by and by: vnderneath the first distance, and also aboue the grate in the second distance, you must make two opening places, square, and hauing their covers to shut them after the manner of the mouth of an ouen: by the lower of those two mouthes you shall emptie out the ashes, and at the higher, you shall put in coales and kindle the fire. Furthermore in the highest part of the furnace, and in such place there as may be most commodious, there must be left certaine other holes, for the smoake to passe out by: See the picture and draught of such a furnace before in the distillation of waters. Sometimes for a need the furnace is

is omitted and let passe, and a brandrith made to serue setting vpon it the vessel for to distill in, & that in a pot, bowle or pan of earth or iron, and making a fire vnderneath it.

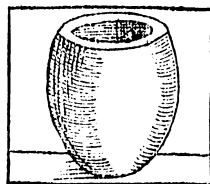
The sixe and seuentieth Chapter.

What manner of vessels must be used for the distilling of oyles.

IKnow verie wel that many do vse diuers vessels, for the distilling of oyles; but leauing the examination of this variety for such as propound vnto themselves to entreat exactly of chymicall matters, as intending my selfe, only to giue some inthuctions vnto the good housewife commaundresse of this our countrey house, I will set downe but two sorts of vessels for the distilling of oyles. The one fit and very convenient to distill herbs, flowres, seeds, fruits, roots, and beasts, or parts and excrements of beasts. And the other for woods, gums, gummy drops, and other thicke and vnctuous liquors. And now for to speake of the first.

Two sorts of
vessels for the
distilling of
oyles.

Let there be made a vessel of very choise earth, such as is verie cleane and verie well knodden, made vp with like paine and industry as the potters make vp theirs; let it be of the thicknesse of a finger or thereabout, fashioned like an egge, and yet not like an egge when it is whole, but when it is cut round awaie almost to the one halfe: it must be great and containing much after the greatnes and widenes of the copper vessel: & yet notwithstanding so great only (especially in respect of his height) as that it may agree with the third and



last loft of the furnace, & the widenes even & iump with the mouth of the furnace wherein it must stand: and in like maner the bottome must beare such breadth, as that it maie be a little flatter then the space betwixt the two rods of iron made fast and set ouerthwart, at the end of the second distance of the furnace, to the ende that it may rest vpon them the more firmly. And therefore to do well, the furnace would be builded before that the vessel be made. When there is need of a great fire to distill withall, it is provided that the pot in this place be not of earth but of iron: as I my selfe haue seene at the Apothecaries.

This second vessel shall be of copper or of latten, shaped also like an egge or a gourd, hauing a wide mouth, whereunto there must be fitted a long or stretched out necke, at the least a foote length coming downe from the head, by the which necke the vapours in the gourd

gourd shall rise vp into the said head. This vessell shall hold, twelue or fifteen pints, or otherwise shall be made of greatnes answerable to the quantitie of the matter which you meane to distill, which generally is (as wee will declare by and by) that for euery pound of matter, as of hearbes or seedes, &c. there bee put in this vessell nine or ten pound of water: Besides this there must bee such an agreement betwixt the greatnes of this copper vessell and capacite of the earthen vessell, which standeth within the furnace, as that they may be free one of another some two or three fingers, for the filling in of sand, as wee will hereafter declare: and as concerning height; it, together with his head, must stand above that of earth, a foote and a halfe at the least.

The head.

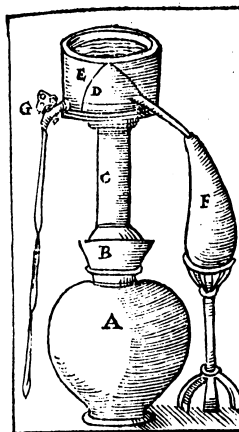
The third vessell shall bee the head, which shall bee round about and not sharp pointed, to the ende that the vapour may not fall downe againe: and it must bee set about as it were with a little stand or tub, wherein must bee put coole water, for the easier thickning and fixing of the vapours: at the one side of this little tub shall be a spout or pipe which shall come out of the head, and by this the oile shal drop downe into the vessell receiuing: on the other side of this little stand must bee a tap with a spigot, and it must come from the capacite of the same, that so it may empirie it of the water it holdeth when it is become too hot: This head shal be ioyned with the orifice & throte of the last aforesaid vessell, by the meanes of a large & wide pipe which shall come downe from the head, and set it self in the mouth & throat of the said copper vessell very cloyly, to the end that no vapours in rising may passe out thereby: and for the better perfecting of this inarticulation, there are two edges or brims, that so they may the better ioine together. This shanke may be called the necke of the bladder, by which the vapours shall rise vp into the head.

The fourth vessell shall be the receiuing vessell which shall receive the oile distilled, and it must be of glasse because of the clearenesse and cleannesse of the same.

This is the proportion and shape of the first sort of the vessels, and it is to distill oiles of herbes, seeds, flowers, and so forth.

- A Doth represent the bladder containing the matter from which you meane to draw your oile.
- B The mouth or throt of the bladder, which is articulated or close ioined with the shanke that commeth downe from the head.
- C Is the shanke which must be a foote long at the least, and is otherwise called the necke of the stillitorie, which setteth it selfe as into a ioint vpon the mouth and throate of the bladder.
- D The round head not sharpe pointed about.
- E The little stand or tub which compasseth the head, and containeth cold water for the cooling of the head.
- F The vessell which receiueth the oile and is made somewhat long.

G The



G The spout or pipe by which the oylie licour droppeth downe into the receiuing vessell.

H The tap, which with his spigot emptieth the water out of the little tub when it is too hot, that so there may fresh and cold be put in his place.

The two distilling vessels, The gourd and the head.

that is to say, the gourd and the head, forasmuch as they are of copper or latten, must be tinned within, to the ende that the oile may not get any strange qualitie by these mettals, seeing especially that the copper being heated and nontinned may caule the oile to

enill qualitie: It is true that besides the helpe comming by this tinning of the vessels, the very action of the fire which worketh & dispatcheth speedily and violently where as there is great quantitie of water, doth keepe the oile from being tainted with any euill smell, or other accident that is not naturall, and therefore there needes no feare to be taken for the vsing of copper vessels in the distilling of oiles for the occasions aforesaid, although that earthen or glasse vessels would be far better and more naturall, (seeing in them there resteth no iore of metallike matter) than either those that are of copper, or molten, or of any other metall, saue onely, there is some danger of breaking or cracking of them, being the things whereunto earthen and glasse vessels are very subiect when they are hot, yea though they were armed with mortar, fat earth, cement, or any other manner of defence: and then such breach or cracke propeth a matter of no small damage or consequence in the distillation of oiles especially those which are pretious. Notwithstanding it is free for euery man to vse vessels of earth or glasse, vpon paine that they be carefull to keepe them that they neither cracke nor breake, and the rather seeing that in the extracting of some oiles there must needes be vsed glasse vessels; or earthen ones, varnished and leaded, and not copper or latten: as which will very hardly let run any oiles from things that consist of an eager taste, whether it be that the copper hath the like it selfe, or of some secret vertue & faculty which is in it. And this thing we see sufficiently tried in the seedes of grapes, whose oile conuerteth and turneth

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rather into a greenerust in such vessels, then into any aire or thin exhalation, do a man what he can either about the fire or any other way whatsoever: but in the distillation of fragrant and aromatical things, as also those which are sweete in taste or haue a diuers qualitie from the copper, it might seeme that a molten vessel might be more conuenient.

The seuen and seuentieth Chapter.

At what time oiles would be distilled: and how the matter and things whereof they are made must be prepared.

THe matter of euerie oile is to be distilled at such time, as when it is best disposed: that is to say, seedes and aromatical things, when they are fresh and new gathered: for the fresher and newer that they are, so much the more excellent oile will they yeeld, especially the things that are of a sweete smell and aromatical. And as for herbes, they must be gathered when they are come to their full force, that is to say, when they are in flower, for and if they be deferred longer, the oile that cometh of them, for the most part will be more full of scum and ranke, as also there will not so much be gathered of them. Being gathered at such time, they must be dried in the shadow for the space of a moneth or two, to the end that some portion of their moistnes and feeding humour may be diminished & taken away, and that the oily & radical humour may be extracted more pure and sincere, and thirdly, that the herbes themselves may be the more easily crushed and bruiled: But on the contrarie side, if the herbes be new & fresh gathered when they are distilled, they will yeeld sufficient store of oile, in as much as their naturall moisture will abound, but the oile will not be of such efficacie, nor yet so odoriferous, as when the merry and good meane betwixt both is kept.

The preparing of the matter.

But as concerning the preparing of such matter, as you meane to make your oiles of, there is not any neede to vse infusion or putrefaction, as is done in the distilling of waters, as we haue said before. For if one should bestow an infusion vpon them, either in water, wine, or Aqua vitæ, it would but breed a confusion and mixture of the naturall saour and smell of the oile with that of the liçour: and againe it would make them more moist than neede would require, in respect of the pure and sincere extracting of the oile. Again, if you should take the way to putrifie them in horse dung, earth, hot ashes, or boiling water, the better to distill and draw out your oile afterward, and following the way that we will speake of by and by, yet thereby you shall giue occasion of infecting your oile with some ill vice. For the matter being putrified it is not possible but that the oiles should haue a smatch of it, seeing it is one part of the matter. That it so fall-

leth

leth out with oiles that are so distilled of matter aforehand so putrified, although it doe not by and by corrupt, appeareth sufficientlie, for in some space of time it is without all doubt corrupted, and that in a great deale shorter time without cõparison, then other oiles which are drawne without putrefaction of their matter going before: by which it may appeere what my aduise and counsaile would be to euery man, namely; that the matter whereout you would extract your oile, be not infused or putrified, but only crushed, brused, braied, and brought into small peeces, so as that afterward they may be sifted through some wide sieue, which course shall do as well, yea rather better then your infusing or putrifying of them without stamping, braying and bruising of them, besides that the busines is sooner dispatched, yea, and if you would infuse and putrifie the matter, you shoulde not thereby gaine three drops of oile more, than you should haue by only beaung and stamping of them.

The eight and seuentieth Chapter.

Of the manner and order that must be kept in distilling of oiles.

WHen you haue prepared the matter whereof you meane to make your oile, that is to say bruiled it, and brought it into small cornes, then passe it grosselie through a searce casting it into the vessell of copper with certaine measures of fountaine water, that is to say, to match two pound weight of matter with eightene pound of water, and for that cause it is meete that the vessell should containe betwixt twelue and fiftene pintes, and yet the thirde part remaine void and empty, when the water and matter are both in. This water standeth in steed of a coach or waggon vnto the matter to be distilled, for the carying vp of his vapours, and to separate the humours by the decoction and boiling that it there maketh. You may adde or diminish of the quantitie of water, according to the matter his quantitie which you are about to distill, vpon paine notwithstanding that you put in nine or ten times as much water as you doe matter, & that your vessell of copper, glasse, earth, or any such matter as shall seeme best, be of bignesse, proportionable and agreeing with the quantitie of matter which you would distill, for being too great or too little, it would prooue but coist cast away. It is true that the two pound of matter, and eightene of water heere mentioned, is the most certaine rate that we can sticke to, for the most easie and plentifull manner of drawing of oile: for if you put in more, the longnes of time will become tedious: and if you put in lesse you shall hardly draw ten drops of oile. And yet in this point lady experience must bee more than quarter matter, in as much as there is some matter which yeeldeth

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deth not any oile except it be put in a great quantitie, such as is anise seede and others, as we will declare heereafter more particularlie. Againe, you must obserue and marke this one point, that herbes require a farre larger vessell and quantitie of water then seedes and spices when their oile is to be extracted: bicause that weight for weight they take more roome then the seedes and spices doe: for herbes lie not so close and round together, and therefore they require also in proportion a greater quantitie of water, for feare that they should become parched and dried away within the copper vessell.

After that you haue put the water and matter together into the vessell of copper, let them infuse fire or fixe howres, more or lesse, according to the nature and substance of the matter: or without infusing of them at this time (forasmuch as their boiling within the bellie of the vessell, will serue in steed of an infusion vnto the matter) cover the vessell, and fit the head vnto it, lute them verie well together with whites of eggs and meale kneaded together and spread vpon a cloth in the place of their ioining and articulation. This done, set your earthen vessell in the furnace vpon the two iron bars, and make it fast to the furnace with potters claiie or cement well bearen and wrought about the edges and brims: after set the vessell of copper well stoppt into the earthen one, and yet in such sort, as that the bottome of the one stand from the other some two or three fingers: and this void space must be filld vp with pure and cleane sand, even so high as there is any space and distance betwixt vessell and vessell, yea, and further if one be so disposed even to the necke of the copper vessell: provided that the nose of the head by which the oile descendeth do stand either to the right hand or to the left of the furnace: and yet this one thing commeth heere to bee marked, that in distilling of aromaticall seedes onely there is vñe and neede of the saide sande betwixt the saide two vessels, and not in distilling of hearbes: for seedes and spices are of a more subtile and delicate substance (as their great heat and drines do testifie) & the matter that they yeeld is more delicate also and firme. For which causes it might fall out that the force of the fire might somewhat trouble their distillation, that is to say, might cause their distillation to come forth a litle troubled, and that even in the very beginning if the fire be not moderately kept, and bridled by the sand put in the void place betwixt the saide two vessels: but in the distilling of herbes you must fit the vessell of copper & the furnace together without the earthen vessell & the sand in the emptie space: for as much as the herbes in respect of their solidenes and harder substance do craue a greater force of fire: whereof you may gather, that no oiles can be extracted by distillation in Maries bath, that is to say, in setting of boiling water about the copper vessell in a caldron: for so the distillation would be longer then it were meete it should, and yet neuer whit

No oile can be
drawen in ma-
ries bath.

the more commendable: for Maries bath, that is to say, boiling water, doth not afford a well proportioned and sufficient tempered heate, but is long in dooing, and the oile doth stil draw vnto it some corruption if the worke be too long in doing, especially if the matter be not moist of it selfe: for thereupon and by that meanes can the oile hardly rise so high as that it may finde the way into the vessell that should receiue it, and because also that it wanteth force and might in as much as the boiling water cannot lift it vp so high of it selfe alone, as the cleere fire, earthen vessell, and sand; all working together.

The copper vessell being thus fitted in the furnace, make fast vnto the nose or pipe thereof, the receiuing vessell, rested vpon some pre-
The order then must be kept in distillation.
tic stoole, in such sort as you see aboue in the figure: stop and close vp the ioint of the saide pipe and receiuing vessell with paste, and bole armoniacke, or the white of an egge and flowre spread vpon a cloth. Then kindle your coales that you haue laid vpon the grate, and make a soft and gentle fire for the beginning, to the ende that the matter may growe hot by litle and litle, and that so long as till the matter within the copper and the fountaine water do boile, but yet so gentle as that it boile not vp, to strike & hit against the head with the walmes thereof, as wee see it sometimes to happen in some seedes, as anise seedes, which by reason of their thinne substance, as also of their viscositie, do cast vp their walmes and billowes with great might and force, and in such case the fire must be rebated: or & if that yet the rebating of the fire cannot stay the furie of the billowes or boiling, then you must take off the head, and with a staffe stirre about the matter, for so the scum will vanish away in vapours, and after that it may be governed, staid, and dried vp by a reasonable fire, putting the head vpon it againe afterward, and luting it as before. Feede and continue the fire in an equall degree, vntill you perceiue by feeling, that the head of the still is growne hot: then, or sooner if you please, you may fill the litle tub at the top, which standeth round about the head with colde water: for it cooling the head, will make thicke and fixe the vapours and spirites of the oile, which are very subtile and hot, and turne them into oile: when this colde water thus powred in shall become hot, it must by and by be let out at the top of the cooler, and fresh put into his place. It is true that some do not allow of cooling the head with cold water, because the vapours by this cooling of the head doe congeale too soone, as being before that they come into the pipe, and thereupon fall backe againe into the vessell, from whence they breath thing the second time: & congealed & falling backe againe as before, do in fine by these manifold things and fallings, spend and waste vnto nothing; or at the least by continuall boiling, it falleth out that but a fewe vapours doe come into the vessell of receipt, and againe those same vapours so congealed do not easily and presently come forth,

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and

and so there is lesse oyle gathered of the matter then would be, and that which is drawne, is somewhat tainted with burning. And therefore in steede of this cooling of the head for to congeale and fixe the vapoures raised vp therinto, they set very neere vnto the furnace a vessell with one bottome, hauing a pipe of tinne passing ouerthwart the said bottome through holes bored sloping in the same vessell; and this pipe is shut vp into the pipe comming downe from the head, and both these being well luted together, then the foresaid pipe crossing through the vessell aforesaid, is fastned to the vessell that is to receiue the distilled oyle: this foresaid vessell hauing this pipe passing through the sides thereof and close fastned therein, must be filled with coole water, by the cooling whereof the vapoures sent or caried from the head in this pipe of tinne are congealed, fixed, turned into oyle, and so drop downe easily into the receiuing vessell with greater profit, and in greater quantitie and better, then and if they had bene turned into oyle in the head by the cooling thereof with cold water. Who so is minded to vse this meanes of cooling the vapoures may doe it, but notwithstanding that former of ours is no lesse beneficiall, commodious and profitable, neither doth it worke that discommoditie afore charged vpon it, as experience teacheth; and put case that it did so, yet the inconuenience is taken away, if in steede of cold water you put in that which is warme, or else by onely couering the round of the head with cloathes dipt in cold water vsing to renew them oftentimes.

Continue in this sort your distillation without ceasing and keepe your fire in the same degree, or if need be augment and make it greater vntill such time as all the vapours be congealed one after another, and that all the liquor which carrieth them, and which is within the copper vessell be runned into the receiuer: the signe and marke whereof is, when hauing put in eghteene pound of water or thereabout, you haue receiued backe about tenn, as also when as the drops distilling shall not any longer relish any thing of the matter: then you must giue ouer your distillation for feare the matter within your copper vessell should either be inflamed or else set fast to the bottome of your vessell ceasing to flote aboue. It shall be iudged to distill in good sort and order, and in reasonable temper; if betwixt the drops distilling, there be not as it were any space from the falling of one drop to the following of another, in so much as that a man shall hardly be able to account the number of one or two, and from hence (as before) is gathered the quantitie and force of the fire. By this meanes the whole copper vessell is emptied in a short time: for very seldome is it longer in doing then sixe or seuen howres if the matter agree in heauines and weight with the water of the vessell, as from two pound of matter to eghteene pound of water.

You must note in this place that the oyle cometh forth now & then with

The signes of
the distillation
ended.

with the water; and that the water which distilleth with the oyle, commeth not onely of the simple, but also of the water which was put in for the vse of the distillation: which, by the force of the boiling which it hath had with the said simple during the time of the distillation is become mixt by the force of the fire with the braied matter: and so hath brought along with it the whole strength of the same, as may be iudged by the smell and tast thereof; being no other than that of the simple. Wherefore this water which distilleth oyle therewith, is not lesse effectuell, yea rather more forcible, powerfull, and of better effect, than that which is distilled of simples by a stillitorie, because it tasteth more strongly of the simple, than the others which were drawn by a stillitorie. Betwixt which there is no other difference but that the water distilled by a lembecke or stillitorie is that which (the sunne heating the earth) hath brought in for the growth, nourishment, and nature of the simple: and the other which is mixed with the simple, from which the oyle is drawne is so deeply ingaged, incorporated and mingled in and with the braied matter by the force of the fire: as that it carrieth away, obtaineth and holdeth all his vertue, as the taste and smell do shew which is in it, for both the smell and taste do draw very neere vnto that which the oyle hath in it selfe, howsoeuer it may seem that the oyle should containe and keepe all the fauour and smell vnto it selfe, seeing the oyle is as it were the soule and forme which giueth being to the said simple: but in the vehement boyling of the said simple and water, there is such a great dissolution and relaxation of the dissimilar parts of the said simple, as that the smell and taste thereof is communicated with both, so that as well the water as the oyle doth retaine (though yet not equally) the taste and smell of the simple. Furthermore, you shall be assured how this water hath seized vpon the vertue of the simple, wherewith it hath bene mixt in the distilling of his oyle, by this, that if you would distill it once againe or many times, you shall find collected and gathered together in it the whole smell and tast of his simple, as it falleth out in aqua vitæ, which hath in it the force of a great quantitie of wine. For the doing of this make cleane the copper vessell, powre in thereto all the water which was distilled with the oyle, dispose and set in order all things necessarie, in such sort as is wont to be done in the distillation of oiles of herbs: when you see that of seuentene pound you haue receiued one, that is to say, the first running, that you must keepe: for into it will be gathered all the vertue of the whole matter, and so as that the vertue of it will be little lesse than that of the oyle.

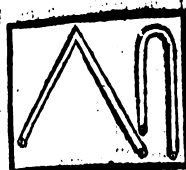
A comparison
betwixt the
water of the
simple and the
water used in
the distilling of
the simple.

To distill al-
ready distilled
water.

The nine and seuentieth Chapter.

Of the meanes how to separate the oyle which is runned with the water in distilling.

IT is verie certaine that the oyle which shall haue bene distilled, is a liquor which by the meanes and force of the boyling water wherewith it is mingled, hath bene separated and forcibly drawne from his matter, and held of the same, and with it also conueighed along into the receiuer. And for this cause the oyle will be alwaies with the water, but notwithstanding not alwaies swimming vpon the water: for sometimes it will be in the bottome, and sometimes mingled all amongst the water: if the oyle be more heauie measure for measure then the water, it will be in the bottome: but if it fall out that the oyle by coldnesse be congealed as it were into cloudes and small tufts of wooll, then it will be mingled amongst the water. Againe, the oyle will go to the bottome, if it be made of a thick substance and well compact as is that of cinamom, cloues, and other such like. The oyles which confusedly (for the time that they are congealing through the cold) goe crosse the water, are the oyles of anise and fennell seade, and that by reason of a certaine proportion which they haue with the weight of the water. Therefore for the separating of the oyle which the water hath caried along with it, it were good, first that the receiuer should haue his bottome somewhat sharpe pointed, and that in the said bottome therewithall there should be a small hole, which hauing bene stopped during the time of the distillation with waxe or cement, should now after the distillation (the water and oyle being growne cold by the operation of the aire) be vnstopped, if so be that after attentue beholding of the receiuer, it appeare that the oyle is gathered into the bottome of it: for so the cement, or waxe taken away the oyle will come out and the water staie behind in the vessell, if by stopping the hole in time it be your mind to keepe it there. If the oyle swim aloft vpon the water, if you vnstop the foresaide hole in the bottome the water will run out below, and the oyle will stay behind in the receiuer, if by mishap it doe not fall downe into the bottome of the receiuer first, before it come into the violl prepared for it, but this you must take heede vnto: but and if the oyle be mingled amongst the water in manner of a cloud, straine the water through a fine linnen cloth, which afterward will be easily gathered together with a knife, in such sort as that you may put it vp in a violl, wherein afterward if need be, you may turne it into a thinne liquor by a small heat being set in the sunne, or vpon hot ashes: if the oyle swim vpon the upper face of the water, you shall separate it in a furnace of digestion with a siluer spoone: you may also vse other meanes to separate your oyle from



from his fellow water, as for example, by a funnell of glasse, putting your finger toward the point of it and underneath, and doing the like oftentimes vnto that, which hath bene done by the receiuer, that is to say, by powring of liquor into the saide funnell. You may likewise doe the same by the sucking of the water out of the receiuer; for so you may sucke out all the water and leaue the oyle in the bottome, which sucking may bee performed by pipes of plate made after the fashion of those which you see pictured here: which will draw all the water in a short time out of the receiuer, as you see them vsed in France, to cause water to runne in manner of a fountaine, out of any bucket or other vessell wherein water is contained.

The eightieth Chapter.

Of the faculties or properties, continuance, and vse of distilled oyles.

Seeing that distilled oyles, as wee haue before declared, are the radicall humour of euery matter: and that such radicall humour, is as it were the soule and forme, which giueth being vnto all matter, and whereupon depend the vertues, powers, faculties, and actions of the saide matter: you need not doubt, but that the whole and intire vertues of simples distilled is imparted vnto the oyles drawne from them, and that in a purer and most subtill maner, in as much as by such chymicall resolution, the most subtill substances are separated from the grosser, by being mingled wherewith, they were greatly weakened and hindred from doing their effectes: and so it also cometh to passe, that looke what vertue was in a pound of the simple, is contained in a dram more or lesse of the oyle: besides this, such oyles haue this propertie amongst others, that by a meruellous subtilnes of substance which they haue gotten by the fire, they doe slyly pearce into the most profound and deepe parts, and quickly worke their effectes.

As concerning their lasting and continuance, they will keepe *the continuance* long especially if (after they haue bene rectified, that is to say yet *once of distilled* once more distilled vpon ashes with a small fire in a retort) you stop *led oyles* them vp in bottles of double glasse, and such as are armed and close stopd with cement or masticke, or waxe and masticke mixt together, without giuing them any aire, except at such times as you would vse them, and which then you cannot doe without dammage done vnto them: for seeing they bee all airtie and fire, they cannot chuse but easily euaporate and spend, and that in such sort as that it may be evidently

Ther.

Andly see and discerned by ascending the rest will easily bee found true in oil of camphire. As for the vial that is in drops if you take them simple and alone by themselves, whether to be into the body or without: as you shall vnderstand hereafter. But to vse them to the most profit inwardly, you must dissolve sugar in vinegar, rose, cinnamon or other such like water, and in it distill one or two drops of the oil which you would vse, and so make vp lozenges thereof.

The one and eightith Chapter.

A particular description of certaine oiles that are distilled according to the former methode.

THe oiles of seedes, as of anise, fennell, elder tree, cummin and others are distilled after this manner: Take such quantitie of seedes as you please, as five or six pound at the least, and for the better bruse them grossly, seeing carefully to it, that not so much as one seede continue whole, put them into the vessell of copper: poure in vpon them of cleare fountaine water 25. or 30. pound, mingle them diligentlie together, cover the vessell with his head, and doe in manner as hath bene said before.

The oil which distilleth first is of greater efficacie then any one: for which cause, the receiver may be twise or thrise changed.

This thing is worthie obseruation, that oil of anise seedes in the time of sommer cannot well be distilled, because that the spirits thereof are too subtil, and much more subtil indeed, then those of fennell: whereupon it followeth, that at the heate of the fire they doe easily spend by euaporation, though it bee guided and kept very low and soft: But the fittest time to distill them is winter; for how much the colder that winter is, so much the more it becommeth coagulate and resembling the camphire when it runneth downe into the receiver. After that you haue strained it through a cleane linnen cloth, all the water passeth away, and the oile carrieth behinde in the linnen cloth, which you must dissolve shortly after in a great glasse by the heate of a fire pan, and so the flegme is easily separated. This is a singular oile, whether it be taken alone by drops with wine, or broth, or sugar lozenges, for to comfort the stomacke, help digestion, discusse winds: for rheumes also and diseases of the lungs, as also for the mother, whereupon it commeth that it staith the whites of women.

Fruits, as of Juniper berries, &c. by reason that they are somewhat more oyle then herbes and seedes, doe not require such quantitie of water as herbes and seedes: so that for a pound of fruites five or six pound of water will bee enough: They must bee braied sufficiently small, put into the goutde and dealt with as seedes and herbes are

are dealt withall: the oile continueth fourth distill; and afterward the water.

Spices and aromaticall things are distilled after the same manner that seedes are; but in their distillation mingle not wine or Aquavitz as some doe, but onely pure fountaine water, for wine and Aquavitz rise vp presently, without carrying with them the vertues of the aromaticall things, whereas the water riseth not vp, without taking with it the aromaticall things. The oile of nutmegs swimmeth aloft, and so doth that of mace.

For to distill oile of cinnamon in excellent maner, Bray a pound of cinnamon in such sort as that it may goe through a sicue, but beat it not all to powder, put it in a gourd, and powre vpon it water of buglosse, borage, endiue and balmé, of euery one halfe a pound; let them stand together foure or five daies in the vessell well stopp: then out of this gourd poure them in an other gourd, and set this gourd in an earthen pot, with sand betwixt the pot and it: and so set them both in the furnace: first make a soft fire, but after make it greater by little and little: after that there is a measure distilled out after this maner take it away as the best: for that which followeth is of a great deale lesse vertue then the first, but yet may be kept to infuse new cinnamon in. After the same fashion you shall distill cloves, pepper, Angelica, Galanga, &c. See in our secret remedies.

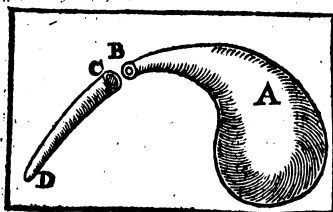
The two and eightith Chapter.

Of the manner of extracting oiles out of wood.

Seeing that the oylie substance of wood is more tenacious and clammy, by reason of the gummynes: therefore the extracting of the same is diuers from that of herbes and seedes, and is not made but with greater cost, and drawne and gathered with greater paine, difficultie, and industrie, then those of seedes and plants which wee haue intreated of before. I know well that some doe accustom to draw oiles *per descensum* as they vse to call it, in two vessells of earth set one vpon another, and a plate of iron with a hole in it betwixt them both: but such oile is nothing woorth, and tasteth for the most part of I cannot tell of what adustion: but the best is to draw it *per ascensum*, that so you may haue that which is excellent good, faire and penetratiue: The manner is such. Make your furnace of matter and forme as above, sauing that in the vppermost part of it you must haue a clef or open place, for the more easie placing and disposing of the necke of your vessell.

The vessell shall bee fashioned like a bladder, corner, or bag of a shepherds pipe called of the Chymists a retort, it must bee of glasse or else of earth and varnished and leaded within, and of such bignes

as that it may containe a dozen pound of water, hauing a necke of a foote and a halfe long, or a foote at the least long and bending downward: it is to consist of two parts, the one of them it reaching from the belly of the said bladder forward, a six fingers long; and for thicknesse so made, as that ones hand may goe into the orifice of it to make cleane the said vessell within: and the other growing euertlesse and lesse, even vnto the end; must be made to ioine with the former part by the meane and helpe of some fastning matter: as glue or cement of bole armontake, and yet in such sort as that they may beset together and taken asunder when neede shall require. This is the figure and shape.



A The retort of glasse or earth, vernished within and leaded.

B The orifice of the retort, for the taking in of matter into the bellie and body, and for to giue way also for the making cleane of the said bellie, and which for that purpose must

be made larger than it is pictured heere, for else the hand cannot enter into it.

C The other part of the retort, into which must be inserted the neather part of the retort, which must haue a ring about, in the place where the two parts shall be cemented and luted together.

D The pipe which must be narrow and sharp pointed, to the end it may be inserted and put into any sort of glasse violl or bottle.

If you haue not the benefit of a furnace, you shall place the retort in fit and conuenient sort within an earthen panne, or in steede thereof, in a vessell or pot of iron good and wide and filled with sand or ashes, or without any thing in it, and that vpon a brandrith if there be need of vsing a very great fire, as we see it daily practised amongst the Apothecaries.

Wherefore to draw oile out of oylie wood, you must first make it small and bring it into peecea, in such sort as turners doe with turning of wood, and not with any saw, or any other edge tooles; neither yet must you make it like powder, for in boiling it would too lightly and easily rise and swell, as also those gobbets and lumps which are cut by edge tooles or other instruments doe hardlie and with great difficulty yeeld any oile: put into the retort two pound of this wood diuided into peecea after the manner of the turners, & as much aqua vitæ, for the steeping and infusing of it, let them infuse together certaine daies: this

aqua

Aqua vitæ by reason of his subtilnes, pearceh more easilie then many other liquor, and likewise without any difficultie separateth & forcibly draweth the oile from his proper subiect; and yet in the meane time it neither changeth nor corrupteth any manner of way the nature of the said oile, because it draweth nere vnto the temperature of oiles, which is the cause why we mingle with the woode aqua vitæ rather then common water, howsoeuer I do not any thing doubt of the manner before described about the distillation of oiles, herbs, and feedes, in which is vsed the vessell of copper with a head, powring thereinto some cleere fountaine water, as though it could not be verie certaine and profitable for the extracting of oiles of wood: were it not that we do feare more then any thing else, the ouer great and vehement boiling thereof, proceeding of the disagreement of the drines of the matter, and moisture of the water which might hinder the course of our distillation. Adde hereunto also that such kindes of oiles can hardlie rise to the inner toppe of the head, if wee see this fashioned copper vessell.

When as the woode hath beene sufficiently infused, place the earthen pan in the vppermost part of the furnace vpon the barres of the iron, set the retort within this earthen pan with sande in the empty spaces betwixt, as also couered ouer with sand, cause the necke to passe through the cleft made in the vppermost part of the furnace, and to turne downward towards the receiuer, into the mouth whereof it must be close ioined, and as carefully and firmly luted with cement as may be: afterward by little and little put the kindled coles vpon the grate, and sometimes it will not be amisse to lay them vpon the retort wherein the matter to be distilled is inclosed: if it like you not better to set an earthen pan ouer it in forme of an head, and that to reuerberate and beare backe the heate againe vpon the saide retort. These things accomplished, you must see to the ordering and continuing of your fire, increasing it by little and little as reason shall require, euermore carefully looking vnto the sequence and successe of the worke, vntill such time as the aqua vitæ before infused be all of it distilled, for this is it which commeth forth first in the distillation, and is gathered into the receiuer: then after this cometh the oile pure and all alone without any thing mixt with it, and that in such sort, as a man could not looke for the like of any manner of putrifying of the matter whatsoeuer: keepe well this aqua vitæ to serue you againe for the same vse, because it still is getting some part of the facultie of the matter wherewith it is mixed, and there is nothing to let why it may not serue twise yea thrise. When the receiuer is taken away you must put another in his place halfe full of cleare water that the oile may distill into it: this water we allow in the receiuer in respect of the impressions which the fire may haue made by too vehement

ment

The preparing
of woode for to
draw oiles out
of it.

ment a boiling in the bile, that by the meanes of this water the same may be corrected and taken away, and the bile also kept the better from euaporation, which thing is yet the more fitly archieued, if you set your receiuer in a bason or other vessel full of cold water, changing and renewing the same from hower to hower, till the distillation be finished. You may also change your receiuer if you think good, once or twice, the better to know the differences of your oiles. The distillation accomplished, which you shall gather by the markes before set downe, you shall separate the oile from the water by the meanes also above set downe, and at the same time or before any of these things done take your retort from off the fire, and take off his necke, emptying the bellie of the drosse and excrementes settled & staying behinde: which afterward you shall temper with water so oft, as that hauing strained them and boiled them againe they come forth thicke and small like papmeate, which is also good for the same diseases, that the oiles are good for. After this order is the wood guaiacum distilled, which is singular good for the vlcers and paines hapning in the french pockes. The oile of the Ash tree: and this is good to be vsed in cold distillations, and to the helping of the morphew and palfie: taken also inwardly it is singular good for the diseased of the spleene: the oile of Juniper wood is a special good thing in the comforting of the reines and matrix.

The fourescore and third Chapter.

Of the manner of drawing oiles of gums, and first of those that are liquide.

FOR the distilling of oiles of gummes, you must vse the same furnace and retort, wherein you distilled your oily woods: but to tell you the truth they are not distilled without much pain, by reason of their glutinous clammines, giuen to hold fast their radicall humour and moisture. And which is more, there are as many waies of drawing oiles of gummes, as there are differences of gummes. For some are liquid, that is to say in substance like birdlime, which will hardly be kept within his boundes, such is turpentine, liquid styrax, and such other like, which participate more of an aerie qualitie then of an earthie, and so are easily resolued with a small fire. The others are hard, as is incense, beniouine, and masticke, which require a reasonable heat to be molified with. Some again are resolued with a waterie humour, as myrrhe and gum arabecke.

Therefore to distill liquid gums, and to draw out their oiles, there may two waies be taken: the one is such as hath beene vsed of a long time, and the other is new; after the first way you may distill oile of turpentine thus: Take cleere turpentine as much as you please, and for every pound take of the ashes of some hard and strong wood two

ounces,

ounces, or small sand, washed grauell, or the powder of bricke, to keepe the turpentine for rising high and swelling; put all these in the retort, which you shall set within the earthen pan in the furnace, as you did in oylie woods, in the beginning you shall haue but a gentle fire to draw out the water which will first come forth, and after make it bigger for the distilling of the oile. It is likewise distilled another and that a new way. Take two pound of turpentine, and eight pound of fountaine water that is very cleare, put both into the retort together and distill them at a reasonable fire, following the order set down for oylie woods. The oile which you shall gather, will be most pure and fine, of a very cleare and bright colour, of a sweete smell and pleasant taste, which properties are not to be found in the oile which is drawne after the common and ordinarie fashion: and this cometh to passe by reason of the water tempering the qualities conceiued and begotten in the matter distilled by the force of the fire and heate of the vessel, which otherwise would haue begotten some ferie impressions therein had not the resisting qualitie of the water withstood the same by his moisture, and that so much the more, for being likewise receiued into a receiuer halfe full of faire and fresh water, which affordeth an other good helpe likewise vnto the same: of all which helpes, the common manner of distilling this oile with sand and ashes hath not one, as is too apparant in the vnplesant taste and blackish or sad yellowish colour, and in that it is not fit to be vsed about the body outwardly, so far is it off from being woorthie to be taken inwardly, without the endangering of the sicke partie; beside the vnplesantnes of the taste: but this which is distilled with water is singular good for all manner of diseases, for which it is so highly commended of all men, as namely for the shortnes of breath, stone, colicke, and diseases of the lungs being taken inwardly in the quantitie of two drams: as also to take away scabbes remaining, freckles, staines, and other spots of the skin, being applied outwardly.

But and if you desire to know when your oile is all distilled, then you must marke and see when it ceaseth to runne out of the retort into the receiuer, for then the distillation of the best and most excellent oile is finished. And in case you yet desire to draw some more oile out of the rest of the matter remaining within the retort, you may doe it verie easily, if you cast into the said retort some little lumps of lead to the quantitie of an ounce, and that by the orifice of the first part of the said retort, which must be very well fitted and luted againe with the other part as it was before, for the leade being molten, doth resolue the gum remaining, in such sort, as that whatsoeuer is oile, will distill as oile, and you shall gather it in another receiuer. All which finished, you shall take the retort handsomely out of the furnace: reseruing the same to serue you againe in like time of need.

The

*Oile of guaiacum wood.
Oile of ash-tree wood.*

Two waies to extract oiles out of liquid gums.

Oile of turpentine.

This is oile of wood distilled.

When the distillation is ended.

The fower score and fourth Chapter.

Of the manner of extracting oiles out of hard gums.

Hard gums, such as frankincense, beniouin, masticke, and waxe, seeing they are of a more earthie substance, haue a faster and firmer consistence, and are resolued more hardly then the liquid ones, and so aske not onelie more labour to haue their oiles drawne from them, but stand in neede also to haue some sort of oile, and a reasonable fire to mollifie and soften them, to the end that afterward they may the more freely yeelde their owne oile. It is true that euē of these there are some of them more tedious and stiffer resisting to bee dissolued, as frankincense and beniouin: and other some more easie to bee molten, as waxe, and there are others that are indifferent betwixt both as masticke. So as that all these gums according as they are more or lesse hard to bee resolued, must bee more or lesse mollified and melted before hande, by the meanes afore named in the distilling of liquid gummes: the water onelie excepted which must neuer bee put into the retort with any thing to be distilled. It is also to bee considered and weighed, howe that harde gummes doe verie hardly indure and abide any water, whiles (inclosed within the retort) they sustaine the violence of the fire, but instead of fire, one may put thereto of oile of turpentine, to the quantitie of three ounces, as well because this oile is most pure and distilled with a reasonable heat (as wee haue said before) as because it hath a propertie drawing neere vnto the nature of these gums, whereupon it seemeth the more fit to bee vsed in the distilling of these gums, as seruing notably to correct their hardnes: againe this way more oyle will be drawn, then by vsing of washed sand & grauell cast vpon the matter: & according as we see commonly practised of oyles of all sorts of gums. And in case you haue not oyle of turpentine in readines, you may vse some other sort of oyle, prouided as much as possibly may bee, that it incline not notably either vnto any colour of smell: notwithstanding by this meanes you shall not doe more good then by the former. For there is some kinde of gum so troublesome to be resolued as frankincense, as that you must bee faine to draw the oyle thereof, after the same manner that you vsed in the extracting of oyles from the droffe and residue of turpentine: that is to say, by casting into the retort amongst it small morsels or lumps of lead, and with raising of the neck of the retort a litle higher, then is usuall in the distilling of turpentine and oylie woods. By this meanes without all doubt you shall see some ounces of oyle swimming on the top of the water within the receiver, after that the matter hath growen hot: which for as much as they would bee tainted with some ill smell and vapours, and after that such

such qualitie as they haue gotten through the vehemencie of the fire, then inclosed within the retort) must be corrected by the changing of the water in the receiuer, that so you may keepe them for the vices which shall hereafter be declared.

These things aforesaid well vnderstood, when you desire greater quantitie of oile, and that more cleere and excellent; you shall take two pound of the said matter and gums, whereof your rectified oiles were made: you shall put them in a cleane retort, which you shall set over the fire hauing the necke hanging downe somewhat more low, and in a short time (and that without any great force of fire) there will be wrought a certaine kind of buttet, which will run out in great plentie, being as it were of a middle consistence betwixt the gum and the oile before distilled. Againe you shall take this butter-like matter and put it into the retort hauing first made it very cleane, and then set it vpon the furnace the second time, with certaine ounces of purged oile which you shall haue drawne before from the same kinde of gumme. By these meanes and the helpe of a reasonable fire giuen vnto it, you shall draw as much oile (and that most exquisite) as Art and nature could ioynly giue together. And thus much for the sure and certaine way of extracting of oiles of hard gums, which though it be costlie, ought notwithstanding for the excellencie thereof be rather practised then the other common way which is by grauell, ashes or washed sand, cast into the retort with the matter. By such meanes you shall make oyle of amber, iet, brimstone, and other such kind of things, being first made into powder and putting thereunto common oile, which hath bene first clenfed and purged in a leaden vessel or warme water.

Oile of wax is thus prepared after the common manner. Take *Oile of wax.* apound of new wax, you shall wash it thus: melting it at the fire you shall cast it by and by into a vessell full of white wine, worke it well with your hand after the manner of paste, sometimes drawing it out in length, sometimes breaking of it, and sometimes doubling of it: melt it once againe, and cast it into the same wine, then also worke it with your handes as before, and thus you shall doe three or foure times, till you see the wax to haue spent about the quantitie of a pinte of wine; this done put it thus prepared into a retort, and cast vpon it grauell, washed sand, or powder of bricke, notwithstanding that it may bee distilled without grauell, sand, or bricke, as is tried by experience: lute the retort all about, euē vnto the midst of the necke, and set in an earthen pan full of small ashes vpon the fire, which must bee but soft and gentle at the beginning, but augmented and made greater afterward from degree to degree, the oile will distill and come forth very cleare.

Others prepare it after this manner. They set an earthen vessel full

Another manner of making oile of wax.

full of white or red wine vpon the fire, whereinto after that the wine is become hote, they cast the wax diuided into many moriells: after they cause the vessell to boile being close couered, and when the wine is spent they powre in other, vntill that euery pound of waxe haue waited ten pound of wine: and when they see that there is yet a little wine with the waxe, they take away the wax from the fire, that so it may not burne, and presently cast the waxe into an other vessell wherein there is a little white wine: after that it is cold and the moisture thereof taken away, they distill it in a retort. In any case there must heede be taken that it boile not in distilling, as in turpentine and hony, for such liquors being heated, doe easilie swell and rise vp. Wherefore there must be made but a soft and gentle fire at the first, and then afterward increased and the stillitorie cooled: againe, to hinder the boiling vp of it, you may cast in some small lumps of lead wrapt vp in paper, or the leaues of luie or small grauell, &c.

*The vertue of
the oile of wax.*

This oile is singular good for to suppurate and ripen impostumes, assuage paine, comfort the hard and strained sinewes, and for the palsie. The water distilled before the oile doth maruellously heale all sortes of woundes, if they be washed therewith, and a linnen cloth wet therein, laid vpon them.

You may distill after this manner, beniouin, ben, ladanum, and other such like gummies: you must also note here in this place, that such gummies may be distilled with water, as the oiles of hearbes, and seedes before specified.

The fiftie and fourescore Chapter.

*Of the manner of extracting oiles out of myrrhe,
styrax calamite, gum arabecke, and
such other like.*

THe licor which is drawne from mirrhe, styrax calamite, & gum arabecke, is not an oile, but a grosse slimie and glewie matter: which is perceiued and knowne, because they take not fire, yea and if you meere with any of them at any time that will burne, then know that it commeth by the mingling of some other oile therewith and Aqua vitæ.

Take therefore very new eggs, and make them very hard in hote water, afterward cleaue them in the middest and take out the yelkes: and in their place putting as much gummies and that before they be colde, ioyne the two partes of euery one of them together againe, and making a hole through the peeces of the smaller ende, hang them in a caue, to the ende that the moisture of the place, may cause the gumme (whether it be myrrhe or styrax calamite) therein inclosed to resolue the more easilie: set vnder euery egge a violl, and there will drop downe into it, a matter much like vnto hony or thinner.

This

This done, gather that which is distilled into a violl and set the same very well stopped, deepe in the horse dung, to the end that by his heat (being good to alter and putrifie the slimie qualitie of this matter) it may be corrected, and made more moist and like vnto oile.

Florentino an Italian Empericke in the 57 chapter of his second booke, and 12 chapter of the fourth booke of his Vexations, prepareth the oile of myrrhe after this manner: Take of elected and true myrrhe sixe ounces, of aqua vitæ without any flegme twelue ounces, mingle them together in a retort of glasse, which you shall set vnder horse dung verie hot the space of sixe daies, afterward distill them in Mariæ bath till all the water be risen and wholly gone: then you shall see in the bottome of the retort oile, which you shall straine through a linnen cloth, and keepe it to preferue the face a long time and continue it in his yong and youthfull brightnesse and freshnes. This oile is a verie fit balme to conglutinate and heale wounds speedilie, as also to cure all other inward diseases in taking two drammes thereof inward: it is good also for the deafenes of the eares. Look for the larger handling of the distillation of oiles, in our booke of secret medicines.

The silke worme.

The sixe and fourescore Chapter.

Of the profit comming of the wormes that spin silke.

TH E good huswife which hath the ouersight, gouernment and disposing of the cartell, must not make lesse account of the silke worme than of the hony bee. For besides the pleasure which she may conceiue of the sight of the maruellous industriousnes of this little beast in making and spinning of silke, she may also reape an incredible profit of so excellent a worke, which honoureth and maketh men glorious, attired with the pompe of this workmanship and piece of cunning skill: in so much as we see kings, princes, gentlemen, prelates, iustices, and other notable personages to be apparelled with the trauell of these prettie creatures. Which is more; the silke serueth not onely for the apparelling of men, but also for a singular remedy to comfort the hart that is sicke, to reioice and recreate all the heauy and troubled spirits, as we may well vnderstand by that famous confecti- on, called of the Physitions Alkermes: which being compounded for the most of the decoction and infusion of silke in the iuice of Kermes, being taken inwardly is a soueraigne remedy in faintings and swoonings. Wherefore the goodwife of our countrie farme shall make account of the keeping of silke wormes: to the end that she may reape profit of the sale of the silke which she shall gather from them yeere-

ly:

ly : which profitable practise is well knowne amongst the wises of Touraine heere in France.

The fourescore and seuenth Chapter.

*Of the situating of a place to keepe
silke wormes in.*

THE hufwife for the vndertaking of the gouernment of silke wormes, and for the making of her best commoditie thereof, must choose out some place about the farm for the keeping of them, and it must be rather high than lowe, in a good aire, without moistnesse, and so provided of windowes, as that the sunne may come in at them morning and euening if it seeme good to such as haue the charge to gouerne them : these windowes must be such as will shut close, or else are glased, or paper windowes, or of fine linnen cloth, to the end that when it raineth or bloweth, in cold weather or in moist, they may be kept very close and fast shut : for who so faileth to gouerne and prouide for them in this sort, it commeth to passe without doubt that these prettie creatures being tender at all times, cannot escape but die when hard weather commeth. He must likewise haue nets and cords before the windowes, to the end that the paper windowes being opened, the sparrowes, swallowes, and such hurtfull birds, may not get in to feede vpon these wormes. Neither cocke nor hen must come in here: for they would so rauenously feed vpon this little worm, as that they would be ready to burst. The floore must be very cleane, the wals without holes or creuises, by which crickets, lizards, rats, or other like vermine may enter and get in to kill and spoile these little things either night or day. In it there must be ouerthwart partitions with pillars, and vpon them shall be fastned many boordes or hurdles made of the stalks of rose-trees, for to pleasure this small wretch withall : and these before you set any wormes vpon them, must be sprinkled with a little vineger and rubd with sweet herbs, because they loue sweet smells.

The fourescore and eight Chapter.

Of the gouerning of silke wormes.

THE carefull hufwife so soone as spring draweth neere, and that she shall see that the mulberrie-tree beginneth to bud, shall make in readinesse eggs of worms, which she hath kept all Winter to be brooded and sit vpon : and if she see that the mulberry-tree is slow to bud, she shall lay fresh dung to the rootes thereof during the new moone of March, thereby to bring it forward : for otherwise for lacke of the leaues of the mulberrie tree, if it should come to passe that

her wormes should be hatcht or bred, she should be constrained for their fooode, to haue recourse to the hart of the thorn, elme leaues, the tender branches of nettles and others. And as concerning making of choise of such wormes as are to be breeders, you must take the seede which is but a yeere old, and which being bathed in wine, falleth to the bottonne and floteth not aboue, and withall hath the markes, which shall be spoken of heereafter : the time of brooding them, is the fiftenth or twelitith of Aprill, from the fourth vnto the tenth day of the moone, but neuer in the decrease : for wrapping their silke rounde about it they wil bring it forth the fourth day, at such time as they are strong, in such sort as that their endes and huskes will be greater, harder, and more finely haired, then any other that are bred at another time : for those which are bred in the decrease of the moone are alwaies feeble, and yeeld no profit. The meanes to make them breede, is, after that you haue watered and bathed them with whire wine, rather then warme water, to lay them neere the fire, till they be a little warmed, then to lay them betwixt two pillowes stuffed with feathers, and made likewise somewhat warme, or betwixt the brestes of women (provided that they haue not their termes) and so as the wormes breede, to take them away with mulberrie tree leaues, those which are most tender, and to lay them vpon boords or papers, that haue beene rubd ouer with wormwood or southernwood or some such like herbe : when they are once bred, they shall haue the leaues of mulberrie tree given them euening and morning, increasing them euery day, as the wormes shall grow greater and greater, vnto the fourth change : for then also they will stand in neede to be fed at noone, because they eate more then they were wont : but you must be admonished, that when they mue or change you must giue them sparingly : because as then they are weake and feeble : in any case let not the leaues be rotten, moist or wet : and if it should fall out that they should be moist, then you must wipe them thoroughly with cleane linnens and drie them at the fire. They must also be gathered of mul-
berrie trees planted vpon the tops of hills and standing open vpon the sunne, and of old trees rather then of yong ones, and such as beare a fruit somewhat red and blacke, and not to garher the said leaues in the morning, so long as they are wet with the dew or other thing, vntill the sunne haue gone ouer them, and further to picke the bad from the good, before you giue them to the wormes. These little beastes may not be touched with your hands, but as little as may be, for the more they are handled the more they are hindred, because they are very exceeding tender and daintie, especially at such time as they cast or change. And yet notwithstanding they must be kept cleane and neate, and all their little dung taken from them euerie three daies, the place must be perfumed with frankencense, garlick, onions,

onion, larde, or broild sausages, that you may minister matter of pleasure vnto these little creatures, and againe if they be weake and sicke, these smells refresh and recouer them againe. They must also be marked whether they sleepe or no, for seeing they are wont to sleepe fower times especially when they cast and change, if it happen that any of them be still eating and sleepe not, they must be put apart without any meate to eate, that so they may fall to sleeping, for else they would all burst: and it is as true that if they be breeding yong they must be soberly dieted. After that they haue cast and changed the fourth time, within three daies after they eate better then euer they did, vntill such time as their bodies begin to shine, and that they make manifold shew of the silke thred that is in their bellies: which if it be to come white from them, their head is as if it were silver: if that it be to come yellow from them, their heads beare the colour of gold: if Greene or orange colour, their heads foretell the same. Thus they feeling themselves well filled and fed, they seeke out some resting place for the purpose to fasten themselves vnto, and there orderlie to auoid their silke, euerie one shutting vp himselfe in his scale or husk, which they make and build vp in two daies or a little more. Then you must be carefull to haue in readines for them, round about the tablet, good store of broome, brakes, branches of vines, oketree boughes, chesnut tree boughes and other thinges, and withall let them be verie drie: for moisture is their enemy, and then not to giue them ouer till they be all fastned and hanged vpon these branches, there to make their worke: whereof they be so eager as that they goe mad till they be packed vp in their little clewes and bottoms, and that in such sort as that a man would thinke that they would be stifled: then they must haue some helpe, and order must be taken that they may not fall downe vpon the earth, and if they doe fall, to put them vp againe in some place for the purpose. They haue finished their worke in two or three daies more or lesse, and as the weather goeth hot or cold at that time: and as it is easie to perceiue when they all worke, so they make it to be heard verie well when they ceale and make an end of their labour. They dwell thus and abide altogether for the most in their huskes twentie daies, more or lesse, according to the tendernes, softnes, or hardnes of their bottoms of silke. As concerning the choise of their huskes or cods, the orange coloured are best and not the yellow, and least of all the white or Greene: and as concerning the taking of the single or of the double, the single are more worth, because that the male and the female are within the double: which female laieth her egges no sooner in the morning then she coupleth with the male againe. The scales or huskes being thus chosen, those which are good for increase must be put into a place where no dust is, and well couered, the double also must be separated from

the

Signes that the
wormes would
make silke.

For to know the
colour of the
silke.

The choise of
the places.

The choise of
breeding
wormes.

the single, to the end that they may make the fairer silke, and especially there must choise be made of such people as are the best workers, both for to know the silke, as also to draw it out with such discretion, as that there may come the most profit of it. When the wormes shall be out of their huskes, then you must make choise of the best for increase and breeding: those which are the grossest and blackest are the strongest, and afford better eggs than any of the other: you must likewise take more females then males: and for the knowing of the one from the other, the eyes of these creatures do sufficiently testifie thereof, for the females haue thinner eyes and not so blacke as the males: they must be put asunder, and white linnen clothes spread, or rather leaues of paper vpon little tables for to receiue their eggs: the paper is more naturall and commodious then the linnen, because it may be the better raked ouer with a knife to draw together the egges thereupon, without any making of spoile at all.

As concerning the diseases whereunto these little creatures be subject: when they haue not been so carefully looked vnto as they should to be kept cleane, when the cold Northren winde, or the hot Southren sunne hath molested them, as also when they haue eaten too much, then they become sicke: wherefore you must keep them cleanly: stop the windows and holes by which the cold winds do enter and get in, and carrie coales of fire that smoke not into their lodging, setting thereupon frankincense or sausages cut in slices (for they so loue this smell, as that it presently cureth them) as also besprinkle them with a little malmesey or Aqua vitæ. If they haue bene troubled with too great heat of the South sunne, there must be sprinkled vpon them rose iwater: if they haue ouer eaten themselves, the contrarie diet will cure them, as the keeping of them three or foure daies without eating any thing: if there be any of them that are spotted with any dusky, blewish, or yellowish colour, and that there appeare withall vpon their bellies a certaine humour that doth wet them, they must bespeedily taken from out of the company of the rest, and carried out: and in the morning before the sunne rise, set the whole and found in the aire, for some small time, and after put them in their places againe, and sprinkle them with good and strong vineger, and to anoint them with wormewood or southernwood, and also to giue them aire, and also to make them feeble the force of the sunne, provided that the beames thereof do not touch them, and so firing the windows, as that the morning aire may season and send his breath throughout the whole house.

The difference
betwixt male
and female
wormes.

The diseases of
silke wormes.

The end of the third Booke.



THE FOVRTH BOOKE OF THE COVNTRE HOVSE.

That there are two sorts of meadowes.

The first Chapter.

IN our former Treatise we haue runne through those things, which belong vnto the husbanding and ordering of gardens and orchardes, and now it requireth that wee speake of meadow grounds, whereupon consisteth the greatest means of feeding and bringing vp of catel, to the end we may perfect and accomplish our foreappointed purpose. The thing therefore called in our French tooing *Pré*, may seeme to be borrowed from the old word *Prat*, and both of them to signifie and point out a thing that is ready and prest to doe the master of the farme and farmer seruice, without putting him to any paines in respect of the labouring or husbanding of them, but this must be vnderstoode of meadowes hauiug their prae and maintenance about them: namelic, such as are those which are fed and watered with the Marne on the one side, and the riuer Aube on the other, which is about some hundred and fiftie leagues of square country, as also those about the riuer called Vefelle, which of all others doth most abound in meadowes: it is in like manner in the free and reclaimed groundes from *Barle duc* to *Vitry* in *Parlois*, and from *Louemont*, to *Vassie* in *Thierache*, all along the little *Blondelle*, as also along the great and small *Morin*, in our country of *Beannoiss*. Such meadow grounds do not feare storms and tempests, as gardens and other arable groundes do: but with little cost and charges they yeeld their double reueneue and profite euerie yeere, the one of haie, the other of pasture. Meadowes are of two sorts, the one dry, the other moist. The drie craueth not the helpe of any water to bee watered withall, except the raine, because it is in a fat place and where it hath full store of refreshing iuice, and in such places hay doth grow of his own accord, and that a great deale better than where it is forced by casting of water vpon it. The moist meadowes haue need of some small brooke to be fed and fatted thereby, by reason of the sleightnes, drinelle, and naturall leanness of the place.

The

The second Chapter.

What grounds are good for meadowes, and how to make new meadowes.

THe ground that is fat and ful of iuice, although it be nothing as all helped either by small riuer or brooke, is good to bring fourth haie, so that such place be not exceeding far from some small brooke, standing water or little riuers, or at the least that it bee moist at the bottome, and such as wherein, if that one make a reasonable deepe ditch, he may finde good store of water. For moisture is one of the nurlies of haie: where such fat and iuice ground is not, there may meadow ground be made of what manner of earth soeuer it be, whether it be a strong, sleight, or leane earth, so that you haue by it but this one commoditie of a little brooke to water it, and that the field lie somewhat sloping or descending, not very lowe, nor very flat, as where in the raine water or other of any small riuer raking sometimes ouer the same, do not vse to dwell and stand any long time, but passeth and runneth away faire and softly without any tarying. Wherefore I agree and must needs confesse, that some groundes are not so fit and profitable as other some for the receiuing of haie seed, as those which through the neerenes of some great floodes and pooles, lakes, and great large waters, are oftentimes ouerflowne and covered with abundance of water, which in winter drowneth the groundes: whereupon it commeth to passe, that the haie is nothing fine or delightfom vnto beasts, but great, and full of stumpe stalkes, a broad grasse also and nothing pleasing their taste. But howsoeuer it is, the haie of standing waters ill husbanded and corrupted, as also the haie which naturally groweth thereabout, and by the large borders of lakes, is not such as the fine mouthed beait can delight in, as neither that which is gathered in groundes bordering vpon the sea, as with the salt and nitrous relish whereof, the appetites of cattell are ouerthrowne, not being accustomed thereunto, besides that, the very grasse it selfe is more ranke then the common sort of grasse, and in taste verie vnlike.

Wherefore if you would make new meadowes, make choise of ^{To make new meadow grounds.} the best ground you can: this ground you shall lay fallow, and let lie idle a whole sommer, then in Autumne after you shall turne vp and plow the same ground, often sowing therein for the first yeere turneps or nauets, miller, beans, or oates, and the yeere following with wheat: then the third yeere you shall labour it diligently and sowe it with fetches mixt with haie seedes, and after this you shall mowe and order it as other old meadowes, as we will declare by and by.

The

The third Chapter.

*What manner of husbandrie is required
about meadowes.*

To sowe meadowes.

SVch as obstinately defend and maintaine that there is not any paines or labour to bee vled about meadowes, seeme vnto the (vnder correction) voide of all sound iudgement: for euerie where in processe of time the earth becommeth weary and standeth in neede to be refreshed in some parts of it, yea to be sowne againe, and fashioned, if neede be, especially in feeding grounds, and meadowes appointed for pasture for horned beastes: for such cattell as beare wool doe not desire warrie places (as meadowes would bee) but being contented with shepherdes, graie along by the waies and vpon the plowed grounds. And as for your herdes of yong horse and asses, they feede naturally and commodiously with your other cattell. Yea furthermore I haue seene in *Cumpaine*, as it should bee about *Pont* vpon *Seine*, a meadow countrie, the geefe and turkies daily and ordinarily driuen to the pasture, for the sauing of charges at home, which thing would not agree well about the places of *Monfort l'Amourye*, where is kept some part of the kings breede of horses and mares, for the downe and other feathers of those foules, as also their dung, would make these sortes of beastes sicke, even horse, mare, mule or asse.

To weede it and keepe it cleane.

But whatsoeuer others saie or doe, sure I am that a good farmer must not neglect his meadow ground, seeing the husbanding of them is a matter more of care then of paine and labour. For the first care must bee to keepe it that it grow not with bushes and thornes, or great high stalkes of other herbs, al which would be pulled vp by the routes in autumnne or before winter, as bushes, brambles, and rushes: some other of them in the spring, as succories, hemlocke, and such other weedes, which are vnprofitable for the feeding of the herdes of horse and mares. Likewise there must not be left in them anie stone, nor yet anie other thing that may hinder the digging of them, when the earth is to be stirred. The ground being freed of stones shall be made even and smooth verie handsonlie in the winter time, and after that tilled and turned ouer very diligently and sinclie with the plough, and after harrowed, especially that which is leane, and lying with some descent, but not watered otherwise then the raine vseth to water it: it must bee dunged also in Ianuarie and Februarie when the moone is in the increase, that so it may be fattened and store of iuice brought into it for the growing of grasse. The best manuring that can be bestowed vpon it, is fine crumbling earth mixt with dung, which wil do it more good then the best and purest dung that you can find in your neathoule. For the making hereof you must gather in sommer the dust that is by the high

waies

To gather out the stones.

To harrowe it.

The manuring of it.

waies most haunted, and mingle the same with the dung of cattell, the filth and sweepings of the house, the dirt of the streets, the parings of the house and the great and little court, the dung of hens and pigeons, oxe dung, horse dung, and all other such excrements, which must be let incorporate and mingle together the whole Winter, vntill such time as this matter watered with water and thoroughly pearled with the frost be sufficiently ripened: this mixture when it is spred, entreth better below into the earth then dung alone, and also incorporateth it selfe better with the earth.

The fourth Chapter.

What must be sowne in the meadowes.

THE way then to reforme the old and drie consumed places of your meadow, if they be become hoary and rotten, must be by *dowes*, sowing them in the spring with good haie-seede, which is the meadow clauer, which is called in some places, *Sops in wine*, by reason of the flower, which is an herbe which men in times past made great account of, sowing it by it selfe as the fetch is wont to be sowne, and they did sow it in Ianuarie as *Cato* and *Palladius* do report. The manner of sowing of it shall be set downe in the fifth booke in the handling of pulse. Likewise the seede of gallion or petty mugguet, and wild fetch and hauer-grasse, which the Latine Poet calleth properlie barren oates. Again the small wild mallow is not amisse, neither the little crow-foote, forseene it be not that with the bulbous roote, that is to say, the crowfoote hauing a round roote like an onion, because that is venomous for the beast, but it must be that crowfoote which hath a hairy and thready roote. The twofold Satyrion is good in some place where it groweth naturally, so likewise is the hyacinth, the one of them being of a blew flower, the other of a purple, heerein differing from the Satyrion, which is more cut and diuided into small buds, as likewise more fragrant. It is not good that there should be any great store of plantaine, except it be that of the least sort, which is called birds roong. The wilde carret, especially that, which in the midst of the white flower in the rounde broade tuft beareth a sweete smelling seede, being rubd in the hand like vnto graines of Paradite and of the same colour, as likewise wilde woundwoort (which *Dioscorides* calleth *Hercules* his woundwort) is very good, forseene that it grow not too great. Germander likewise is good, being called of the Grecians small oke, by reason of the figure of the leafe. Little rampions likewise is very good, because of the roote, which helpeth forth Lent fallads as well as the cressus, wilde taffron is not good because of his flower; seeing both the rooe and it doe kill beastes, even as hemlocke doth which is called birdesbane: neither yet water pepper as being venomous through

Sops in wine, or small clauer.

Cato. Palladius.

Plantaine. Wilde carret.

Wound-wort. Germander.

Small rampion. Wilde taffron.

Laughing
smallage.

Greas and
small water
germander in
the meadowes of
Chales.

Carpenters
wort baine.

Blessed thistle.

Pimpernell.

through his heate and vsing to grow onely in standing and stinking waters as laughing smallage doth, called *Herba Sardonica*, because it maketh men and beastes to seeme to laugh when it killeth them: in like manner wild woad, buckes beard, hartes toong, wilde and lowe growing all good, both sortes of violets, the lesse centuarie: all the three sortes of daisies, and especially those which are called gold cups or little crowfoote, and the three leaved grasfe of the meadowes are all of them singular good herbes for the fruitfullnesse of the meadowe ground. The garlick which is called *Serpentina*, and which a man would iudgeto be a little small rush of a reasonable length doth nor amisse, no more then the true and small water germander, which is oft found in the meadowes of *Chales* and elsie where: but great store of it maketh the haie to smell ill, as on the contrarie penniroyall maketh it smell sweete, and so likewise organie of both sorts, the three sortes of balme and costmarie, but mints, and that horehound which is wilde cammomill are nothing woorth. Great quantitie and store of wilde fetch causeth the haie to be very full of nourishment for cattell, the lesse plantaine, siluergrasfe of both sorts, peachwoort (so called because it carrieth a flower like a peach tree) and burnet: the three sortes of shepherds needles, called of the ancient writers storkes bils, (by reason of the fashion of the peake that followeth in place after the flower) whereof herbe Robert is one, doe very well for cattel, and cure them of the grauell, causing them to make their vrine in abundance. Milfoile and prunell (called the carpenters herbe, because it is good for cuts) are also good, and verie sweete of smell, but quitch-grasfe (called dogs grasfe) doth destroy the meadow as much as balme doth mend it and increaseth milke in kine, as great hares foote doth in goates: and in like manner as veruaine and groundswell are good hearbes for conies. Looke well that thistles set not their foote within your meadow, except it bee the blessed thistle with the yellowe flower, or elsie the little thistle, and that but about the borders or edges of the meadow, and that it haue the leaues of sow-thistle, though it bee smaller and spotted as it were with drops of milke, and therefore it is called *Maries thistle*. The red and blew pimpernell because of their flowers, as also the white, are as good there, as either the male or female mercurie, though these hearbes delight rather to grow in the waies, and amongst vines, as doe also the bindeweede and nightshade: flaxweede which differeth from *Esula* in as much as it hath no milke, and groweth high as line doth (saue that it hath a yellow flower) is good, but *esula* or spurge is naught, as is also *hypericum*: for these two are both of them very hot and shrewd fellows: melilot the small and the great, mirrhis which hath leaues like fennell and diuers diuided white flowers, is of great vertue and sweete after the smell of myrrhe: to bee short the carret and cheruile doe serue greatly

greatly for the nourishing and goodnes of the haie. To conclude, the meadow well kept and maintained, doth alwaies bring double commoditie, to that which is ill gouerned and husbanded.

The fifth Chapter.

Of the barroweing, watering, and keeping cleafe and well defended of the meadow ground.

BEfides the seedes of good herbes, which is very requisite for the meadowes, yet there are other workes needfull for the goodnes of haie: for the meadowes must be barowed and raked, presently after they be sowed, to breake the clods into small earth or dust, that so the mowers may not therby hurt their siethes. If the ground of the meadow be withered and dry, it will be a merueilous commoditie vnto it, to drawe into it all the winter long, at the least some small brooke, for the watering and moistning of it, seeing that moisture is the naturall nourishment of haie, and this woulde be done, speciallie during the months of Nouember, December, Ianuarie, and Februarie: afterward, when the earth hath drunke her full, stoppe the way whereby the water of the brooke runneth. It is true, that if the meadowe plot lie vpon the side of some hill, or vpon some high ground, there shall be no need to water it, for the first raine that falleth, will descend and water such meadowes very sufficiently, being ioined with the iuyce and goodnes of the dung which you shall haue bestowed in the higher places. Neither shall it bee needfull to water the ground much where there is great quantitie of three leaved grasfe, because it woud die by and by. Againe you must not cause any water to ouerflow any olde meadow groundes, in the time of great and excessiue colde, except it should bee that they should continue a long time: bicause that the water failing, the ground thus boyled againe, and drenched, would bee much annoyed by the vehemence of the frost and ice. If there bee any marrish or dead water in any part of your meadow: you must cause it to run and draine out by some conduites or trenches: for without all peradventure, the superabundance of water, doth as much harme, as the want, scarcity, or lacke of the same: you must bee sure to keepe swine out of your meadowes, bicause they are alwaies turning it ouer with their jnouts, and raising great loddies of earth: neither must you admit any great cattle into them, saue when they bee very drie, because the bodie boose doth sinke into the earth, and either breake off the grasfe, or cut it sunder the rootes, whereupon they cannot spring or multiply any more.

The

The sixth Chapter.

*To mowe your meadowes againe and againe, to gather the hay
and refresh your meadowes, and to bring your
barren meadowes into tillage.*

Your meadowes must be cut downe in the newe of the moone, but neuer in the decrease; and while it is somewhat greene before it be through ripe: for so you shall reape both more, and againe it will be more daintie and delicate for the beasts to eate, more sauourie to fat them; and to make the knife to yeeld their milke more plentifully, and the meadow will be the sooner ready to yeeld her second crop of hay: for and if it should staie till it were verie ripe before it were cut downe, it would haue lost all his iuice and substance, and would become good for nothing but for litter: and againe, if it bee laid in too speedily and ouer greene, it would do nothing but putrifie in the heie mow or burne when it is mowed, it must be dried in faire & open weather, two or thre daies before it be caried in, and if in the meane time any raine do fall, it shall not be caried in before it be dried againe. And when it shall be thoroughly drie, you shall make it vp in cocks or heapes, and afterward you shall make it into bottles for the vse of your cattell. It is true, that such as you will keepe for the feeding of your horse and oxen must be very drie: for when it is so prepared, it will make them stronger, and keepe them from hauing the gripes in their bellies: but that which is to serue for kine and sheepe, standeth not in need to be so through drie, because then they wil both eate it better, and giue greater store of milke. And in case you cannot get in your hay so soone, nor make it into bottles, then you must make it into a high cocke with a narrow top, that so it may garde it selfe the better from the raine: and although there come no raine, yet it will be good to make these great stoukes; to the ende that such moisture as is still remaining within the hay, may be dried and breathed out. And therefore skilfull hindes, although it were already brought home and close set vnder some couer, would not lay it into the barnes or hay-stacks, before it haue bene a certaine time in these stoukes, for to heate and sweate, and as it were to boile together againe and after to be come cold, when it is laide vp in the barne or hay loft, it must be couered very well with drie straw, the depth of a fadome, as well to keepe it from heate, as from the stinking aire of the beast houses, because the straw will draw all these incommeniences into it. Moreover though your meadowes be mowed downe, you must not cease notwithstanding about the middest of September to mow them againe as well in respect of the latter hay growing after the first mowing of them, as also in respect of the grasse which shall haue

escaped

escaped your sith in the first mowing of them.

If by the gathering of your hay you perceiue your meadowes to become barren, whether it happen by your negligence in not hauing bene carefull enough in husbanding of them: or by reason of age, seeing the earth will sometimes rest it selfe as being wearie: for the recouering of the strength againe, use the like meanes; that you would in making of new meadowes; set downe before in the second chapter of this booke: or else if you see that you loose your labour in renewing of your barren meadowes; set downe with your selfe to reduce them into arable ground, especially those which are drie, parched, bringing forth very small store of grasse, growne ouer with a hard crust and fraught rather with naughtie weeds, than good and profitable grasse. For the dooing whereof you must cut the vpper face and crust of the earth in Aprill, with a shallow delfe, i. i. turkes some fadom and a halfe long, and halfe as broad, and to the thicknesse of two fingers: drie these turfs in the sunne, and being concocted by the heate of the sunne, fit them one to another, and lay one vpon another, in manner of a furnace: afterward set fire to them with good store of straw: when they are burned, let them coole fixe or seuen daies: after spread the ashes thereof equallie all ouer the field: then looke for a good raine in May, to incorporate this ashe earth, and when it is accordingly performed then plow it vp in Iune, and presently after sow it with mullet, afterward with rie, and in the ende with masting and wheate.

The seuenth Chapter.

Of the Ozier plot.

Three things carefully kept and increased by the diligence of the workeman, doe make rich without any great trauell: that is to say, the meadow-grounds, the Ozier plot, and the willow plot, which by the meanes of water lightly sliding through the veins of the earth in the far and well liking places that are vpon the sides of hills, and by the watering of manifold streames round about doe naturally grow euerie yere, and yeeld great profit vnto their master, for the feeding of his cattell, the making of hoopoes for vessell and binding of them, as also for sewell, the benefite of poles, wooden vessels, arbours, stakes for hedges, and supporters for vines. We will therefore speake first of the ordering and husbanding of the Ozier plot, and after it of the willow plot, which we do not dreame to haue any other assigned place, then about the meadowes, and far remooued from the arable ground; in as much as their shadow is so hurtfull to wheate, line, pulse and other graine, as that they neuer growe well, where they are ouershadowed by these: but on the contrarie meadow.

meadow ground receiue great profit thereby: as well because the grasse doth grow the fairer and more pleasantly in the shadow, then where it is not shadowed; as also for that the leaues of ozier, willow, alder and such other trees, falling vpon the meadowes and there rotting, maketh them the more fat, abounding in grasse and fertile. The ozier then (which olde writers doe call the willow or wicker tree, that is to say apt to bende) desireth not to come very neere to the water; but loueth rather to stand vpon the descending side of the valley, and the ozier plot would ende at the sides of the willow plot: the ozier plot must be prickt with a line, and prettie small ditches drawne out in it betwixt two lines, and euery slip must be set one from another about five foot and a halfe, to geue them their spreading. It will not abide the shadow of any tree, but loueth much to haue the fruition of the South sunne. The tamed red ozier, requireth greater husbandrie, and is a fraid of frosts and the shoures of raine that fall in March, and very cold water: the white and the greene ozier, which neither bend nor yet defend themselves so well, are of a harder nature, and grow higher. It will be good to pricke downe moe of the same one then of the other and alwaies to set them out of the shadow, and there must be but a little water at their foote, the most part of the time: wherefore you must make furrowes by the way, to keepe and referre water. It must be dressed twice in a yeere to make it grow well, that is to say, about mid Maie and towards the end of November presently after that it is gathered, being also the time of planting of it.

It is very delightfome vnto it to haue the earth raised with the spade and stirred, and to cast in againe the cloddes vnto the foote some fiftene daies after *S. Michael*, which is the time of gathering them and making of them vp into bottles. You must keepe your bottles made of the thicknes of a sadome, fresh and coole in some cellar or caue, and if the season be drie to water them throughout now and then: some slip off the leaues in gathering of them, thereof to make good ashes: other let the leaues fall of themselves, and after gather them for the household, and in winter nightes by the fire side make the slaues spend their time in cleauing them, for to make baskets of. Some doe not cut the oziers all from the head, but such slips as are about the edges of it, and leaue the master twig to stand whole for five or sixe yeeres, when it must be renewed and pricked downe againe: for this is the terme of the plant: for in all the time following the plant doth nothing but drie and the twig harden.

The eight Chapter.

Of the willow plot.

THE willow plot craueth the like husbandrie that the ozier plot, because the willow differeth onely from the ozier in vse, bignesse

and barke: for the willow tree is for poles, the ozier (as hath bene said) for bindings about the vine and caske: the willow is thicke and growing taller, the ozier is finaller and lower: the willow tree hath a barke of a darke purple colour, the ozier of a yellow straw colour. But whatsoeuer it is, the willow loueth waterie places and is planted of the tops cut off, or else of poles: the poles are taken from aboue, of a good thicknes, but notwithstanding not thicker then the arme, and they must be planted and pricked downe in the earth so deepe as they should stand before they touch the firme ground: the cut of the top may be of the length of a foote and a halfe, and beset in the earth, being couered a little, that which you shall plant, must be cut from the tree verie drie, because it will not thrive if it be wet when it is cut. Therefore you must shun rainie daies in the cutting of your willowes. The best time of planting the willow is in Eebruarie in the beginning, or in the end of Ianuarie, when as the hart of the great cold is broken, which oftentimes hurterth this plant when it is newlie planted: It is true that it may be planted at any time after the beginning of November, yea it may be then both planted and gathered. The plants shall euere one stand from another sixe foote square, and they must be carefully husbanded for the first three yeeres as if they were yoong vines. You shall finde a larger discourse of the willow tree in the sixth booke. The distilled water of willowes is good to be drunke for the staying of all sortes of fluxes of blood: the decoction of the leaues or the lee made of the ashes of the wood being drunke, doth kill bloud-suckers which hang in the throat.

The ninth Chapter.

Of the elme.

MEN of old time did much esteeme the elme for the vine sake, because they married the vine vnto the elme, as also it is yet practised of some vnto this day in Italie, but now the elme is applied to another manner of vse by the husbandman: and for that cause we haue giuen in charge to euery housholder to plant a plot of elmes, at the end of his orchard, as well to make fagots of, as to make wheelles and axletrees of for his carres and ploughes, as also for fire wood and other eatements, besides the pleasure, that the elme tree affordeth all the sommer long. For the planting then of your elme-plot make choise of a fat peece of ground, and withall somewhat moist (although this tree be easie to grow in anie kinde of ground) which you shall dig and cast breaking the clods afterward verie small, in so much as that you shall make all the earth as it were dust, and in the spring you shall harrow it and lay it euen: afterward you shall sowe it verie thicke with the seede of elmes, which shall by this time be come

a litle red, having bene a long time in the sunne, and yet notwithstanding retaining his naturall substance and moisture: and you shall sow it so thicke as that all the earth shall be covered with it, then cast of fine mould vpon it, good two fingers thick and water it a litle, and cover the earth with strawe or broken boughes and branches, to the end that what shall come out of the earth may not be deuoured of birds. And when the sciences shall begin to shew, take away the strawe and boughes, and pull vp the bad weedes verie carefully with your hands, in such sort as that the small rootes of the elmes which as yet are tender, be not pluckt vp therewithall. The waies and squares must be so discretely cast, as that he which is to weede them may easily reach to the midst of them euerie way. For if they were too broad then he should be constrained in pulling vp the weeds to tread the earth with his feete, by which meanes the shootes might be hurt. After when the branches are put vp some three foote high to take them vp from their nurserie, and to plant them in another ground, and after that to transplant them againe. The elme tree also may be planted of small branches taken from great elmes, and that a great deale better in Autumne than in the spring time: after three yeeres passed, they must be transplanted and that after Autumne, when as the earth beginneth to be moist vntil the beginning of the spring, as being the time when the roote may be drawn without leauing of the barke behind: you may plant an elme at euerie forty footes end, and not touch them at all for two yeeres after: which being passed, you must dig the earth all about the bodie of the tree, pruning and picking it with a small handbill, euerie two yeeres. We will make no longer description of the elme: but send you to the sixth booke, where you shall find particularly and amply declared, how this tree is to be planted, and in what soile it doth principally delight to grow.

The tenth Chapter.

Of the alder.

THE alder or alder tree is no lesse profitable for the husbandman, then the elme, in as much as the wood of alder doth serue to make many implements and working tooles, as ladders, railes for the cart, poles, handles for tooles, racks for horse-meate, and such other things. To lay the foundations of buildings vpon, which are laide in the riuers, fennes or other standing waters, because it neuer rotteth in the water, but lasteth as it were for euer, and beareth vp marvellous strange and huge masses.

The alder therefore shall be planted neere some little brooke, in some moist and waterish meadowes: for the alder tree naturally delighteth in water more then any other tree doth, and it looketh that

the most part of his rootes should be in and lower then the water, for else it will not come to any growth. The alder is not sown because it beareth no seede, fruite or flowers: yet it may be planted two waies, either of branches taken from the great trees, or else of liue rootes drawne out of moist places their earth with them, and so set in another moist place, and that in such sort, as that at the least the one halfe of his rootes may be lower then the water, and covered aboue with earth a fingers thicknes: and withall before it be planted you must cut the small branches awaie till within a finger of the maine roote, which afterward will shoote vp manie small sciences. This tree is easie to take and grow againe in moist places, because it hath much pith in it, and putteth forth much wood in a short time. You may make your alder to grow high in anie place without any great labour, and to small profit because it would neede continuall watering. It is better then that your alder stand in a waterie ground (as we haue said) that so it may both please and profit you. See further of the alder tree in the sixth booke. The fresh leaues do stae inflammations: being put vnder the naked soles of the feete, they greatly take away their wearisomnes, which by far walking haue wearied themselues: full and all moist with the morning dew, being spread in sommer all ouer a chamber, they kill fleas. The barke serueth to make inke, and to die leather blacke.

The poole, fishpond, and ditch for fish.

The eleuenth Chapter.

Of the manner of making stewes and pooles for fishes.

THE chiefe and principall point of a good countrie farme is to want nothing either needfull for the prouision of the chiefe Lord: or auailable for the profite that may come thereof. The good housholder then shall not esteeme a litle of fish, seeing that of them he may make both prouision for his table, and great gain to his purse, but rather shall prouide some place neere vnto his house, for to cast pooles or stewes in, to the end that when need is, he may finde vittalles therein, both for himselfe and his familie, and that as readie as if it were already in a safe, or in the kitchen, besides what he may yeerely tell of that his store to make monie into his purse. Therefore for the appointing out of ground for these his pooles or stewes to breed or feede his fish in, he shall choosie it ioyning vnto his meadowes, in some leane place, and such as he could otherwise make no profite of, and yet it must be in a firme ground, that is grauelly or sandie, for such places doe feede fishes excellent well; notwithstanding

T t 2

The situation of the pooles.

that the muddie and dirtie poole be best for the tench, burber, cod, eele, and such other slipperie and slimie fishes: but he that loueth his health must not furnish his pooles or stewes with such manner of fish. The poole shall be marvellously well seated, if the commodiousnes of the place will afford it continuall refreshment from some flowing fountaine, or some brooke, or little river falling into it, whereby continually the first water may be remooued, and new supplied in place thereof, not suffering the other to stande too long impounded: and therefore if it be possible, the poole is to haue conuenient issue in one part or other, for so by this means the water is renewed the more easily, and the fish therein made the more cheerefull and better thriving to euerie bodies sight: whereas on the contrarie the standing and corrupted water affoordeth them nothing but bad nourishment, making the flesh thereof of an ill taste, and vnpleasant in eating. In the meane time you must not forget to set grates of brasie or iron close fastned and pearced but with small holes in the conduits, that so by them the water may finde one passage in, and another out, and yet to staie the fish forgetting forth: it will be good that the poole be large and great, to the end that the fish which is kept therein may finde roome to sport themselves, without perceiuing of any impediment or imprisonment that they sustaine. It will be good also to make in these pooles some corners or starting holes, like little lodging roomes in the wall thereof, to the end that thereby the fish may finde place for to hide it selfe, and to auoide the great heate of the sommer: provided notwithstanding that they be so made as that the water which is in them may easily get out againe.

The twelfth Chapter.

What manner of wilde flesh is to be provided for the furnishing of the fishpooles.

One great commendation belonging to inheritances is to haue wilde flesh and fish in the fieldes thereto belonging. As concerning the wilde flesh, the walkes thereof are partly in the woodes, and partly in the warrens, of which we will speake in their place: partly in the arable groundes and fallowes, as the great and little hare, the partridge, quail, and lark: and part in the woodes, as the hart, the hinde, the doe, and the wilde bore: and as concerning birds, the stockedoue, turtle, small hen, plouer, and others: but to retorne to our fishpooles, the wilde flesh thereof (especially of birds) is the swan, the heron, the woodcocke, snipe, mallards, teal, young wilde duckes, the wilde goose and the bitor. Besides there are belonging thereto as concerning beasts, such as auient writers haue called double liued beasts, that is to say, such as liue either in or out of the

The wild flesh of the fishpooles.

Beasts of a two fold life.

the water, the otter, the badger (which verily hath a scalie taile like fishes) the beauer, and the dormouse, vnto which we will adde the tortoise, that daintie dish for princes and great lords: albeit the most commendable of them, and which hath the best relish, and in most request, is that which is called the wood tortoise, and maketh her borough in the woods, the wealth of *Prouence* and *Langnedoc*.

The thirteenth Chapter.

Of the sortes of fishes wherewith pooles, pondees, and ditches, are to be furnished.

TO furnish your fish pooles and feeding stewes, it is needfull that you carefully consider the nature of the place wherein you haue made them: for all sorts of fishes do not feede alike in all manner of places: the stonie and rockie places do like well the fishes called thereupon *Saxatiles*, or fishes liuing in stonie places, as the troute, perch, loach, lumpe, mullet, and gudgeons. In muckie and slimie places, the tench, bourbet, codfish, and eele, do delight to liue. In grauellie and sandie grounds, the salmon, the pike, and the barbell, do not much dislike to liue. Wherefore to the ende that we may speake generally: in regard of the fish of pooles, pondees, or ditches (things common amongst the inhabitants of *Beaux*, though they haue no such store of water as the people of *Salongne*, *Percheron*, *Turraigne*, *Anion*, or *Mantz*) the most common and which best store and furnish the same, are the carp and the barbell. It is true that the pike is a good meate, especially if he be kept in springing waters, and into which there runneth some river (as the poole of *Nau*, or *Noue*, as also that of *Gonnienx*, *Noue* and *Gonnien*. the two most naturall and greatest pooles that are in all Fraunce, and such as neuer drie vp) but in keeping of him there is this danger, namely, that he is a very tyrant amongst all fresh water fish, eating and deuouring the small thereof, in such sort as that in fishing there is not a little one of that kinde cast into the pooles againe, after they be once drawne out, which yet is vsed in the little ones of all other kinds besides. The small fish which is called white, are the perch, the mullet, the millers thombe, the cheuin, gudgeon, loach, menuise, and the trout, albeit that the foremost are those which are the most daintie, and chiefest in request for sicke and delicate folkes, but the trout is the princeliest and most delicate dish of all the rest, which is neuer found but in running waters, or in great springs. The salmon-trout is a very daintie thing, and so likewise the flesh thereof is more fast and red, even after the manner of the salmon, after whom he had his name giuen. The tench, bourbet, and cod, are of a courser and more slimie meate, as is also the eele, which yet proueth singular good in great pooles, and greatly commended being taken in that of *Noue*, and at the

Kele ponds.

the milles of *Gomhionix*: witnes hereof are the eelepondes which haue bene caused to bee made there by Princes, and therefore that of *None* seemeth to me to bee of greater account, because of the causeley belonging thereunto: but there are some which disdain the eating of the eele in respect of the vnfauorines of hir flesh, and also because (as some say) she coupleth with the snake. But whatsoeuer the matter is, I finde her as good in a swift running water, as either the lampreie or lamperne a venomous fish in the sea, though when she is shoured and come vp into the great riuers, as *Loire*, she become a good firme nourishment, saue that it is somewhat slimie, and of hard digestion, how well soeuer it be dressed and handled.

The lamprey a venomous fish in the sea.

The excrements of the poole are the frog and the creuisse.

Sorts of fishing forbidden.

The excrements of the poole (which are eaten after the manner of fish) are the frogge and the creuisse, the first whereof being taken in his season, as when she is not ingendring, but well flesht and liking, doth taste like a little chicken: the other doth more load the stomacke then nourish; and yet vnto the husbandman and farmer this is as a second manna for his familie, which on festiuall daies delight themselves with the taking of them with the long bowe net, or with a little maunde of bulrushes, as also the little fish with the shouener, small net, called a truble and line; for the fire, the tunnell and baite are forbidden by all right. The net and the hooke are chiefe and principall of all the rest.

The foureteenth Chapter.

That fish pooles must be looked vnto, and the sides thereof repaired.

BUT and if you minde to reape any profit by your fish pooles or fish ditches, you must haue care to lay them drie euery six yeere at the least, and to dresse them euery three yeere taking away the reedes, bulrushes, and broad leaues of water lillies, and other water flowers, for these hinder the fish that they cannot sport themselves, and maketh them eate muddely and of a bad tast. You must likewise chase and drive away water rats, or else take them with some engine: as also the otter and beauer, as mightie spoylers of the fish pooles: these two tyrants are founde in greater number in *Lorraine*, then in our true and naturall countrie of *Fraunce*. Furthermore you must haue care that there bee not much shooting in gunnes at the wilde fowle which is found to haunt therein, because such shooting astonisheth the fish and killeth it oftentimes. Again there are other means for the taking of such wilde flesh: neither is the crosse-bow so dangerous, whether it bee the tiller, or the bullet. It is true that the long-bow is the most singular of all, & performeth the action of killing as well as the turkish bow, when it is drawne lustely and by one which

To banish water rats.

Not to shoot about fish pooles or wild fowle.

Guns cause fish to die.

hath a good sight.

The greatest charges of the fish poole is the keeping of the banks and causey, the water stops, sluices and ditch ouer against the poole, made for the receiuing of the water during the time of the fishing, as also to rid it of mud and vnprofitable weedes, as being the cause that the water when it is not of any strong current, becommeth couered as it were with earth: yea and though it be of a good fresh spring, yet they are the meanes of the stopping and dryng vp of those springes, and to cause them to diuert and turne their courses an other way: wherefore all good house-holders must be furnished with iron to re-
The raising of the sides or banks of the fish poole.
 paire the grates and flints and hard stone for the maintenance of the causey.

As concerning the pondes and ditches for fishes they must be often dressed, replenished with new store, and refreshed with small ware: for to be alwaies taken away and neuer adding any thing to, doth pull downe the greatest heapes of store. Again the good farmer is carefull and diligent alwaies in his taking of fish, to cast the small backe againe into the water, and not to kill them out right if he can auoide it: It is true that for further profit and thrift, he vseth to pricke about such ditch or pond great plentie of willowes, and some also doe plant the aller and elme, in the same place: for to gather firewood of for the household: others againe doe plant the alpe & poplar tree, and euery one of these, according as they find their ground best disposed to beare the one or the other.

The fifteenth Chapter.

Of the feeding of fishes in their pooles, ponds, and ditches.

IT is most certaine that the fishes abiding in the sea, or streames and running riuers, haue greater store of vittaille, then those which are shut vp in pooles, ponds, ditches and stewes: for such as haue their full scope of libertie in the sea and streames, doe alwaies meete with one reliefe or other brought vnto the by the course of the water, besides the small fishes which are the foode and sustenance of the greater: but the other shut vp and inclosed in safegard, cannot goe forth a hunting after any pray. It will be good therefore sometimes to cast them in of all sorts of small fishes, the bowels and entrails of great fish, tender figges cut downe, crackt walnuts, soft ceruises boyled, fresh cheefe, lumps of whit, bread certaine fruits chopt small, all sortes of salt fish and such other like victuall: for & if the fish be not fed and made fat wich meat which the householder or farmer shall giue vnto them, when they shal be carried either to hall or market (for my meaning is that the good farmer should make his profit of all things)

the leannes thereof will manifest, that they were not taken in any full sea at their libertie, but in some place of gard and restraint, and so they will not sell so deere by much. And sometimes it will be good to cast vpon the pooles and pondees the fresh leaues of parly, for those leaues doe reioice and retrefh the fishes that are sicke.

The sixteenth Chapter.

The fishing of all sortes of fish.

THE fishing or taking of fish is diuers according to the riuers and waters wherein they keepe, as also in respect of the diuersitie of the fishes themselves: for the fishing in the sea and that in fresh water is not all one, but feuerall and diuers: the great fishes one way, the Eele another way, the pike another way, and the carpe is taken another way. But whereas it might fall out that such variable manner of fishing might be very difficult and long to describe, we will leane this knowledge to such as make account to sell and buy fish: we will onely declare for the benefit of the housholder, that the chiefeft and most principall waies to take fish are either in the maund, or with the casting net, or with the line, or with nets or with the hooke. Thenets do heape together greatestt store of fish, but they are chargeable to maintaine: the casting net is of the same condition: the line and hook are the most ingenious and wittie, but least profitable and of slenderest reward.

The time to take fish.

The fittest time to go a fishing in Autumne is after sun set, and then principally when it is betwixt night and day, for then fishes are flumbring and that so deeply, as that they may be taken at their rest, with light and flaming torches. In winter the fittest time to fish in, is about noone: in the spring time all the day long, but chiefe before the sun rise, which spring time is the most fit of all other times for fishing, in as much as then the water being warme, and the fish stirred vp to ingender, they rise from the bottome of the depthes, to the vppermost part of the waters, yea oftentimes to the very edges thereof: the worst and most vnfit time of all other is the summer, especially whiles the dog daies last, the heate whereof caueth the fish to die, and constraineth it to betake it selfe to the bottome of the depthes: so that if you would fish in sommer it must be in the night season. In fishing you are to haue regard vnto the winde: so that when the North wind bloweth you must turne your nets toward the South winde, and the South wind blowing toward the North winde: in like manner when the Westerne wind bloweth, your nets must be turned toward the East and contrarily: but before all things, fishing must be gone about in a calme time when there is not any tempest abroad.

For to gather fish together into one place: Take penni-royall, sa-
uory,

uorie, organie, and merierom, of euery one the weight of three french crownes, of the barke of the frankincense and myrrhe tree, of each one ounce: of sweete cherries dried and infused in good wine halfe a pound: of a hogs liuer roasted, of goats grease & garlike of each a pound: stamp euery one by it selfe and after put thereto some fine grauell, with this mixt together, you shall feede the fish for some hower or two before you cast in your net, which when at such time you haue cast in, you shall therewith compasse the place about.

To catch all sortes of fish: Take sheepes suet, of burnt sesamum, garlike, organie, thyme, and dried marierom, of euery one a sufficient competent quantitie, stampethem with the crums of bread and wine, giue of this composition to the fish to eate. Or else take sweete cherries dried, and braing them, make pilles thereof to giue vnto fishes: Or make a meate with vnquenched lyme, old cheele and rams suet: cast this vnto the water and presently you shall see the fish flote, and lie still vpon the water. Fishermen to catch small fish with the line doe baite hookes with small earth wormes: whereof the fish are very delirous and greedie. Otherwise: Take the Indian shell, cumin, old cheele, flower of wheate, kneade them al together with wine, make pilles thereof as great as small peason: cast them into the riuer, when the water shall be quiet and calme, all the fish that shall taste of this confectiion as though they were drunke and besotted, will run to the brinke of the riuer, and so as that you may take them vp with your hand: or else make a confectiion with the round roote of birthwort brisfed, or sowes bread and vnquenched lime; cast vpon the water some portion of this confectiion, the fishes will hasten vnto it presently, and hauing tasted thereof will die sodainely.

To take small fishes: Take the flesh of a snail without a raile, and thereof make a bait, and put not on any more then one little snail at a fishes time: or else take the flesh & blood of a calfe well pouned: put it in a vessell and so leaue it by the space of ten daies: afterward vie it to make baites of. Otherwise: Take sweete cherries dried, and bray them making pilles thereof, which you shall cast vnto the fishes.

Take sal ammoniack an ounce: onions, the weight of a french crowne, of the fat of a calfe the weight of six crownes: make pilles thereof after the fashion of beanes, and offering them to torteiles, they will come to the smell, and so be taken.

For the cuttle fishes: Take the lees of strong wine, and mixe them with oile, and casting it into a place, where you know that the cuttle hath cast her blacke and shadowing humour, shee will come to the place where the oile is, and so you may take hir. Or else take sal ammoniack two ounces, goates butter an ounce: stampe them all and make little soft loanes thereof: wherewith annoint some kinde of corne, or little clothes that are not fringed, for so it will come to passe that

that the cuttle will feede round about them, and not stir away, so that you may take them presently.

To fish for and
to take loches.

To take loches : Take the bran of wheate two pound, of whole lintles halfe a pound : mingle them together, and bray them with a sufficient quantitie of salt brine : after, put thereto halfe a pound of Sesamum, of which you must cast about you some here & some there, for so soone as you haue cast it fro you all the final fish will hasten vnto it: and which is more they will flocke together into one place, though they be fixe hundred paces off. Or else take heats blood, goats blood, sheepes blood and swines blood, and the dung which is in the small guts of a hog, thyme, organic, penniroyall, saurie, marierome, garlick, and the lees of wine of each alike, of the greates of the same beastes; so much as you shall see to be inough, stampe euery thing by it selfe : after mixe them together, and make pils thereof to cast into the place whither you would haue the fish to flock, and thar an hower before you cast in your net. Otherwise : take the blood of a blacke goate and barley flowre, of each alike, bray them both with the lungs of the goate cut very small, make pils to vse after the manner aforesaid. Otherwise : take garlick halfe a pound, burnt sesamum as much, penniroyall, organic, thyme, marierome, saurie, and wilde stauesacre, of each fower ounces, of barlie flower a pound, of the dough as much, and of the barke of frankincense tree two ounces; mingle all together with bran, and giue it vnto the fishes.

To fish for
pearches.

To catch pearches : the pearch is not easily taken with nets, neither yet at the weyres, but rather with a proper baite, and that in a pudlie and troubled water : wherefore you must make a baite with the liuer of a goate, and baite your hooke therewith. Or else : take yellow butterflies, and cheefe of goates milke, of each halfe an ounce, of opopanax, the weight of two French crownes, of swines blood halfe an ounce, and of galbanum as much; powne them all well and mingle them together, powring vpon them neat red wine, and make thereof such little loanes, as you vse to make perfumes into, and drie them in the shadow.

To take sal-
mons.

For to take salmons as well of the riuer as of the sea : Take of the testicles or stones of a cocke, one ounce, of pine apple kernels burned, two ounces, bray them both together till they come to the forme of a powder. Otherwise : Take wilde rue seede, and the fat of a calfe, of each an ounce, of sesamum two ounces : stampe them all and make little loanes, which you shall vse.

To take trout.

The trouts which are a kinde of salmon, are taken with the hand, hauing betaken themselues into their holes, or with nets, or at weyres, and sometime with the light of a candle.

The gudgeon.
The carpe.

The gudgeon is taken with a hooke or the little net called a truble. The carpe is taken with the net hooke or engines laid at weyres:

but

but she oftentimes deceiueth the net, shooing her head downe into the mud or mire, wherein she delighteth.

The end of the fourth Booke.

THE FIFTH BOOKE OF THE COUNTRIE HOUSE.

Of arable grounds.

The measuring of lands of what sort or forme
soeuer they be.

The first Chapter.

Of the common measures whereby things
are measured.



Notwithstanding that the arte of measuring grounds belongeth to the Geometrieian more than vnto husbandmen : and euen as chiefe masons & master builders, who ought to haue the skill of measuring, do not vouchsafe at any time to measure the workes and buildinges which they haue set vp and finished, but leaue the same for such as make profession of measuring : so it may seeme that this is no duty of the husbandmans, to measure out his grounds, but rather appertaining, and therefore to be expected, of them which practise such art and skill: notwithstanding being desirous that the master of this our countrey farm should not be ignorant of any thing, which may serue for the enriching of his house & increase of his wealth, I haue thought it meete and reasonable before I passe any further vnto my purposed discourse of the tilling of corne ground, familiarly to vnfold certaine rules of measuring, very common with vs heere in France, and wherewith the farmer in case of necessitie and for his commoditie may helpe himselfe.

To begin therefore with the matter, all grounds and lands, whether they be meadowes, vineyards, woods, illes of water, courts, gardens, corn ground, places, fields and others whatsoever are measured in France by the foote, fadome and pole. The foote according to the kings measure containeth throughout all France twelue inches : the

The measures
in France called
the kings mea-
sures.
The kings foot.
inch.

1 mch.

The dour.
The quarter.
The fadome.
The pole.

each twelue lines, and euerie line must be of equal length to the thicknes of a barlie corne that is full and well fed. And the, or third part of a foote is called a dour: the fourth part is called a quarter. The fadome and pole are measured by the foote; but how many feete the one and the other should containe, there is not any so sure and certaine rule which holdeth through all France, as there is for the foote, by reason of the variety of measures, and thole not in diuers countries of France onelie, as in *Britaine*, *Normandie*, *Gascoine*, *Poitou*, and others: but also euen in places situate within some one ille of France and standing hard together, as may easily be seene neere vnto *Paris*; in such sort as that the fadome of some countries, containeth six foote and eight inches: and the pole, twentie foote: elsewhere the fadome containeth seuen foote and foure inches, and the pole two and twentie foote: In manie places the fadome containeth sixe foote, and the pole eighteen foote: In others againe the fadome containeth sixe foote five inches and halfe an inch or thereabout, and the pole nineteene foote and one dour which is fower inches. True it is that as the rule is certaine through all France; that a foote containeth twelue inches, so it is as sure and inuiolable that a pole containeth three fadome: wherefore without standing much vpon the fadome (which in truth is a measure more fit for masons and carpenters, then for measurers of ground) for the well measuring of all sortes of groundes, you must content your selfe with two principall measures the foote and the pole, not forgetting or omitting your inches, quarters, and thirds which are partes of a foote. Which more is in as much as feete, fadomes and poles are but small measures, & such as wherof might rise as it were an infinit number, or at the least a very troublesome number. (Such a one, as the reckoning wherof could hardly be kept) especially when there is need of measuring a wood, meadowes, places, illes, arable ground and other places of great compasse, besides the foote, fadome and pole, there is vsed another measure, which the Frenchmen call an Arpent, but of the people of *Burgundie* and *Champaigne* and manie others *Sourmans*, deuied from the Latine worde *Iugerum*, which containeth as much ground as two oxen or horse coupled or yoked together can till in one day. The Normans call it an acre taken from the Romaine worde *Acre*. This measure ariseth of manie poles put one to another or multiplied together, as the poles doe rise of manie feete multiplied. It is verie true that euen as the pole doth not holde throughout all France one measure of feete, so neither doth the Arpent consist infallibly of one number of poles, but looke almost how manie countries there are, euen for so many differences of sortes of arpents: and that it is so; there are to be noted amongst many other, fower sortes of this measure called the arpent, as must accustomed to be vsed. The first is called the kings arpent, and it is vsed of men ordinarily about the

the measuring of woods, and it consisteth of two and twentie foote to the pole, twelue inches to the foote, and a hundred poles to the arpent. The second is more common consisteth of twentie foote for a pole twelue inches for a foote, and a hundred poles for an arpent. The third is the least vsual of al, it consisteth of nineteene foot and a third, which are fower inches in euerie pole, twelue inches to a foote, and a hundred poles to an arpent. The fourth is most common of them al, consisteth of eightene foote for euerie pole, twelue inches for euerie foote, and a hundred poles for euerie arpent: because of such great diuersities of measures of the arpent, the measurer shall not of necessity be put beside the right performing of his worke, for before he begin to measure, he shal diligently and wisely inquire of the measure holding by the custome of the countrey, in the place where he is called for to measure. Furthermore you must know that the arpent may be deuied into many partes, as the halfe arpent, a tierce, a fourth, a halfe fourth, a halfe tierce: all which containe euerie one according to his proportion, so much as the whole arpent containeth.

The instrument and persons required as necessarie to helpe to make mesure.

The measurer must be prouided of ten or twelue arrowes, otherwise called little broches or prickes, because they are prickt downe in the earth, to guide the chaine, they are made of wood but harnessed at the neather end, with a sharpe pointed end of iron, of length two foote, or thereabout: and of such thicknes, all the ten or twelue together, as that a boie of fiftene yeres old, may easily hold them in his site. We haue saide that he must haue some ten or twelue: that is to saie ten, when the measurer doth vse his geometrical staffe in steede of one stick, or euen when he doth not vse his staffe. The second instrument very necessarily required for the measurer to measure assuredly, that is to say, not to faile in his feete & poles, and in the number of them is the *Richards* chaine made of iron, rather then of coard, (because coard is apt to stretch, not keeping his exact length constantly at all times,) sufficient strong and thicke, distinguished and diuided by round buckles or nails at the end of euerie foote, to the end it may be folded vp together, the more easily into one: it must be of the length of a pole; according to the custome of measuring in France, or of two or three poles, more or lesse, according to the aduise of the measurer, and custome of the countrey, and haue in the end of euerie length a ring, or round hoope, so wide and great, as that the middle finger either of the measurer or of his assistant may freely goe through it, without any manner of force or violence vsed. Besides, the said chaine; must (if a man be so disposed) be marked by the way, that

(that is to say) into tierces and fourths, with some mailes differing from the mailes of the chaine, by them the better to know the tierces and fourths. And as for the measurer he must haue three or fower foote length of chaine to referue vnto himselfe about his spade, or in some little bagge of leather, that so (if neede be) he may lengthen the chaine, or elsie helpe to make it againe, if in case it shoulde breake. In the figure or picture following you may see the shafts in a bundle by themselues, and the chaine gathered vp together by it selfe.

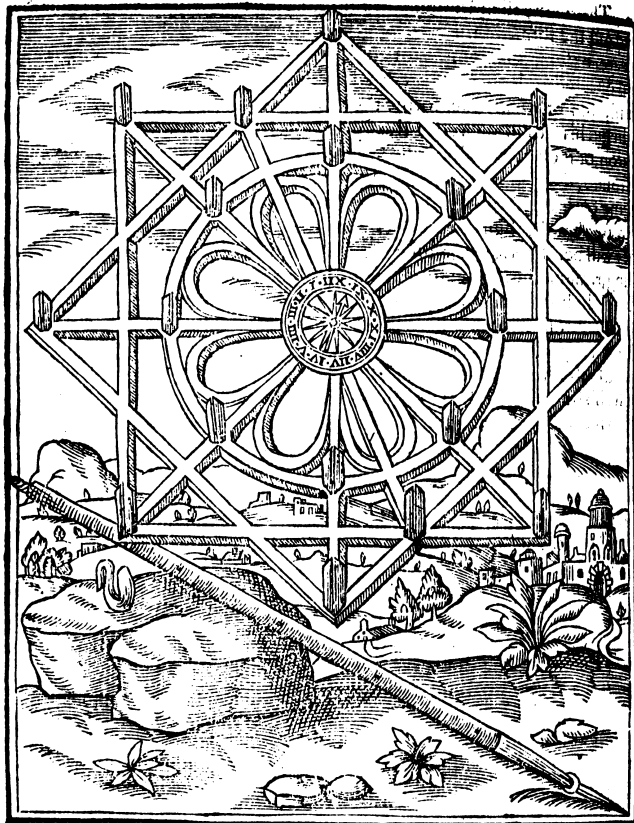


The

The principall instrument for the measurer well and assuredly to find out the forme of the earth which he must measure (whether it be square, or somewhat long, or of any such other forme: for to iudge of and discerne the length and bredth thereof: for to reduce all sorts of earth, and of whatsoever forme they be into a square; and to order & begin his measuring well) is the Squire, which is an instrument made of iron, or molten mettall, or of common woode, or of brasill, squared or round, diuided iustly and equally into eight portions, hauing the forme of direct lines, and those such fine and small ones, as possibly may be; for the thinner and finer that they are, so much the surer they will be. This squire must haue in the midst a round, in manner of a ring, reasonable thicke; bored in the length thereof cleane through with eight holes, without which the said instrument would be altogether vnprofitable. By those lights or holes the measurer shall make his sight, by winking on the one cie, to discerne the length & bredth, and all other forme of the grounds which he must measure. There must also be on high iust in the midst of the round of this squire a hole, for to receiue the measurers staffe, whereof we will speake by and by, that so it may beare vp the saide squire, and raise it on such a height as shall be needfull for the measurer, to take the viewe and sight of the ground fitly and conueniently. It will be good also, though not much necessarie, that there were a diall set vpon this round, to discerne the houres of the day if neede be: and to knowe in what part the south standeth.

The staffe that beareth vp the squire, is called the geometrical *The Geometricall staffe.* staffe, which must be of wood, very straight, fixe foote long or thereabout, reasonable thicke so as it may well be carried and held in your hand, hauing the end downward, sharpe & shod with a sharpe point of iron, made very hard and thicke, or elsie of copper, and hauing a little hinge after the fashion of a vice aboue, and in the end thereof a little hoope to receiue and holde fast the squire set thereupon, that so it may not moue, tremble or shake with the winde, yea though it be a great and violent winde that bloweth, whiles the geometrician is in performing his busines. The staffe must be marked out all along with lengths of feete, halfe feete, fourthes and tierces of poles.

In this figure you see the squire and the staffe each of them by themselues.



The Geometrician must likewise haue in readines two sortes of writing tables, the one of slate, reasonable thicke, with a pen fastned to the same at the end of a litle string, and it must be likewise of slate, that so it may not cut the saide tables too deepe in when he writeth vp his accounts therein with it. The other litle paire of tables shall be of boxe, or other such like matter, like vnto those which are brought out of Germanie, hauing a copper pen, which the said Geometrician shall vse for the setting downe in writing: the lying, buttings, and contents of the said peece of ground which he hath measured.

He

He must also haue two men, that is to say, one his assistant to go before him, and to carie the end of the chaine, and to thrust downe into the earth the ten or twelue shafts: and the partie whose ground is measured, or some one for him, that can laie and point out vnto the Geometrician the boundes and limits of the saide peece of ground, whether it be arable, wood, meadow, or any other such place.

How and in what manner the measurer of these grounds is to accomplishe and performe his worke.

This measurer of grounds (being thus suted with all the foresaid instruments seruing for the measuring of ground, and hauing likewise the directions and assistance of others, (as hath bene saide) to helpe him about his worke) must diligently inquire of the manner, fashion, and custome of measuring in that place, and of what length his chaine must be, how many poles are contained in an arpent in that countrey, and how many foote are to goe to euery pole, letting (as we haue saide before) almost euery countrey hath his seuerall measure: besides this, he being well instructed and taught in the boundings and limits of the peece of ground which he would measure, he must lay aside, or else at the least trusse vp his cloake very close, and place himselfe at one of the ends of the plot of ground, wood, or meadow, hauing his shaftes all of them vnder his girdle on the left side, and his squire hanging by a litle crooke at his girdle on the right side: there pitch downe his geometricall staffe, making fit and faste his squire vnto the end thereof, and to assigne for his more ease the ten shaftes which he had made fast vnto the left side at his girdle, vnto that place whereas is fixed the litle hinge, afterward stouping with his head, to take his sight and view by shutting the one eie, ouerthwart and within the holes or lights of the said squire the forme; and first the length by one side of the squire; afterward the bredth by the other side of the saide squire (without stirring or moouing of the squire at all from out of his place from aboue the staffe) of the peece of ground that he would measure: It is true that he shall need neither staffe nor squire if the peece of ground be square, or of a small compasse, because that without any such squire hee shall bee able to discerne the forme of the ground, and in such cases he shall onely vse the helpe of his shaftes, which he shall giue vnto his assistant, and of the chaine, the one end whereof he shall hold himselfe, and giue the other vnto his assistant, which shall goe before to sticke downe the shafts at each end of the chaine, both of them herein applying themselves to the same purpose alike. The assistant shall goe before, and first he shall hold in his left hand the ten shafts altogether, leauing the eleuenth with the master measurer to fasten downe in the place where he shall begin his measuring

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asuring (if so be that the measurer do not choose rather in steed thereof to vse his staffe, the said assistant shall hold one of the ends of the chaine by the ring with the great finger of his right hande, and that without any want of roome for his finger to ge in: he shall fasten downe in the earth one of his shafts, (which his left hand shall haue reached him) with his right hande, at the end of the chaine as it is stretched forth at length: the said master measurer shall follow him, and shall take vp the shaft which his assistant hath set downe into the earth, then the assistant shall proceed and go on, alwaies carying the chaine with him, and fastning the end of the chaine which he carrieth with one of his shafts thrust downe into the earth, and this shaft the master measurer alwaies comming after shall take vp, and both of them shall continue and holde on this course, the one to put downe the shafts, and the other to take them vp, vntill such time as the chiefe measurer haue gathered to himselfe all the tenne or twelue shaftes which will be so many or so many poles. This done, both of them shall go vnto two other endes of the saide peece of ground, and shall do in like manner as they did at the first, where when as the measurer hath measured the length of one side, he shall measure the one breadth, leauing the length of the other side, and the other breadth, hauing found out by his squire that the peece of ground is square, if rather for his owne assurance and contentment of the owner he thinke it not meete to measure the two lengths by themselves, and the two wide-nesses by themselves. Whereupon it will come to passe that if the peece of ground or wood (for an example) containe from the one end to the other on all sides tenne poles, multiplying the one side by the other, that is to say, ten by ten, they shall haue the totall summe of the poles of the square, which will be a hundred poles, which is one arpent: and so hereupon the measurer shall conclude that the place doth containe an arpent. Againe, if in case that the place were of greater breadth and length then ten poles square, they shall hold on their measuring, and passe from one end to the other, accounting that which shall be more, till reducing all that they measure into hundreds of poles, and so into arpents. See heere the easie way for the measuring of lande, woods, and other places of small compasse and square, wherein there is no great need of any squire: but and if the peece of lande, wood, or other such place be of great compasse and contents, and yet notwithstanding lying straight on euery side, as of fise or sixe hundred arpents or more, it will stand the measurer vpon to vse the helpe of his squire, wherefore he shall pitch downe his geometrical staffe at one of the ends of the saide peece, and shall set his squire to the top of the end of his staffe, and shall view the other ende of the ground through the holes or lights of the said squire, if his sight and largenes of the place will permit him, which if it will not, then onely

so farre at that time as his sight may be conueighed: vnto which place directly, whether the direct line of the squire doth looke, he shall send his assistant, or some other man to pitch downe a diameter, that is to say, a stake or pole, or some other certaine marke, so farre off as that the saide measurer may see it at that end of the peece where he is taking his sight: or else many diameters in many places alwaies directly beholding the first diameter, if in case the peece of ground should be of longer distance, so as that, one, two, or three diameters alone would not be sufficient, as those which the saide measurer should not be able easily to see and discern. The diameters one or many being thus pight, they will serue to helpe the measurer better and more easilie to measure the peece, being thereby as it were diuided into many equall portions. If it be a peece of vnderwood that one would measure, the measurer and two or three stoppers, doe cut downe so much of the saide vnderwood, as may make a way of such widenes, as that the measurer and his assistant may easily passe. But and if this be a woode of great timber trees, and of a great compasse and reach, the great trees shall serue for diameters. Then the direct draught being taken, and the diameters pight, and the other end of the peece of ground attained, the measurer shall giue his assistant ten shafts, and shall keepe still the eleuenth, or in place thereof vse his geometrical staffe (as we haue saide before) and shall hold one of the endes of the chaine with the great finger of his right hande, as his assistant shall holde the other end in his right hande, and the tenne shaftes altogether in the left, to pitch downe one at the end of euery chaines length: as we haue saide before. In this figure you may perceiue how this measurer and his assistant doe performe the thing.



How to reduce all sorts of ground into a square for the better measuring of it.

But as all grounds are not of one forme and fashion : so is it not possible that one manner of measuring shoulde serue to finde out the quantitie of euery peece : and therefore to speake generally, all places and grounds are either square or longer than they be broad, and then they are called somewhat longer then broad, but stretching right out or vnequal both in length and breadth, and then they be called

led somewhat long and ending like a house, or in the forme of a wedge that is to say, a like long, but of an vnequall breadth, or of an equal triangle, or of an vnequall triangle, or square, or halfe rounde, or of the fashion of a bowe, or consisting of many corners, or of many fashions mixt together, or they are inclosed one within another: for the sure measuring of all which places, you must reduce them into a square, which is as *Polygeton* his rule for the well measuring of all groundes and places: the measure of square is very easie as we haue saide, that is to say, like number of poles on euery side, which consisteth of tenne poles to a French arpent, which number being multiplied with it selfe, which is ten by ten, make the whole sum of poles, whereof an arpent consisteth, which are a hundred poles, and euery pole consisteth of eightene foote.

If then the earth be found by the measuring of the Geometrician, to be more long then broad, and yet hauing each long side equall, and each side of breadth likewise equall, which is called *Rectangle droit*, for the bringing of this form into a square, you must remember (or else haue it let downe in writing tables for the better remembrance) what number of poles are in the length, and howe many likewise in the breadth, and to multiplie the length by the breadth, that is, the poles of the length, by the poles of the breadth: as for example, if the measurer haue found in the equall length of a ground five and twentie poles, and in the equall breadth of the same ground four poles, he shall multiplie five and twentie by foure, and shall haue foure times five and twentie are a hundred: this ground then by this multiplication is found to contene a hundred poles, and so by consequent an arpent, at a hundred poles to an arpent, and eightene foote to a pole, and so in like manner as the length is more or lesse. Likewise the breadth being lesse or greater, that the number of the length & breadth be multiplied together, whether it be lesse or amount to more then an arpent, he shall make his accounts and reckoning to fall proportionably, according to the greater or lesse number of poles, as well of the length as of the breadth: as for example; if the measurer haue founde in the length of a ground seauen and thirtie poles and a halfe, and in breadth one pole, he shall multiplie thirtie seauen poles and a halfe by one, and shall say that this ground containeth thirtie seauen poles and a halfe, which is a quarter an a halfe of an arpent, at a hundred poles to an arpent, and eightene foote to euery pole; by the same meane if the ground be leasured one pole long, and two poles and sixe foote broad, in multiplying seauenteene pole by two pole and sixe foote, he shall finde a quarter and a halfe, two pole, three foote of an arpent: after a hundred pole to an arpent, and eightene foote to a pole.

If the ground be founde by measuring to be vnequall and unlike, a ground vne-

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Grounds that
are more long
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called *Balonne*
Corme, after
the fashion of a
horne.

as well in the length of the one side to the other, as in the breadth of the one end to the other; you must remember, or for your better remembrance, to write in writing tables, the unequal numbers of the two sides, as also those of the two ends, and afterwarde to reduce the two vnquall lengths, as also the breadths, into an equalitie, in the end multiplying the equal length by the breadth likewise made equal; as for example, if one of the broad ends of the said grounde do containe fewer poles, and the other two poles onely, and the one of the sides of length containe sixteene poles, and the other tenne poles, to bring and reduce the thing into a square, you must take of the two poles by which one of the broad ends is broader then the other, the halfe, that is to say, one pole, and put it to the two poles of the other end, and thus each end will containe his three poles a peece equalle. And of the fixe poles wherein the one of the sides doth exceede the other in length, to take also the halfe which is three poles, and to put them to the ten, so each of the sides will be thirteen poles a peece: then afterwarde to take the number of one breadth (made equal with the other, as we haue saide) which is three poles, for to multiplie one length (made equal likewise with the other as we haue saide) which is thirteen poles, and to account that three times thirteene are thirtie nine: so there will be thirtie nine pole, which make a quarter and a halfe, one pole and a halfe, of an arpent, according to a hundred pole to an arpent; and eightene foote to euery pole: so that you must follow this rule in euery thing that is *balonne corne*, that is, fashioned after the maner of a horne: that is, that the side and ende which are of greatest contents, do helpe and succour the other which are the lesser: in yeelding of their owne so much vnto them as may make side equal with side, and end with end.

Ground fashioned
like vnto a
wedg.

If the ground be fashioned like vnto a wedg, that is to say, equal-ly long on both sides, but hauing one ende broader then another: as for example, twentie pole long, and seauen pole brade at the one end, and but three at the other, then you must gather the two breadths together, which will make ten pole, to take the halfe of them will be five, to multiplie the length withall, in the dooing whereof you must count five times twentie, and the summe will rise in all to a hundred pole, which make one arpent, after a hundred pole to an arpent, and eightene foote to euery pole.

A ground lying
triangled-wise.

If the ground should be triangled, hauing three sides equal, you must follow this course, which is to learne out how manie poles there are in euery side, and then to multiplie the number of the one side by the halfe of the number of the same or another side: and that which ariseth of such multiplication, will be the whole contents of the poles of that field: as suppose an equal triangled field, hauing ten poles on each side, I wil multiplie the number of the one side by the halfe num-

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ber of one of the other sides, that is to say, ten by five, which is fiftie pole, and containe halfe an arpent, at a hundred poles an arpent, and eightene foote to euery pole, and twelue inches euery foote.

If the ground haue the fashion of an oxe head, that is to saie, bee cast into two triangles equally ioyned together, and that euery side (for example sake) containe twentie poles, I wil multiplie the number of the one side by the number of the other side, that is to say, twentie by twentie, and will say that twentie times twentie poles, are fouer hundred poles, and that fouer hundred poles are fouer arpents: at a hundred poles to an arpent, eightene foote to a pole, and twelue inches to a foote.

A ground con-
sisting of two
triangles.

If the ground should proue round like a circle, you must deuise the same round into two diameters: which make fouer equal quarters; then you must know the number of the poles of euery quarter; afterwarde to multiplie them will be the sum of the whole rounde compasse of the ground: for example, euery quarter of the rounde doth containe twentie poles: we will multiplie twentie by twentie, and so we shall finde fouer hundred poles, which make fouer arpents which this round shall containe: at a hundred pole to an arpent, eightene foote to a pole, and twelue inches to a foote.

A ground that
is circular or
round.

If the ground be of a mixt sort, hauing many formes & shapes, the best will be by the meanes of the squire to reduce them all into squares, and then to finde out the number of poles in them, and to put the said numbers together. And, if in reducing & bringing of them into fouer squared formes you borrow something, you must restore the number which you haue borrowed in the totall number which you haue gathered, and by this meanes you shall haue the perfect number of your ground.

A ground con-
sisting of many
formes and
fashions mixt
together.

If your ground be intangled within some other piece of ground, you must measure all together, and afterwarde taking awaie the inclosed part, and putting the one asunder from the other, you must measure your owne by it selfe.

An inclosed or
intangled
ground.

Thus haue we briefly set downe that which is to be knowne of the husbandman, concerning the skill of measuring of lands and whatsoever grounds: if he happen vpon any peece of measuring worke which is of greater importance, hee must haue recourse vnto the professed skilfull in measuring.

The second Chapter.

Of the manner of tilling of arable grounds, shall be intreated of in this booke.

As it is ordinarily seene that the complexions of people dwelling in the severall prouinces of one great region and countrey do differ one from another according to the aire, or aspect of

the sunne which is called the climate that they dwell in: so in like manner one may see the nature and fertillnes of arable groundes to ingender and bring forth diuers complexions and sorts of ordering of the same more in one place then in another, according as the ground shall be moist and glib, grauelly consisting of fullers clay, bricke, stonie, or free and well natured: which thing did necessarilie compell our predecessours inhabitants of this country to alter and change the manner of tilling, as also the fashion of the ploughes in France and the confines of the same, as the high and base country of *Beaux*, the countrie of *Normandie* and the confines thereof, *Sangterre*, *Berie* and *Picardie*; in like manner high and base *Brie*, *Champagne*, *Bourgogne*, *Niuermois*, *Bourbonnois*, *Rotelois*, *Forst*, *Lyonnais*, *Bresse*, *Savoie*; and againe in the countrie of *Annergne*, *Languedoc*, *Solongne* (where there groweth no corne but rie) *Bordeleais*, *Rocheleais*, *Vandomois*, *Basadais*, and generally throughout all the countrie of *Languedoc*, euen vnto *Gascogne*, *Biscay* and *Beaune*, and not to leaue out *Prouence* and *Brissaigne*, which some call *Galla* and *Tomant*. To be short, beyond the countrie of *Mayne*, *Touraine*, *Poitou*, *Le Perche*, and *Cohent* of *Anion*, which were it were the lands of promise in our countries of France.

Of all these sortes of tilling of arable ground we haue purposed to intreat heereafter in short and easie manner, and that in regard onlie of the husbandrie of the true and natural France, which we vnderstand to containeal what beuer is inclosed within the bounds and circuits of the riuers of *Oyse*, *Marne* and *Seyne*: and our purpose is notwithstanding this to make the husbandrie thereof as a patterne for all other fashions and sorts of tillage vsed in all other countries, as well here as those which are furthest off: and yet not of any othe than those which are within the dominion of France (for of forraigne countries I take no care) as *Beaux*, *Solongne*, *Anion*, *le Mayne*, *Berie*, *Poitou*, *Annergne*, *Brie*, *Champagne*, *Picardy*, *Bourgogne*, *Normandy*, *Lyonnais*, *Forst*, *Bresse*, *Dauphiny*, *Savoie*, *Prouence*, and the bordering countie, which are the most fruitfull of all the countries of France.

The third Chapter.

Of the nature and conditions of the arable ground in France.

NOW as concerning the husbandrie of France (which comprehendeth and containeth the confines called also French, and reacheth vnto the countrie of *Sangterre*, and to be briefe, which compasseth all whatsoeuer *Seyne* doth overflow, euen to thenner *Oyse* both of the one side & of the other, coasting along the riuers of *Marne* and *Aube*) it is certaine that it is verie strong and toile some, as also the earth is found to be well natured, easie to stir, blacke, deepe,

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lying high when the fallowes come to be ploughed vp, having few stones, and by consequent bearing great store of fruit. Againeth beareth pure wheat that noble graine for the making of bread and sustaining of mankind, if so be we will but giue that which is due vnto *Gommeffe*, *Louures*, *Poissy*, *Dampmartin* and vnto *Sarcelles* and vnder *Escoman*, and *Lnfarche*. In which countries a couple of horses of the price of a hundred or fixe score crownes a peece or aboue doe runne through their worke and husbandrie, without being either called or cried vpon, and they do but a certaine taske by the day, seeing they cannot endure great heat or rain, strong winds or frosts, being as loftily & brauely kept as the courser or light horse is in the stables of Princes. It is true that all their ground in France is not altogether alike: for in some countries you shal find it much consisting of a potters clay and grauelly: in other countries marshy, moist, stony, flinty, barren and vninhabited, hilly, full of wilds, overgrowne with rushes and brooms, which and if a man would til for to bring forth corne, he must irrich and make the better, by such meanes as I haue declared in the first Booke.

The fourth Chapter.

What space and largenes arable grounds would haue.

IF you desire that your corne grounds should be faire to sight, make a goodly shew, be easie to be tilled and beare plentifully, part them into many peeces cast fowre square, and let neuer a one of them exceede in the length of forty poles, nor yet be lesse than thirty or five and twentie: and, if the inconuenientnesse of the place will not suffer you to cast them into squares, then make them somewhat more long, but yet not exceeding the foresaid fortie poles in length: for besides infinite other commodities and pleasures accompanying short fields and such as are not of large reach, this is one verie speciall profit, namely, that oxen and horses doe labour there with lesse trauel and wearisomnesse, in as much as they do not onely cheere vp themselves and take their breath being at the end of the furrow, but also for that the ploughman cleanseth and freeth his plough, of the earth wherewith it is woone to be laden, as then also carrying them about to enter vpon a new furrow: cause your ground if possibly it may be, to lie leuell and euen, for besides the pleasure of seeing from the one end to the other, they will also be the more easie to be ploughed, dunged and sowed: let them be ditched round about, or at the least on the sides, as well to draine away raine water or other if any should stand there, as for to cut off the trade waies of passengers. Plant not within nor about your corne grounds any trees, for feare of the shadow, knowing already

redly that the more that corne is shadowed, the further off it is from being comforted and reioiced by the sun, as also from having the dust (which is wont to lie much vpon it) blowne off by the windes, and likewise from being deliuered from snow, fogs and tempestes oftentimes a heauie burthen vpon the backe thereof. And yet put case that for your pleasure you would plant some trees thereabout, then let them be no other but willowes, or such like that may beare no great head to make shadow: and therefore let neuer come nie thereto either the poplar, or aspe, or aller, whose shadow is not onely dangerous and hurtfull vnto the corne ground, but which is more, with their great, thicke and great store of rootes, they draw vnto them the best witte, they sucke vp the fat of the earth, and so steale away the best from the feede that is sown.

The fifth Chapter.

How oft corne ground must be eared or plowed ouer.

THAT I may therefore briefly declare vnto you the tilling of grounds for graine and pulle, vnderstand in generall, that the earings of arable grounds are diuers, according to the places and situations of the said grounds, as wee haue already alleaged. But howsoeuer the case stand in that point, and in what plat or peece of ground soeuer you can name them to be, it behooueth that at the first earing which is given them after they haue rested and laine fallow, that you cleanse them well from stones all ouer with rakes, and that at the paines or trauell of some yoong boies and girles that can doe little or nothing else, or otherwise by others, for the earth of it owne nature lying vtilld, begetteth nothing but stones, and strong and vnprofitable weedes, as those which are the reliques of the dung now thoroughly digested, and changed by a heate exalted vnto the fifth degree. And we neede not make any doubt of it, but that euery good and kinde ground, when it should not bring forth any thing but mustard feede, couchgrasse, pimpermell, mercurie, thistles of all sortes, danewort, wilde fatch, red poppie, wilde oates, veruaine, blew bottles, axfatch, or such other like vnprofitable weedes, without forgetting of cockle and darnell, and that which is called reitharrow, or at the least some fumitorie and henbane, yet it will bee doing of some thing more, as namely those which grow out of it of themselves, as stinking mathweed, kexes, rupture wort (these be reclaimed grounds) and the herbe called Chamepytis, as I haue sometimes seene in those countries, which properly and truly containe France. For the digging of these herbes, the thistles they the beare of the ground, and their aromatisall and oddiferous rootes may refuse the henbane wilde

The first earing of ground, after it hath lain fallow.

Vntilld ground.

Weedes shew what manner of ground it is wherein they grow.

wilde smillage and fumitorie grow of putrefaction: the bindeweede both great and small, doe proceede partly of drineste, partly of the alteration of the humour: nightshade the great and small doe spring vp of the cold part of the earth, which they drawe from the humour thereof: mercurie of both sorts, eie bright also of two or three differing flowers, the small sorrell red vnderneath, and the three sortes of plantaine doe hold of cold or temperate ground: but the garden and water cresses, rockets, wilde mustard feede, as also the two sortes of water parley haue differing natures and are more hot, according to the humour which they confesse to participate, in respect of their proprietie: To be short, these are certaine dalliances and sports of nature, which (though they shoulde neuer be husbanded in the earth) would (notwithstanding) yet neuer abide idle, or without doing some thing. It is true that the couchgrasse and that which is called rest-harrow make shew to be more standing tenants, than veruaine or male knot-grasse, for they will not away, except the plough and calter their tyrannous commanders doe come. To conclude, these latter herbes being cut and rooted out by oft and deepe ploughing, must afterward (especially the thistles) be thwacked and beaten small before the first raine, that so there may nothing of them (yea, no more then of an adder) remaine aliue to breed or increase any thing againe: for their nature is so soone as they receiue a little moisture to fasten & claspe themselves so close to the llime of the earth, as that they will thereby againe so enter new possession, that within a short time after they will become strong enough to strangle their mother. Let vs therefore conclude, that the earings of the arable ground are to cleanse it from stones and weedes, to manure it, to spread and cast abroad the dung of manie, to plow it after the manner of the first earing, to furrow or ditch it, to clod it with a rowler or board to couer it: then after some time when the raine hath fallen vpon it to plough it for the second earing, which of ancient men is called stirring of it, and this cannot be done without laying it in furrowes: and the third earing is to plow it for seede time, to sowe, harrow, and pull vp weedes, which by abundance of raine, and too much rankenesse of the earth, doe ouergrow and enter commons with the new shot corne. And lastlie, to mowe and laie it bare and naked, to sheare or cut it downe, to sheare it and to gather it in.

The sixth Chapter.

The plow mans instruments and ropes.

THE carefull and diligent plowman, long time before he be to begin to eare his ground, must take good heede and see, that all his tooles and implements, for to be vsed in plowing time, be

Nature is neuer idle.

The first earing.

The second.

The third.

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be ready and well appointed, that so hee may haue them for his vse when neede shall bee: as namely a waggon or two according to the greennes of the farme; and those of a reasonable good big size and handsome to handle, well furnished with wheelles, which must be finely bound and nayled: and of a good height but more behinde then before: one or two carres, which may be made longer or shorter, according as the matter, which shall bee laid vpon them, shall require: one light and swift cart, the bodie laid with planks and sufficient strong to beare corne, wine, wood, stones, and other matters that are of great weight: a plough furnished with a sharpe culter and other partes: rumbrils to carrie his dung out into his grounds, wheelebarrowes and dung pots to laide and carrie out dung in: strong and stout forkes to load and lay vpon heapes the corne sheaues: pickaxes to breake small the thicke clods, the rowler to breake the little clods: rakes, pickaxes, and mattocks or other instrumentes to plucke vp weedes that are strong and vnprofitable: harrowes and rakes with iron or wooden teeth, to couer the seede with earth: sickles to sheare or cut downe haruest: flayles to thresh the corne: fannes and sieues to make cleane the good corne, and to separate it from the chaffe, dust, and other filth.

The seventh Chapter.

To cleanse arable ground of stones, weedes, and stubble, the first works to be done vnto wheat ground.

BV T to speake more particularly of the dressing and eareing of arable grounds that are to bee sowed with corne, that is to say with rie corne, mallin, some kind of barlie, Turkie corne & such others whereof bread is made, and especially that which the Frenchmen call for the excellencie thereof wheate corne, and the Latines *Frumentum* and *Triticum*: they must haue the stones gathered off in winter, vpon ground that hath laine fallow, which thing for to spare cost and charges may be done by little lackboyes and girles, which with their hands stooping downe and filling maunds and little baskets, may carrie them into the midst of the high waies, and into the furrowes and rupts of carts, or else vnto the end of euerie land, there casting them in some vnprofitable place. The worke is so needefull, as that if the field be not cleansed from stones, though otherwise it should be duly and orderly plowed, though otherwise it were fat and fruitfull of his owne nature, yet would it beare lesse then any other peece of ground: and on the contrarie how leane soeuer it be, if yet it be leane withall and freed from stones, it will not let to bring forth in good and plentifull sort. Sometimes before the gathering of the stones, if some

some vse to weede it and to pull vp by the roote the briers, thornes, bulthes and great herbes growing thereupon: but such labour may seeme moit requisite in an ouergrowne ground before the first breaking vp of the same. The stubble is to be taken away and rid from off the ground where wheate, or other corne, as oats or other graine haue growne, so soone as the corne it selfe is shorne and cut downe.

The eight Chapter.

That the second or next dulse to be performed to the ground is to enrich it by manuring it: that so of a leane ground, it may become fruitfull.

ALL grounds which are appointed for seede or corne ground, whether they bee such as are new broken vppe, or such as haue oftentimes already borne corne, must be enriched and repaired by manure in the beginning of winter about the eighteenth of Nouember, or the beginning of December, with sicepes dung that is three yeeres olde, or else with cow and horse dung mingled together, for the helping of it to a temperate heate. The dung is to bee laide on in hils, little lumps, or heapes, and that along as you meane to cast vp your furrowes in plowing, and after to spread it in his season whether it be rotten dung or marle. And it shall chiefly be done in winter, that so the raine and snow dropping and falling downe vpon it, it may be ouercome and caused to relent. The vnskillfull and bad husbandman spreadeth it al hot, but he lacketh not a faire Forrest of weedes as reward of his hastie paines: for dung being thus at the first sowne & spread though it be ouercome afterward: notwithstanding see what weedes it hath receiued from the beastes houses as being there scattered, it yeeldeth for his first fruites backe againe vpon the land, and therewithall impairerh much the first crop of corne that shall follow after, howsoeuer others following may proue more naturall and plentifull by it, and further hindereth both the ground and hindes in their working. And this is the cause why the inhabitants of *Solorgne* and *Beaux* the best husbandmen, cause their rosemarie to be rotted in sommer and made manure of in autumnne, and yet many times not hastning but deferring the vse for a longer time: furthermore they continue and hold it from father to sonne as a receiued verity, that nothing is more deere and pretious then dung taken in his season, for the enriching of ground. Some take dung as it were hot and halfe rotten at the end of their field; but that doth much harme, because such dung not being ouercome of the snow, raine, and other helps of the heauens, but remaining crude or rawe: doth likewise remaine vnprofitable, especially the first yeere doing nothing it selfe and keeping the better fruit from profiting and comming on as it would: though the second yeere it may helpe well and hinder nothing.

*The diuersitie
of manure.*

*Stubble sowing
in Steele of
dung.*

*The first ma-
nuring of the
ground is the
best.*

*To spread
dung.*

thing. It is true that if you would enrich a poore field, that it is better done by the dung newly gathered out of the beasts houses, then with such as is old, and it would be spread in the new of the moone a little before the seed be sown, provided yet that it be then plowed & turned vnder the earth. They seeme vnto me not to doe worst, who hauing gathered their corne in August or September, and cut it somewhat high, doe burne the stubble and other weedes which are in the fields, whereby they make a manner of danging of it by the helpe of raine falling thereupon. This standeth in steed of the first sort of enriching of their ground, especially in barren and sandie grounds, and such as stand vpon a cold moistish clay, or such as haue a strong new broken vp ground: True it is that they doe not this yearly because of their neede to couer their houses, and of hauing litter for their beastes. And yet those may seeme vnto me to be little deceived, who hauing left their stubble long and high, in the shearing and cutting of it downe, doe presently thereupon bestow an earing vpon such ground, and so vnderturne the said stubble and weedes, there to let them rot with the winter raine. There is nothing so good as the first manuring and danging of the ground, which if it be neglected, it will not recouer it for two yeeres space againe, so that for such space he shall gather nothing but rie in steede of wheate, and fetches for oares, and wilde fetches for kinde and naturall ones. It is true that the first is not sufficient of it selfe for to dung and enrich the earth sufficiently, and to make fruitfull chote that are barren and leane: but there must be other meanes vsed for to effect such a worke, and amongst them all, that seemeth vnto me the principall, which is the letting of the field to lie a yeere or two vnuoccupied, not ceasing the while to husband it both winter and sommer, as also the first time when you would haue it beare to sow it with lupines or rather with pease, provided that the ground be not ouer colde, for then it would profit those pulse but a little. And if all these meanes should fall out to be insufficient, it will be good to spread quicklime vpon the plowed ground in the end of Februarie: for besides that it enricheth a ground greatly, it clenseth it also, and killeth all bad and dangerous weedes, whereupon it cometh to passe, that the haruest after it is more plentifull, then after any other dung that a man can inuent to vse. Furthermore if the ground be light it will be good to cause some water to overflow the corne for the space of ten daies or thereabout, which will likewise stand in steed of a manuring or danging.

The dung or marle is to be spread in the increase of the moone about the eighteenth of Nouember, after such time as the rested ground hath passed his time of recreation: but and if it be in such grounds as wherein the chiefe kinde of corne are to be sown, then they must be dunged presently after the end of autumn, that so the ground

ground may haue leasure to receiue the raine therewithall, which will serue to helpe the seedes the better to rot, thereby prouiding an aid for the weaknes of the earth. In like sort if this should be for rie, or for melling, the ground would be dunged in the hart of winter or a little before, notwithstanding that some doe staie for the moneth of March that it may presently after receiue the showers of Aprill, which may doe much good towards the latter end of September, at which time they sow in fine dust and windie drouthes looking for the first raine & the putrefaction to be wrought by the same. But howsoeuer the case standeth, seeing it is better to manure the ground, then not to manure it: so it is better to dung it oft then much at once: for as a field standeth if it be not dunged at all, so it burneth if it be ouer dunged, in consideration whereof the ground must be well waighed, for a good ground hath no such need to be dunged as a leane ground. The moist held would be much more dunged, for seeing it is frozen continually by reason of his moisture, it cometh to passe that the dung by his heate doth resolu and thaw the same againe. The drie ground requirerh lesse, because it is hot inough of it selfe by reason of his driness, and if you should bestow great store of dung vpon it, it might bee a cause to make it burnt.

There must likewise consideration be had of the goodnes of the dung, for good dung would lie fast and close together for a season, and rest it selfe a yeere: it be elder it is so much the worse. The pigeons dung is the best of all, and next thereto is mans dung, especially if it be mixt with the other filth and sweepings of the house: for of it owne nature it is very hot: next vnto this is asses dung, which is the best of all beastes dung, because this beast doth chew and cate his meate with great leasure and digesteth it best, and thereupon also maketh a dung most prepared and fitted to be put presently into the earth: next vnto this is the dung of sheepe, then that of goates, and alike of all others, as horse, mares, and oxen and kine: the worst of all is swines dung by reason of his great heate, for therewith it presently burneth the earth: for want of dung the stalks of lupines cut downe, haue the force and efficacie of very good dung: or else to sow lupines on corne ground which is leane, and after that they be come vp to put them into the earth againe turning it ouer them. There are many farmes of which one can keepe neither bird nor beast to make dung of, and yet the painfull farmer in this scarcitie of manure, may make some of the leaues of trees and thornes, and dirt, or parings of the earth gathered out of the streetes: he may also take ferne and mingle them with the filth and mire of the vtter court: or make a deepe pit, and gather into it, ashes, stubble and stumps of hay or straw, the dirt hanging about spouts, and all other manner of filth that may be scraped and raked together in paining or sweeping the house or else howsoeuer. And in the

*How it is
manure to dung
a ground see
much.*

*To put dung
close together.
The diuersitie
of dung.*

the midst of this ditch you must set a peece of wood of oke to keepe away adders and snakes that they come not to breed or abide there. If you haue no other but arable grounds, they will not need, that you should diuide your dung into diuers sorts: but and if you haue vineyardes, meadowes and corne ground, you must lay every sort of dung by it selfe, as that which is of goates and birdes must be stirred every sommer, as if you would dig it with pickaxes or spades, to the end it may rot the sooner and be better for the ground.

The ninth Chapter.

That the ground must be plowed ouer according to his three earings before that it be sowne.

TO till and husband the earth as it should, there are three things chiefe required: a husbandman furnished with a good vnderstanding and ripe iudgement: cattell fitted for the worke, and a plough well appointed and made: but of all other things it is requisite that the husbandman doe know the nature and condition of the earth, which he vndertaketh to till, to reape fruit and commoditie of, that so he may stirre it and giue it as many earings as the nature thereof doth require. For in fields which are of a good ground vnderneath, he must let his culter and plough so deepe, as that the better and fatter earth which is vnderneath, may be turned aboue, where as to take the same course in a ground that is barren and leane vnderneath, were altogether vnprofitable. In like manner there are manie fieldes which the more they are eared and plowed, become so much the leaner and barrenner, such as those are which haue a light moulde, which the oster they are plowed in the time of heat, so much the more they are pierced of the sunne, and so become the weaker and lesse able to beare corne. It is true indeed that there are not many sorts of ground, but by oft earing they become more fruitfull, then and if they were seldomer eared: but howsoeuer wheate or melling especially, do desire to haue three earings, before they be sowne: one, which is called the first earing, and it must be when as the dung is newlie spread (otherwise the dung would loose his force, being wasted and consumed by the heate of the sunne) and this first earing is for to stirre the earth and to make it soft for after plowing, not turning vp much earth with the plough, nor piercing deepe into the earth this first time, but cutting it in such sort, as that the furrowes may be so neere together one vnto the other, as that a man shall hardly perceiue the path or passage of the plough: for by this meanes all the roots of the herbes will be broken and die. The second earing is in the spring, at such time as the earth beginneth to open of it selfe: and then you may cast your ridges good and high, and great withall, that so the seed may

may be the better intertained.

But you must vnderstand, that according to the situation of the grounds that are good for corne or pulse, as also according to the countrie, mould and hartines thereof, it is vsed to varie and alter the plowing and tilling of the ground for the further benefice of the inhabitants, for at *Brie* where they haue a slipperie and moist ground, sit to make pots offor necessary busines, they plow vpon a causey and as it were vpon an asses backe, & in euery five furrowes they hold it meet to caste one high ridge that is very large, and made also like a causey, both to receiue the raine water, and that which springeth out of the earth, which is alwaies moist, and that because of two riuers lying on the one side and on the other, and do moisten and water the grounds there continually vnderneath. And for the same purpose (which is also practised in small *Beaux*, as in *Longboyau*, *Vil de Gallie*, *Vil-boyau*, *Nihermois*, and *Burbonnois* they make at the end of their ground, certaine rises of sufficient height, where betwixt the saide rise and arable ground, there is a ditch or pit made within it, after the fashion of a long fat, to receiue the waters which runne along after great raine, for otherwise they woulde rot and smother the corne: this troubleth such as trauell those countries: and this is the cause of the name whereby they are called the grasshoppers of *Brie*. In somuch as that they can not tell how to do so well, as in a rainie day to go and pull vp darnell, danewoort, and other ouerspreading weeds (which else they could hardly overcome) being a kinde of earing of the ground, called of auncient writers the freeing of corne ground from weedes: hauing further by such abundance of raine this scath done vnto their corne, as that it is laide bare now and then, yea, and that though it bee neuer so well harrowed, and the earth of it selfe strong and mightie. There is no neede of any such ryfes or ditches in the parts of France truelie and properly so called, neither in the Ile thereof, nor in the flat and free countrie of *Blairie*, as *Long-boyau*, and *Labeauce*, (the very barne and storehouse of France) the countries of *Oye*, *Sangterre*, or else of *Berry* and free *Positon*. And all grauelly countries may be well excused & freed from all maner of such inconuenience as appeareth by many places of *Picardie* and *Solongne*, euen vnto *Percheron*: so that they make their furrowes close and neere one to another, as is wont to be done in low grounds and valleies.

The ground must also be plowed in a fit and conuenient time, to the ende it may become fruitfull: wherefore the carefull husbandman shall neuer plow his ground whiles it is wet, for running through it with the plough, it will do nothing but runne vpon heapes, especially in rough & clammie grounds, as also in those which be harde, or growing and putting forth their fruit, in as much as this maketh them so ladde and close, that it is impossible to make them fine and

X x

small

small moulde: againe it is but an absurd thing euer to go about to put the plough in a dirty & myrie ground, because it is nothing fit to stire or deale any maner of way withall before it become drie, and so vnfit, as that though you could do what you would vnto it with the plough, yet there is no casting of any seed into it.

And if it should fall out, that there were any tree or vine plant in the ground, you must passe it over, in lifting vp the plough from off the shootes which come from the rootes; at all times when you perceiue your selfe to bee vpon them: or else you shall cut them off with a hatchet, rather then bruse and breake them with the culter, for feare of breaking the culter it selfe, and putting the oxen or horse to trouble and paines.

The tenth Chapter.

That the cattell vsed to plow withall do differ according to the manner and custome of the countreies.

Plowing with horse.

IN rough and tough grounds, as also in free and kindly grounds (as hath bene said) where there are required as needfull three horses to a plough of fiftie foote (but not so coupled and spanged, as they be in countreies, where they vse to plow with mares, oxen and asses, or buffles) you must after the first earing, breake the clods with the roller, and lay it flat, square and plaine, with a planke. In leane, gravelly and weaker grounds, you shall not stande in neede to bee at such cost either with horse or man: for it is not requisite that you should draw so deepe a draught in the earth; and againe, the husbandmen of such countreies haue looner finished and made an end then others, and yet do labour with more leasure because of the aire and climate of their countreie: Again, they worke with the asse and the ox, as in *Auvergne* with the yoong mule, and in *Romaine* and *Champaigne* in *Italie* with the buffle. Whereas of a truth the labour of oxen is not readie, nor so quicke of dispatch in the time of necessitie; and for to remedie and helpe this mischiese, you must begin your worke with the oxen looner, and haue a great number of them then of horse: the prouision of oxen is of lesse charges for diet, buying, and selling againe; whereunto you may adde, that you may eate the ox, or sell him againe, after you haue had his labour a certaine time; true it is, that he that hath wrought all the morning must rest the afternoone: and the oxen going earlier to plough, retutne earlier from labour than the horse: the greatest commoditie comming by them is, that they better endure the vnseasonableness of times, and in sturdie and stiffe ground they draw a deeper draught, and acquite themselves in the worke with more commendation: againe, they craue nothing so much shooing or harnesse in the countreies where iron and harnesse is deere.

Plowing with oxen.

deere, neither are they subiect vnto so many maladies, save that they must be kept from being starned with colde, and from the raines, as also care taken that they be well couered.

I finde not any labour lesse chargeable then that of asses, such as *To plow with* are to be had in *Talie*, *Calabrie*, *Sicile*, & in the countreie of *Iesse*, being all of them countreies whet they grow great and faire, for they endure more labour, and are not subiect to so many diseases, neither are they so costly to feede. True it is that they doe not so much, neither yet altogether so well: wherefore they are better to be vsed in leane grounds, except the yoong mule of *Auvergne*, which exceedeth all other beasts: but he is troublesome, hard to be brought to draw, & so brain sicke, as that there is not the yoong mule which hath not his madding fit, and vexeth his master now and then: whereupon it groweth that some vse to say, namely a good yoong mule, but a curst beast. *A good mule but a curst beast.*

The plowing with buffles, as is to be seene in *Romaine* and else where, is good in groundes that are far and standing vpon a potters clae, and are not chargeable in harness: because that hauing so short a necke, they stande nor in neede of any thing but a ring, to holde and keepe them by the snout, but in sommer they are dangerous, and fall oftentimes into a frenchie, especially when they see any red clothes; and yet notwithstanding they holde out longer at labour, and are more readie and diligent then the ox: finally this poore beast serueth to giue milke, besides the worke and labour performed by them; as also their hide is of much more vse then that of the cow or ox: for in some places husbandmen do vse mares, asses, she mules, and kine to drawe and goe to plough, after the same manner that the males do.

I do not intend to trouble my selfe in this place with the fashion of *The diuersitie* the plough, neither yet with the diuers sortes thereof, that are founde *of ploughes* in diuers and sundrie countreies, so as if you should aske me of the difference betwixt the oxen plough and the horse plough, I intend not to shape you any further answer the this, namely, that according to the loafe so must the knife be: euen so according to the force & strength of the ground, so you must haue your instrumentes and tooles, for to cut and till the same; neither will I trouble my selfe with examining the fashions of our ploughes with that described of *Hesiod*, to see whether they be like or no: no more then I intend to meddle with the fashion and making of *Columella* his hedging bill or wedge, which he saith in his time to haue bene named after the French name.

The eleuenth Chapter.

Of clodding, and earing it the second and third time, and of sowing of it afterward.

X x 2

Furthermore

To clod the
ground.

The second
earring.

The third
earring.

Furthermore it is meete after the first earring of corne ground, verie diligently to breake and take away clods, and to make the ground plaine & even, for the better sowing & bestowing of the seed in good proportion & sort vpon the ground, which our common husbandman vseth to doe in the time called of him the dosing time: notwithstanding that the inhabitants of *Denkes*, do not so strictly stand vpon the same: for by reason of the fatnes of their grounds they take the time howsoeuer it shapeth, hauing no good assurance of the time whether it will continue faire or turne rainy. It is the order and common fashion to breake the clods with the rowler, which would do well to be of marble in a tough and stiffe ground; or else you may breake them with a harrow well toothed with sharp pointed teeth of iron and of a good length. But howsoeuer, you must so labour it and so oft go ouer it, as that it may be broken all into dust if it be possible, that so there may not remaine one clod vnbroken after that it is sown. Wherefore after that the clods are wel broken and all made plaine, for the second earring you shall cut vp your grounde againe about this time if they be fat and moist: or about the moneth of September if they be beane and drie: for otherwise your beane ground would be quite dried vp and burnt with the sun, neither would there remaine therein any vertue or iuice. About all things you must obserue and keepe such order in plowing, as that the ground may not be too drie nor too moist: for great store of moisture maketh them dirt and mire; and too much drines doth disadvantage the husbandman's maine; either because the plough cannot enter the ground, or if it enter, yet it cannot break it small enough, but turneth vp thicke and broad clods of earth, which sort, as that afterward it will be hard to plow vp the field againe, for certainly there cannot be that done which should be requisite when the earth is too hard: wherefore the ground that hath bene plowed in drought, must haue a rainy season found out to be plowed in afterward againe, that so the same being watered and moistned, may be the more easily tilled.

Shortly after the second earring, you shall giue it his third earring, which must be more light and such as breaketh not in so deepe as the two former. This earring being finished, you must euen and make smooth the ground with a harrow presently after, which shall be about the middelt of October; you shall sowe and bestow your seed vpon the ground in good proportion, but not at any other time then in the increase of the moone, and neuer in the decrease: and then likewise it will be the better if you take the opportunitie of a little raine, following the Prouerbe which saith, you must sowe wheate in myre, and barley in dust, and the reason is; because that wheate being harde and coming neere to the nature of woode, doth bud and sprout better

better and sooner when it is laid in steepe and mollified in dirt, or else for feare of pismires, which doth whete, should bee sowne in a drie ground, would become lordes of it by and by and carrie it away: notwithstanding if you see that the raine be somewhat long in coming (seeing the times are not in mans power) you shall not defer to sowe especially in drie grounds: for the corne which is sowne in drie ground and well harrowed and couered, doth ioy and keepe the same without corrupting; as well as it is were in the garner, and if there follow any raine the seede will be vp in a day. I presuppose in the meane time that the husbandman hath let rest and lie idle his groundes for some two yeeres, wherein hee is intending to sowe his wheate, to the ende they may bring him a better crop. Furthermore seede time is expired and past about the eighteenth day of November: for then the earth by the coldnes of the aire becommeth close shut, and as it were rugged, staring, and agait, so that it will not be able so well to receiue the seede, and to cause it to thriue. It is true that in cold places seede must be sowne earlier, but in hote places later: whereupon it commeth to passe that in *Italy* they sowe about the beginning of Nouember, but with vs in France, where it is temperate in October: in cold places and coast countries in the Calends of September, or rather sooner, to the end that the rootes of the corne may be growne strong before that the winter raine doe molest it, or the ice and frostes doe hurt it. Notwithstanding at what time soeuer you sowe your seede, you must make diuers conueyances ouerthwart the groundes and conduits to carrie away the water out of the corne. In the meane time the husbandman shall haue occasion sometime to reioyce, in hope of good successe, and somtime to feare in doubt of the euill successe of his seede by reason of the variableness of the time. He shall haue good hope of his seede if he see the time inclined to sweete, milde and not violent showers, & vnto temperate, not excessiue and often showers: for the milde showers resemble the dew, the excessiue ones doe moisten and coole to much. If in like manner the snow doe fall in abundance and become hard by some frost following thereupon: for such snow letteth and stayeth the earth from spending it selfe by exhalation and wasting of his fatnes, which otherwise by vapours would bee consumed, and if also the said snow in melting doe waste and water by little and little the earth with his pure and sweete licour, and as it were scumme of raine, for that serueth to make the earth fat, prouided that presently vpon the melting of the snow there fall no showers of raine accompanied with haile: If lastly the frostes come in their proper and due time: for if they be too early and forward they burne the yong sprouts, and if too late, they hurt them very much.

Ther twelfth Chapter.

*Of the choice and quantitie of seede
to be sown.*

*The chusing of
seed wheat.*

THE industrious husbandman, shall chuse such wheate to make seede of, as is full, thicke, heauy, firme, so hard and strong as that it cannot but with paine be broken betwixt the teeth, of a red colour, bright, cleane, not aboue a yeere old, which maketh sauorie and well tasted bread, threshed out of choice and culled eares, which after fanning & winnowing lieth vppermost (as that which is the thickest and most massie) which was growne in a fat ground, but contrarily seated to that wherein such wheat is to be sown, as from hil to plaine, and from moist to drie, and yet so contrary, as that the seed of a bad place be rather sown in a good place, then the seed of a good place, sown in a bad: for seed be it neuer so good doth become worse and degenerate easily, when it is sown in a bad plot.

Seed degenerate.

It will bee good before you sowe your seede to lay it in steepe in water some certaine howres, and afterward to spread and lay it abroad some where in the shadow to drie, that so it may be ready to rowle or runne at such time as it is to be cast into the earth: by this meane you shall choofe the fairest cornes that shall stay behinde in the bottome of the water to sowe them, which will growe within three or fowre daies; but as for those which swim aloft aboue the water, they shall bee taken away, because they are not woorth any thing to sowe: for the best vse for such, is either to feede hens, or else to grinde, that so you may get out euen that small quantity of meale and flowre that is within them. Some before the sowing of their corne do sprinkle it ouer a little with water, wherein haue beene infused houslecke, or the stamped seeds and rootes of wilde cowcumbes, to the end that the corne may not be eaten of moules, field-mise, or other such like vermine.

*How much
corne will serue
in sowing.*

The quantitie of corne which must be sowne shall be measured and rated according to the peece of ground: for an arpent of fat ground will for the most part take fowre bushels of wheate, a reasonable fat ground will take five, and a leane will take more: it is true that there must respect be had vnto the countrie and place where it is sowne. For in colde countries and places that are waterie, being also alwaies subiect to snowes, it is needefull to sowe a great deale more then in hot countries, or in temperate and drie places: in as much as the cold and snow do corrupt the greatest part of the seede. Besides, the time is well to be obserued, and the disposition of the aire, for in Autumne you must sowe lesse thicke, and in winter or the times approaching and comming neere to winter, a great deale more: againe, in rainie weather you must sowe thicker then in dry weather.

The

The thirteenth Chapter.

Of harrowing and weeding of corpe.

PResently after that the seede is bestowed in the ground, you must for your last worke harrow it along and crosse ouerthwart, and after that rake it from furrowe to furrow, but ouerthwart onely: this would bee done with harrowes hauing iron teeth rather then wooden ones, because they make the corne settle deeper into the earth, which they doe breake and make small a great deale better, and so by that meane do couer the corne with earth, as it requireth at the least the thicknes of fowre fingers, that so it may be the faster rooted and the safer from birdes, and thus it must be let alone the whole winter vnto the spring. True it is that during winter you must not neglect to make draines and draughts thereby to carrie away the water that falleth in too great aboundance by raine.

When the spring time is come, and the wheat hath taken good roote, you must weede your ground of such store of weede, as winter raine, and the ranknes of the earth it selfe haue caused to abound and ouergrow the corne newly put vp, as fetches tame and wilde, poppie, cockle, and such like, and after once hauing weeded it, it will be good to do it the second time, as when the eare beginneth to shoote: for in so dooing the corne will prooue faire and cleane: but in the meane time you must so weede it at the first, as that the rootes be not hurt, but that they may remaine couered and laden with the earth, that so they may stande faster in the earth, and growe the more vpward. At the second time of weeding you must not bare it much, for and if the wheate shoulde not shoote vp still more and more, it would rot vpon the earth and bring forth nothing. Again, at the second weeding you shall stirre and make euen the ground a little, that so the corne may not be too close and fast couered at the foote, which would cause it to die also and rot away bringing forth nothing. This worke and dutie is not of small weight and moment, in as much as oftentimes the corne is choked vp by weedes and bowed to the earth, by their too much loftines, taking their opportunitie of some beating winde or raine. Moreouer you must not be abashed, if the greater part of eares prooue emptie, without hauing any thing at all in them: and the other not to come to perfection and ripenes. Again when the good corne is accompanied with fetches, darnell and other weedes, the bread is not onely made more vnpleasent, lesse sauorie, whole-some and discoloured, but also it commeth not to the one halfe of good corne, which is not mingled with these filthy weedes, in so much as that three loade of such corne, after the winnowing of it doe not yeeld two of pure and cleane corne. And which is woorse the field

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where

where such seedes are scattered, doe not bring forth halfe so much as those, which are charged with nothing but well cleansed and winnowed corne.

The fourteenth Chapter.

Of mowing.

The last labour.

THE last labour and toile, for the which all the other in the whole yeere going before was taken, is mowing and cutting downe of the corne, which must be attended, after that it once becommeth ripe, which will appeere by the turning of the colour into a light yellow throughout in all partes alike, and before that the graine be altogether hardened and turned red, that so it may grow thicker in the weathering and barne rather then standing in the fields: for it is most certaine that if it bee cut downe in good and due season, it will grow bigger and increase afterwarde, whereas otherwise if you staie the mowing of it downe till it be thoroughly drie, the greatest part of the corne will fall to the ground in mowing of it, and will become a prairie for the birds and other beastes: if there happen any violent or whirlewinde, it will lay it flat with the earth: you must of all other times make choise of the wane of the moone, or betwixt moone and moone, to cut downe your corne therein, if that you would haue your corne to keepe well. And the best hower is the break of the daie, when it is full of dew. The manner of mowing is either to cut it in the midst of the straw to the ende you may haue stubble to cover your countrey houses, as also to heate the oven to bake bread in such countreies as are vnprovided of wood, as in *Beauce*; or else to cut it within a foote of the ground, for the greater propiotion of straw, which will serue afterwarde to make *Mats* for beds, or litter for horses and other cattell, (and which is yet the greatest profit of all) to imploy about the making of mats for the vse and behoofe of the householder in his chambers: that which remaineth, shall either be cut downe with sickles, or hedging bills made fast to the end of a great staffe, to make a fire withall for the winter time: or else it shall bee burned in the fields themselves, to make dung by the meanes of raine falling thereupon: in groundes especially that are sandie, or standing of a stiff potterys clay, or which haue a strong mould.

The corne being cut, shall bee gathered together and made into sheaues, and after led and carried into the barne by the farmer, which must be seated in a sufficient high place, that so it may receiue the winde readilie, and yet not that I would haue the winde when it commeth, to be able to goe against the houses or gardens, for besides the annoiance which the small chaffe would worke in the eyes of the people, and that before they should perceiue it it would hurt them.

hurt and much annoie the gardens, because that by the same sticking to the leaues of the herbes and trees, as also to their fruits in Autumne, it would drie them, and make them apt and easie to be burnt by the heat of the sun.

The fifteenth Chapter.

Of threshing corne.

Here remaineth nothing more for the last labour of the husbandman, but to thresh out the corne, for to sowe it againe, or for to store vp and lay aside in the garner, and this not sooner then till three monethes passed after the haruest: for although the corne should be gathered of full ripenes, yet still it goeth forward to more perfection as it lieth in the barne. The Gascoynes notwithstanding fearing that corne left long in the sheaues should not onely take a greate heat but grow full of butterflies, mothes, and small wormes which are wont to spoile it, cause the sheaues to be dried three whole daies in the sunne, and that in the field where they were mowen, and afterward thresh it in the same place, carrying lastly the corne so threshed into garners: so that by that meanes, they stand not in neede of barnes to carrie their sheaues into and there to keepe them. Before the threshing of it, you must be careful to prepare the floore and to sprinkle it ouer with oxe blood mingled with oile of oliues not salted: and afterwarde to make it plaine and smooth with a paining beetle or roller, to the end it may not haue any clefts or creuises in it, wherein the corne threshed out may be lost, or wherein the pismires might breede and hide themselves. The best way to thresh it is with flails, and after to cleanse it from the chaffe, huskes and other filth with the fan, and last of all to sift it. In any case leane not wheat long in the sheafe, because it taketh heate, and thereupon becommeth full of butterflies, mothes, and small wormes which eat it vp. In the meane time you must not cast away the chaffe, which is good meat not only for horses and other beastes mingled with prouender, but also for to ripen fruits, and to keepe them as we haue said before: in like sort the Spaniard and Italian do make it serue to keep snow in al sommers, for they make deepe pits in the ground wherein they put their snow and cover it with chaffe.

The sixteenth Chapter.

In what manner the garners are to be made, and how to put corne in.

THE garner wherein you shall keepe your wheate, shall take his light from the East, and a little aired from the North and West but principally from the Northeast, which keepeth the corne

corne alwaies drie and fresh and coole, but not from the South nor from any such like coast or quarters: it shall haue many open holes, by which the whole vapour of the corne may passe forth, and the coole gentle aire come in: And that it be not flored or planked above, to the end that the windes may easily enter in through the open places and tiles of the rooffe, that so it may be more fresh and coole at all times: it must be placed far from all moisture, and other euill smells and vnpleasant aire, and also from all the houses wherein cattell are kept, whether horse, oxen, or other such like: the boarded floore thereof shall be ordered as the earth floore, that is to say, sprinkled with neats blood mingled with oile oliue vsalted, and after smoothed and made plaine with a rowler or pauing beetle, as in which there is not to be left hole or breach be it neuer so little, without stopping of it with lime and sand. The said floore where the corne is to be laid, shall be watered with vineger: the walles must be made trimme and dressed ouer with mortar tempered in water, wherein hath beene steeped the rootes and leaues of wilde cucumber, or with lime tempered with sheepes vrine, which shall be of much vse against all kinde of shrewd beastes that vse to eate the corne.

In the garner thus fitted, shall your corne be laid, being first made very cleane, for the cleaner it is the lesse subiect will it be to weeils and other vermine: It is true that being in the garner, for the defending of it from this vermine, it is good to remooue it often, and to haue about the heapes some wild organic, or the dried leaues of pomegranate trees, or wormewood, or drie southernwood: or which is better in the midst often load of drie wheat to mingle one of millet made very cleane: for by the coolenes of the miller, the wheate will be kept from the vermine and taking of all other maner of heate, and when occasion requireth this millet will be easily sifted from the wheate by the meanes of a sieue: and furthermore that it may somewhat increafe, you must cast vpon the heapes of corne sal nitrum and the scum thereof, both of them finely powdred, & mixt with very fine earth. And if it should come to passe that the corne should not prooue to last and stand sound for long time, and that therefore it is ground into meale, then for the keeping of the said meale, you must make masses or drie lumps, of cummin and salt pouned and lay them in the midst of the meale. Or if it appeare that palmer wormes be bred in the corne, or any other such like vermine, by the ouerheating of it, you must dust it by and by with a sieue, and after spread it abroad and leaue it in the sun, all the while of the great heate euen vntill euening, and after that it is become hot thus by the sun, and hath beene made very cleane, carry it vp againe into the highest garner that you haue, and thus the vnnaturall heate thereof will cease and all the vermine be killed, and the wheate so coole as that it will be out of the danger
of

of the former ouerthrow. Furthermore as concerning the fanning of corne, the husbandman must beware least he be beguiled by the measurers, or yet by the measures: seeing it is a trick they haue either in powring on the corne to presse it downe with their hand, or else to strike the measure with their knee to cause the corne to run the closer together, that so they may haue the better measure: such craftie shuffles as this, are the cause that the second measuring is not answerable vnto the first.

*The sowing and ordering of other sorts
of graine.*

**The seuenteenth Chapter.
Of Rie.**

RIE (called in Latine *Secale*, and of the Ancient writers *Farrago*) craueth not such an indutrious and carefull ordering, nor yet so fat a ground, and so well enriched as doth the wheate, for it increaseth in all groundes in such abundance, that of one bare corne, there will come an hundred, be it neuer so badly plowed and dunged. Witnesses heereof are the people of *Anuergne*, *Limosin*, *Perigord*, and *Farest*, but chiefly those of *Beauce Solonnois*, which is abounding in this kinde of corne; notwithstanding that the ground thereof for the most part be leane, grauelly and very slenderly husbanded and tilled by the inhabitants, as those which imploy themselves a great deale more busily in keeping of sheepe, than in growing of corne: and heereby we may learne and take out a new lesson, namely, that negligence is good for something, and now and then bringe. h his commodity home with it. It is but a very small and starued graine in respect of wheat, and the bread made thereof vnpleasant, fattie, slimie, heauie, like paste, blacke, and more profitable in the time of dearth, to slay and kill the sharpnesse of hunger, in the base and rusticall people, than to feed holelomy and make good nourishment of: againe, such as be wealthie and men liuing at ease make no reckoning of it. It is true that many doe mingle it amongst wheate, to the end that the bread made thereof may continue a longer time moist and tender: yea and which is more, the Physicians of the Court, doe giue directions for the making of bread of this kinde of corne for Kings and Princes to feede vpon in the beginning of their meales (especiallie in sommer) to procure them a loose bellie: but they that are carefull of their health, especiallie such as doe not exercise and toile their bodies, and students in generall, the Monkes and such like, must auoide to eat the bread, made of the meale of this corne alone, howe soeuer the plowswaine haue this opinion of it, namely, that it maketh
the

the body strong; and for certaine it is found by manifest and daily experience that the women of *Lyons*, *Annvergne* and *Forsyth* use of this bread doe become very faire, and to haue more solide bodies and more abounding in good and laudable iuice or humours, then others commonly haue. Somelike wise use of iudgement that the water of Rie bread, is more pleasant and far better then that of wheate bread be it neuer so white. Cookes used to worke in pastie doe make such crusts as they would haue to endure long of Rie flower. This bread is made to feede dogs, and to fat swine: all other kinds of cattell, especially hens and horse, doe abhorre and loath it altogether: this corne is very subiect to rust, because it keepeth water in the huske or bag wherein it groweth, the remedie whereof consisteth in such meanes used, as we haue already set downe: The straw thereof serueth for much vse in binding of vines, because it is flexible and pliant hauing bene first steeped in water, as likewise the meale thereof, to make cataplasmes of, for the suppurating and ripening of impostumes: the decoction of the corne killeth wormes if there be some coriander seede put thereto: in like manner horie-leashes doe giue it to horses which are pained in their bellies.

Maslin.

Maslin (called of the Latines *Metellum*) is not one kind of corne but a mixture of wheat and rie, or of white corne, which the Latines call *Far adorem* euen (as we shall further declare by and by) and of rie in such sort, as that these two kindes of corne mingled, are sowne gathered in and threshed together: the maslin delighteth in a mixt kind of earth and tillage, but for the most consisting of that which is fit for wheat. The bread made of maslin, is one of the best sorts of bread and easie to digest.

Secourgion.

Secourgion is a kind of corne that is verie leane, wrinkled and starued, somewhat like vnto barley, and it is not used to be sown in Fraunce, except in the time of famine and dearth, and then also but in such countries, as are barren and very leane, and that to stay the urgent necessitie of hunger rather then to feede and nourish. It hath his name from the Latine words *Succursus gentium*: The greatest part of *Perigord* and *Limosin* doe vse this sort of corne: it may seeme to be a degenerate kind of corne, and may be called bad or wild corne. It must be sowne in the thickest and fattest ground that may be chosen: howsoeuer some say otherwise, as that it delighteth in a light ground, in as much as it sprouteth out of the earth, the tenth day after that it is sowne, the thicker end running into rootes, and the smaller putting forth the greene grassie blade which flourisheth and groweth out of the earth. The fittest time for the sowing of it, is about

about the moneth of March in cold places, or about the eight or tenth of Ianuarie if it bee a mild winter and not sharp and parching. This is that kinde of graine of three monethes growth, whereof *Theophrastus* speaketh in his booke of plants, howsoeuer *Columella* doe not acknowledge any kinde of graine of that age. *Theophrastus* in like manner maketh mention of a kinde of graine of threescore daies or two monethes growth, and of another of fortie daies growth. I heare say that in the West Indies about *Florida* there grow sortes of corne some of two, some of three monethes, and some of fortie daies: we see it very ordinarie in France to haue corne in three monethes, namelie in the countries of *Beauce*, *Touaine*, *Lyonnoise*, *Sauoy*, *Annvergne*, *Forest*, *Prouence*, *Chartrain*, and others in which the corne being sowne in March is ripe and readie to bee cut downe in the third moneth. The occasion of sowing it so late is either the waters or excessive cold, or snow, or some such other hard weather, which kept and hindred it from being sowne any sooner. Such graines and sortes of corne as are of three or two monethes, or of fortie daies, and amongst them especially the *Secourgion* doe yeelde a very white and light floure, because it hath but very little bran, and the graine hauing drawne very small store of substance for his nourishment, but such as is of the lightest part of the earth (and therefore small store of bran) by reason of the small space of time that it stayed in the earth: The bread made of this corne is very white, but withall very light, and of small substance, more fit for countrey people and seruants in families then for maisters and wealthy persons: Again in countries where it is of Account, they vse to mixe wheate with it, to make household bread.

Blanche.

Blanche is a kinde of wheate which the Latines call *Far blanchum*, and old writers *Far adorem*, as a corne or graine woorthie to bee firelike thought & made of, for his excellency & goodnes sake it is very hard and thick, and requireth a strong & rough ground though it be not al of the best husbanded. It groweth also very well in places, and countries that are very cold, as not fearing any cold be it neuer so outrageous: Neither doth it milke and refuse drie and parched groundes, and such as lie open to the excessive heate of sommer, the corne can not bee driven from this huske, except it bee fried or parched againe for to grinde and make bread of it, they vse to fry or parch it, but when they vse to sow it, they let it alone with the huske, and in it they keepe it for seede. It is very massie and weightie, but not altogether so much as wheate, but yet more cleane and pure then wheate, and yeeldeth more flower & bread then any one sort of wheate besides. This kind of wheate is very rare in France, but very common in Italie, where it is called *Sacidata*.

There is a kinde of small corne that is very white: which the Latines call *Siligo*, whereof is made white bread, called therefore of the Latines *Siliginis*. The French cannot as yet fit it with a name. It must be sown in very open places and such as are hot and thoroughly warmed by the sunne: although it doe not vterly refuse an earth that is thicke, moist, slimie, and of the nature of walkers earth, seeing that good husbandmen doe likewise report of it, that there needeth no such great care to be taken about the making of this graine to grow, and withall that if a man vse to sowe wheate in a moist and muddie ground, that after the third sowing it will degenerate into this kinde of wheate.

Amelcorne.

There is yet another kinde of corne, which the Grecians and Latins call *Olyra*, of a middle size betwixt wheate and barlie, unlike altogether vnto winter wheate whereof wee last spake, but of a sort and facultie like vnto spelt, whereof wee will speake next in order. Of this graine *Dioscorides* maketh mention, & *Mathiolus* calleth it in French *Seigle blanche*: the tilling and ordering of it is like vnto that of spelt. There is very white bread made thereof: there is but smal store thereof in France.

Speltcorne.

Speltcorne is that which the Latines call *Zea*, and hereof the ancient Romaines did make great account, and gaue it to name *Semen*, by the waie of excellencie, as the Italians in such places as where the said spelt groweth in great abundance, doe call it *Biada*. The graine is lesse and blacker then wheate. It is found sometime single, sometime double in an eare set with a long beard. It must bee sown in a very strong and hard ground, for otherwise it will not thriue, neither is there any sort of wheate which so troubleth and weakeneth a ground as this, but the bread that is made thereof is excellent: and of it likewise the Italians vse to make a singular kinde of furmentie.

Course wheate flower: or fine wheate meale.

Course wheate flower is that which of the Latines is called *Simitago*, and is made of wheate that is excellent good, hauing the greatest bran onelic sifted from it, but being ground of the best mill that may be gotten, howsoeuer the French name *Semole* which seemeth to bee deriued from these Latine ones *Sine mola*, may seeme to argue the contrarie. We haue not any of the corne in this countrie whereof the *Semole* is made: but in *Prouence* it is sown in great quantitie: as also in *Campanie* and in the countrie of *Naples*, and from thence there is great store of this fine meale brought, which phisitions do prescribe to their sicke patients to make Panade or papmeate of with the broth of a capon, notwithstanding that *Galen* and the greatest part of phisitions

ons doe affirme, that the fine meale called of the French *Semole*, is of a grosse and slimie iuice, and not digested without difficultie, and thereupon iniurious to such as haue neede of a fine and attenuating nourishment. It is certaine that it is of great nourishment, as is also the bread that is made thereof. In steede of *Semole* we vse mellin: and as concerning the wheate whereof the course flower *Semole* is made, it craueth such ground and manner of husbanding as mellin doth.

Furmentie.

Furmentie is that which the Latines call *Alica* or *Chondrum*, and it is a kinde of wheate, whereof (after that it hath beene steeped for some time in water and afterward braied and husked, and then in the ead dried againe in the sunne and ground somewhat grossly) is made a kinde of grosse meale, resembling oatmeale very much, whereof sometimes is wont to be made papmeate, sometimes it is mixt in meate broth, & sometimes panade withall: all which meates, to say the truth, doe nourish a great deale more then they profit the health of the bodie, in as much as they ingender a thicke, clammie and grosse iuice, very hurtfull for them that are subiect vnto obstructions or vnto the stone and grauell.

Turkie wheate.

Turkie wheate (so called, or rather Indian wheate, because it came first from the west Indies into Turkie, and from thence into France, not that it is sowed there any otherwise then for pleasure, or for to cause some admiration at the strange things which Frenchmen themselves doe admire and make much account of) must be sown very carefully after this manner: the field must be diligently tilled according to all the sorts of earings which are wont to be bestowed vpon any arable ground, afterward toward the end of March, at such time as the sunne beginneth to afford his hot and comfortable beames in franker and freer sort the saide wheate must be steeped in water two whole daies, and when this is done, to keepe it till the earth receiue some prettie showers: which hapning, then presently to open the earth with some sharpe stake, and that all along as straight as a line, but with equall and sufficient distances: and to cast into euerie one of these holes foure or fise graines of this wheate, and by and by to close in the earth againe with your foote, and so in this sort to fill and set a whole field with this corne: If the earth be fat and the seed full and well fed it will not faile to sprout within seauen daies, and to be readie to mow within fortie daies, two monethes, three monethes, or at the furthest foure monethes, sooner or later according to the goodnes of the ground, and power of the sun, that is to say earlier in a hote place and good ground that lyeth open vpon the sunne, but more late in a cold ground, and a leane place. It hath the like temperature that our wheate hath, but somewhat more hote, as may easily be

be gathered by the sweetenes of the bread that is made thereof, the meale thereof is whiter then that which is made of our wheate, but the bread made thereof is more grosse, thicke, or close and of a more slimie substance, in such sort as that the nourishment made thereof is likewise more grosse, and apter to ingender obstructions; wherefore if the dearth of wheat and famine doe force and compell you to sowe of this Turkish wheate, to make bread thereof, it will doe better if you mingle it with the flower of our wheate, then and if you should vse it by it selfe all alone. The meale of this wheate in as much as it is thicke and clammy, will be good to make cataplasmes of, to ripen impostumes withall: for being apt to stop the pores of the skin by his clammines, it cannot choose but worke such effect.

Sarasin wheate.

Sarasin wheate is a graine very ordinarie and common throughout all France and more abounding without comparison then the foresaid Turkie wheate: it must be sown in all manner of groundes, because it refuseth not to grow in any, whether it be grauelly or of any other qualities whatsoever, and that especially in Aprill in hot places, or somewhat later in those that are colde, and it is so forward and hasty, as that it will ripen twice and yeelde you two crops in a yeere, in one and the same ground, being in a hot ground, as is to be seen in *Italia*. It may be mowne at the end of three moneths after it is sown, in this country it is most vsed in the fattening of hogs, pigeons, and other fowles, and in the time of dearth and famine to make bread, which will be a great deale better, if with this corne be mingled the come of our owne countrie wheate. It may be made into grosse meale, even as the graine called *furmentie*, but better without comparison then that of millet to be imploied in meate brothes, in panades and pap meats, as also to make tartes with cheefe and butter. This is a meate that is pleasant enough, and not much loading or charging the stomacke, notwithstanding that it be windie, for therein it is not so excessive as the pease or beanes.

Goates wheate, and Typh wheate

There are yet remaining two other sorts of wheate, which the Latins call *Tragos Cerealis*, and *Typha Cerealis*, whereof *Dioscorides* and *Galen* do make mention. Typh wheate is very like to our rye, and doth make a very blacke bread, and very vnpleasant also when it is olde, though it be otherwise very pleasant when it is newe baked, after the manner of rye. The goates wheate is not very much vnlike unto the graine called *furmentie*, save onely that his meale yeeldeth more bran without comparison, and so maketh a fitter bread to loosen the belly then to feede or nourish it. These wheates are not so much vsed to be seene in France, and therefore I meane not to make any longer discourse thereof.

of

of all manner of March corne.

The eighteenth Chapter.

Barley.

After that we haue thus largely spoken of wheat & other corne, it remaineth that we should consequently speake of all manner of pulse: the ordering and husbanding whereof to speake in generall, is like vnto that of the other graine going before, as namely, in the gathering of stones from off them, in manuring and giuing them their first, second, & third earings, as also in clodding, sowing, harrowing & mowing: but differing notwithstanding in some things, as namely, in their nature; and therefore it will be best to make a particular description thereof.

Barley must be sown in a leane, drie, and small ground, or else in a ground that is verie fat throughout, because it doth bring down and diminish the fumes of a ground mightily: and for that cause it is either cast into ground that is very fat, the force and goodnes whereof it shall not be able to hurt: or into a leane ground wherein a man shoulde not sow any thing else so well. It must be sown in a ground that hath had two earings, in some countries in the moneth of October, but in this countrie after the fifteenth day of Aprill, according to the common prouerbe, (at Saint Georges day you must sow your barley, and lay your oates awaie) if the ground be fat, but and if it be in a leane ground it must be sown sooner, not staying for any raine, in as much as that according to the prouerbe, wheat must be sown in dirt, and barley in dust: for barley cannot indure any great store of moisture, being of it selfe drie, open, and cold: againe, barley being sown in moist places, and much watered with raine water, doth easily canker and turne into darnell and oates: the same manner of ordering is giuen to the barley called *mundified barley*, and that because the chaffe thereof falleth presently, and cleaueth not vnto the corne, as it doth in common barley. When you perceiue it somewhat ripe, you must mowe it sooner then any other corne: for it hath a brittle stalk or strawe which is very apt to breake, when it is very drie, and the corne being but weakly inclosed within his huske, doth easily and of it selfe fall vnto the earth: and hence also it becommeth more easie to thresh and shake out, then any other graine. After the corne is mowen, it will be good to let the earthe lie idle a yeere, or else to manure it thoroughly, and so to take away all the chaffe quality that is remaining and left behinde. In a deere yeere it is vsual to make bread of barley, as we shall declare hereafter, and that better for the poore people then for the rich, and yet in one point to be praised, in as much as it is good and wholesome

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Barley bread.

holefome for them that haue the goute : the affured truth whereof is found out rather by experience then reason. Notwithstanding in as much as barley (as *Galen* teacheth) whether it be in bread or in papmeate, in priſanes, in mundified barley, or otherwise employed doth coole and yeeld a thin kinde of nourishment and ſomewhat cleaneſeth the bodie, in that reſpect it may be profitable for them that haue the goute, as thoſe that are full of humors and ſubiect to diſtillations falling downe vpon the iointes.

There is made of barley a certaine kinde of drinke, which is called a priſane, and a meate that is good for ſicke perſons, called mundified barley, which the good wife of the farme may make in this ſort. Take barley well clenſed and huſked, boile it till it bruſt, and till it be become like vnto a papmeate; after beate it in a mortar and ſtraine it through a very fine ſtrainer, put vnto it ſugar, or the iuice of ſweete almonds, or of poppie ſeede, melons or letiſes, according as occaſion ſhall be offered. Or elſe, Take of the beſt and neweſt barley, put it in a mortar, and caſt vpon it warme water, as it were to wet it, but not to make it ſwim, afterwarde beate it gently with a wooden peſtell, in ſuch ſort as that the huſke that conereth it may be forced off, then chaſe it betwixt your handes, that ſo you may free it quite from huſkes: then afterward drie it in the ſunne: when you haue this done, take a handfull of the ſaid barley, and put it in a pot, which it may fill to the halfe, and filling vp the other halfe with water, let it boile by little and little vntill ſuch time as it be bruſt and become like papmeate, let it run through a linnen cloth and ſo ſtraine out the iuice.

Oates notwithstanding that they grow amongſt wheate and barley without being ſowen, as an euell and vnprofitable thing, notwithstanding for the profit coming of them for the feeding of great cattell, as alſo of men in the time of neceſſitie, they deſerue a proper and conuenient kinde of huſbanding. They loue to be ſowen in leane places, which are drie, well aired and haue bene already twice ſowed; and that in February or March, but not later: they craue watering and then they grow both fairer and fuller ſet. They muſt be gathered preſently after that rie and barley are in.

Although oates be not vſed to make bread of except it be in the time of great dearth, notwithstanding ſome doe beate them in a mortar and doe make a meale thereof called oate-meale, which is boiled either alone, or elſe with fleſh, to vſe in manner of a panade. Phyſitions are of iudgment that oate-meale ſo made doth ſeede very well, and is good againſt the gravel and difficultie of vrine: for the truth whereof I refer you to the *Drumins* and *Angelins* which vſe it for the ſame effects. When it is boiled all alone, for the making of it the more pleaſant, there is wont to be put vnto it cowes milke, goats milke,

milke, or the iuice of ſweete almonds with ſugar. The *Flemings* vſe to make papmeate thereof which they loue exceeding well. The *Muscovites* diſtill the water of oates, and vſe it for want of wine, and ſuch water heateth and maketh drunke no leſſe then wine.

Millet, (as thoſe knowe well which dwell in the countie *Beane*, *Bigorre* and *Armignac*) after that it hath ſteeped ſome certaine time in water, would be ſowen, either morning or evening in the coole thereof in light and ſmall moulded ground: and it groweth not onely in grauellie ground, but alſo in ſand, when the countrey is wet and moiſt; but in any caſe it would not be ſowen in drie grounds, and ſuch as conſiſt of Fullers earth, or ſand, neither muſt it be ſowen before the ſpring, for it requirerh heate. Wherefore it maie conueniently be ſowen in the end of the moneth of March, or elſe ſomewhat latter, that ſo it maie enioy the benefit of the dew a long time; it putteth not the husbandman to any great charges, for a little ſeede will ſow a great deale of ground. So ſoone as it is ſowen it muſt be preſſed downe with a hurdle of wickers well laden, to keepe it from the heate of the ſun in the ſpringing vp thereof: for otherwiſe the ſeede would grow vp and drie awaie, through the vehemency and heate of the ſun beames. Notwithstanding it would be oft and verily well weeded, for the rooting vp of all manner of ill weedes, eſpecially the blacke millet. So ſoone as it may be ſpied peeping forth of the earth, and before that by the operation of the ſun, the corne doe ſhow, it muſt be pluckt vp by the hand, and be laid in the ſun, afterward to drie, and laſtly ſhut vp in ſome place where it may be kept, and being thus ordered it laſteth longer then any other manner of corne. Millet doth good vnto the fieldes wherein it is gathered, in this reſpect, namely that wormes will not hurt the corne that ſhall be ſowen there preſently after any whit at all, ſeeing they will leaue the graine that is ſowen and cleaue to the ſtraw of the millet.

In the time of dearth they vſe to make bread of millet, but vnpleaſant enough, eſpecially when it is ſetled, and the inhabitants of *Gascoigne*, & *Campaigne* doe vſe a papmeate made of millet with milke, and that not of the pleaſanteſt taſte; as well the bread as the papmeate made of millet is of ſmall nourishment, beſides that they make obſtructions, and that becauſe that millet is cold in the firſt degree, and drie in the third; millet fried with ſalt and flowers of cammomill and put into a bag, doth ſerue againſt the paines of the colicke and wringings of the belly: To keepe purgatiues as *Rubarbe*, *Agaricke*, yea and fleſh alſo from rottenneſſe and corruption, it is good to bury them in millet.

Sesame would be ſowen in a blacke ground, that is ſomewhat rotten

Mundified
barley.

Oates.

Oate-meale.

Graine.

Water diſtill
of oates.

ten and moist: it groweth well also in sandy and fat gravelly ground, or in mingled grounds, and it is verie fruitfull, even no lesse then millet or panicke. It is true that the good householder needeth not trouble his braine much with the sowing of it, seeing it is apt to make the ground altogether barren, and yet is good for nothing except the oile that is pressed out of it, and the cakes which liquorish women use to make of the meale. It must not bee sown but in the midst of sommer, whiles the times continue drie, and that there is no raine looked for of a long time, for the raine doth hurt it after that it is sown, cleane contrarie to other plants, which (all of them) reioice in raine after they are sown. The oile which is pressed out of the seede of Sesame, doth neuer freeze, and is the lightest of all other oiles, and yet being mixt with wine or aqua vitæ, sinketh to the bottome. There is no account to be made of this graine for nourishment, because it is given to overcome the stomacke, and is hardly digested, as is all oile matter.

Lentils.

Lentils must be sown at two times, in autumne, and most commonly, especially in France and cold countries, in the spring time, whiles the moone increaseth vnto the twelfth thereof, and either in a small or little moulde, or in a fat and fertile ground: for when they be in flower they destroye and spoile themselves through too much moisture, or by putting too far out of the earth. And to the end they may grow the more speedily & the greater, they must be mixt with drie dung before they be sown, and sower or fower daies after that they have bene so laid to rest in this dung, to sow them. They will keep long, & continue if they be mingled with ashes, or if they be put in pors, wherein oile and preserues have been kept: or and if they be sprinkled with wineger mixt with Beniouin.

Lentils (howsoever ancient Philosophers had them in estimation) are of harde digestion, hurtfull to the stomacke, filling the guts full of winde, darkening the sight, and causing fearefull dreames, and withall are nothing good if they be not boiled with flesh, or fried with oile.

Fasels.

Fasels grow in stubby grounds, or rather a great deale better in fat grounds, which are tilled & sown euery yeere; & they are to be sown betwixt the 10 of October, & the first of Nouember, or elsain March, as other pulse, after that the ground hath been eared about the 11 of Noueber. They must be sown after that they haue been steeped in water for to make them grow the more easily, and that at large when they are sown, and alwaies as they ripen to gather them. They make fat grounds where they be sown: they are accustomed to beare much fruite: they keepe a long time; they swell and grow greater in boiling,

ling, and are of a good pleasant taste vnto all mens mouths: It is true that they are windie, and hard to digest, but yet not so hard as they are apt to prouoke vnto venerie: if after that they be boiled, they be powdred ouer with pepper, galanga, and sugar, and yet more specially, if they be boilde in fat milke vntill they burst: if you minde to take away their windines eate them with mustard, or caraway seede: if you haue bene bitten of a horse, take Fasels, chaw them, and apply them so chawed vnto the greene wounde. Yoong gentlewomen that strue to be beautifull, may distill a water of Fasels that is singular good for the same end and purpose.

Lupines.

Lupines craue no great husbandrie, are good cheape, and do more good to the ground then any other seede: for when as vineyardes and arable groundes are become leane, they stande in neede of very good manure vnto them: likewise for want of dung, they may be sown in groundes that stande in neede to be dunged, if after they haue put forth their flowers the seconde time they be plowed vnder the grounde: they grow well in a leane ground, and such as is tyred and worne out with sowing: and they may be sown in any ground, especially in stubble groundes, such as are not tilled, for in what sort so euer they be sown, they will abide the roughnes of the grounde, and negligence of the husbandman, neither doe they craue any weeding, as well in respect of their roote which is single, as also for that if it were hurt they would die presently, and because also that it should be but labour lost: for they are so far off from being infected & wronged with weeds, that they euen kill them, and cause them to die. And this is the cause why many sowe them in the midst of vineyardes, to the end they may draw vnto them all the bitterness of the vineyarde, as being the qualitie most familiar vnto them, and with which they best agree. Notwithstanding they may not be sown deepe: for when they flower they are made no account of. Of all other kinds of pulse they onely stande not in neede to be laide vp in garners: but rather vpon some floore, where the smoake may come vnto them: for if moisture take them, they will grow full of wormes, which eate vp that which shoulde make them sprout, and that which is remaining can doe no good: they must be gathered after raine, for if it should be drie weather, they would fall out of their cods and be lost.

Lupines are good to feed oxen in winter, but they must be steeped in salted and riuer water, and afterwarde boiled: they serue also for to feede men, to make breade thereof when it is a time of dearth of other corne. Some doe note this speciall propertie in them, which is, that they turne about euery day with the sunne: in so much as that by them, workemen are taught the time of the day, though it bee not cleere and sunshiny.

ripe, you must water them five mornings together before the sunne rise with water wherein haue been steeped the seedes of wilde cucum-ber and wormwood: and the dew within five daies after will haue ta-ken away all the bitternesse thereof. Such practises are likewise good for to be vsed about smal peason and beanes. The vse of them is good for such as are slowe to performe the act of carnall copulation, and especially to carrie away grauell and to breake the stone, as also for such as haue weake lungs and low & weake voices. They are also good against melancholie, and doe cut off troublesome thoughts and cog-itations, put in place thereof iollie conceits and merrie moodes, and then they being laid forth in the moone shine whe it is in the increase, and before the sunne rise, they must bee sprinkled with oile olive, af-terward steeped in warme water to soften them, and lastly boild for to be eaten. The way to vse them is rather to sup vp their broth made with the rootes of parslie, then to eate the peason.

Small ciche peason.

Small ciche pease called of the Latines *Ciceren'a*, must be sown in fat places and in a moist time, as in Ianuarie or Februarie: they doe lesse harme to a field then any other pulse, but for the most part they neuer come to profit: for when they are in flower they cannot abide drouth, nor any strong southerne windes at such time as they leaue flowering.

Great wilde tare and bitter fetch.

The great wilde tare and bitter fetch doe desire leane places and such as are not moist: for sometimes by putting forth to freely and growing too much, they ouerthrow themselves. They may be sown in autumne or in the ende of Ianuarie, and all the moneth of Februa-rie, but not in March: because if it should be sown in this moneth it woulde hurt the cattell, especially oxen, troubling them in their braines.

Fetches.

There are two seede times for fetches, the first when they are sown for to feede cattell, and it is about the fifteenth day of Septem-ber: the second in Februarie or March, & this is for to make bread of for to eate, being mixt with other corne: both of them may be sown in vntilled groundes, but it is better when they are sown in groundes that haue had their three earings. This seede soueth not the dew, and therefore it must be sown two or three howres after sunne rise, when all the moisture thereof is spent and consumed, either by the wind or by the sunne, and it must not alone be sown, but it must also be coue- red the very same day, because, that if the night should come vpon it and wet it but a little before it were couered, it would quickly become corrupt and putrified. The ground wherein it is sown needeth not any more then one earing, and when it is sown it needeth no weeding.

ding. In any case it must not be sown before the fifteenth day of the moone, for otherwise the snails will annoie it. In like manner it must not be sown neere vnto any vine or orchard, or any place, where there are trees growing, because it draweth vnto it the iuice of such plants and be neere it, and yet the fetch doth not make the ground leane, but ra-ther fat it: and that it is so, appeareth; because that so soone as the fetch is taken away out of the fields, there may peason, millet or any other sort of pulse be sown.

Panicke.

He that would sow panicke must make choise of a light, gravelly, sandie or stony ground, & such a one as is situate amongst hils and on the tops of hils, and yet whereas there is no little resort of water, for that it being hot by nature, groweth and putteth forth more easilie than millet. It must be sown in sommer, and it groweth so speedily, as that it may be mowen within fortie daies after that it is sown. The in- habitants of *Gascoigne* make bread thereof, but it is very vnpleasent, because it is verie short and apt to crumble away, euen like ashes or sand. The *Perigordians* frie it with butter or oile: others eate it with milke or meat broth.

Fenugreeke, cumin, and mustard seede.

For the sowing of fenugreeke you must make choise of such ground as you would for the fetch, which you must not cut the second time, seeing the first if it be done thicke and small, and not deepe, will serue: for if the graine should be couered aboue foure fingers, it would not be able to sprout and spring vp, and therefore the plough and har- row both, must goe but lightlie ouer it. The meale of fenugreeke with brimstone and nitre, doth take away the freckles of the face: If you mingle it with a fourth part of the seedes of cresses in Vineger, it will prouoe a singular remedie for the falling of the haire called *Tinea*. If you boile it in honied water putting thereto some swines grease, it will resoleue the swelling of the testicles, hands, feet and vnder the eares, and is profitable against the wrenches of ioints. The decoction therof drunke oftentimes, doth infinite good to such as haue bene troubled with an old cough, and likewise for the vlcers of the breast: for the de- stillations and rheumes falling vpon the eies, you must wet clothes in the decoction of this seede, and applie them vnto the browes. And as for cumin and mustard seede, wee haue spoken of them in the second booke.

Medicke fodder or snail clauer.

There is not either any pulse or other seeding which is more agree- able or more pretious for the feeding of beastes than snail clauer, called in French *Sainct foim*, for that it may seeme to spring out of the earth, and as it were of a more speciall fauour from God, not onely for the nourishing and fattning of herdes of cattell, but also to serue for physike,

physicke, for beastes that are sicke, and in that respect it is called of the Latines *Medica*. Some call it *Burgundia* haie, because the *Burgundians* haue beene alwaies verie carefull for the sowing and tilling of this herbe; The inhabitants of *Picardie* call it *Foinasse*, and many haue giuen it the name of great trefoile. Howsoever the name goe, the benefite of this grasse is so great, as that euerie carefull husbandman ought continually to referue the better part of his groundes to bee sowed therewith. Make choise therefore of the sowing and growing of great store of this grasse, of an euen ground that is very cleane and fat, easie to bee plowed, and which hath had three earings before it was sowed, as also which hath beene well dunged, well harrowed, and digged and delued rather in the decrease of the moone, than plowed with the plough, beginning the worke in Iune, afterward in August, October, December, and Februarie, to the end that the weeds which are in the ground may be sufficiently killed, as well by the heate of sommer, as the cold of winter. After that you haue made the ground well pleasing, and fit by such industrie, begin to sowe it in the ende of April, during the new of the moone, and toward the later end of the day, for being watered by the dewe of the night, it will spring more speedily and easily out of the earth, then and if it were sowed in the heate of the day, because it would be burst continually, and would come but to small effect and profite. You must not be niggardly in sowing of it, for by how much the more seed you sowe, by so much the more thicke will the grasse grow; neither will there growe any other grasse there, and so there will also the more profite growe and rise thereupon to the good housholder. So soone as it is sowed, you must harrow it euerie manner of way, as longwaies, broadwaies, and ouerthwart, with harrowes or rakes of woode set thicke with teeth, but not of iron, because it is an enemy vnto iron: afterward you must water it gently for the first time, for and if you shoulde water it forcibly, and with abundant store of water, you shoulde driue the seede all to one side of the field, and yet you must not water it after September vnto the end of Aprill. It will be good to cut it downe with a lieth five or sixe times the first yeere, and so proportionably the yeeres following: for it endureth ten yeeres, yea thirty as *Pliny* saith, without standing in neede of being sowed againe. The fit time to cut it downe is May, Iune, Iuly, and August, and the new of the moone in the meane time you shall not let it lie vpon heapes any longer then a day in the meadowes, for if it shoulde staie there any long time, it would raise such a heate, as that it would smother and kill whatsoeuer were vnder it, to the keeping of it for euer growing againe: wherefore it will be good to carrie it else where, and to dry it as soone as possibly may be, stirring it euerie day, from day to day. Again, you must not let the cattell feede neere vnto this grasse, in as much as neither

tooth

tooth onely, but their very breathing of it also is very noisome vnto it, and that to greatly, as that it afterwarde becommeth either barren, or else dieth presently: it must not be giuen Greene for cattell to eate, least it make them sicke by reason of the moisture and heate that is therein: it must staie till it be drie before you giue it them to eate, and then also but in small quantitie: for that this grasse begetteth in them such store of blood, as that of the much eating thereof, they would be strangled therewith. The good husbandman must be carefull to gather and referue seede of this snale clauer, to sowe the same when it shall be requisite: it must not be gathered the first yeere that it beareth, by reason of his weakenes, but in all the other following, and that in the monethes of Iune and Iulie, so soone as the huskes wherein the seede is contained shall appeere drie, and the seedes themselves be turned yellow.

Mixt prouander.

Mixt prouander must be sowed in fat and well manured places, and such as haue beene twise eared: it will be very good if it be sowed with pilde barley, sometimes it consisteth of barley, oates, fetches, and fenugreeke, which are let growe hande ouer head, and are cut afterwarde either Greene or ripe, to make fodder of for cattell in winter.

Rice.

If you will sowe rice you may do it, but it is like to proue rather a worke of curiositie then of profite, for rice is a commoditie properly belonging and growing amongst the Indians, from whence also it is brought hither vnto vs in France. Therefore for the sowing of rice either white or red, choose out some place that is very moist, and in case you haue no such amongst your arable ground: then choose out some field that is leane, foule, and nothing well clenfed, or some other which is light and weake, but yet euen, and through which you may conuey some little brooke, or gutter of water. Eare the ground thrife where you meane to sowe your rice, and when you haue thus plowed it ouer thrife, sowe your rice therein, which you must first steepe for one whole day in water: so soone as you haue sowed it, draw your little brooke along through it, and there suffer it to continue five whole monethes the depth of two fingers: and when as you perceiue the blade to begin to shoote forth his eare (knowing that it also flowreth and seedeth at the same instant) then double the quantitie of water to keepe the fruite from blasting or spoiling otherwise. If you order it thus, you shall not onely reape great quantity of rice, but you may also sowe it three yeeres together one after another, without retting of the ground, and yet the last yeere will not be lesse fruitfull then the former: yea, which is more, you shall make the field more fat, frolicke, in better plight, and cleaner from weeds, and cleaner from

from noisome beasts then it was before: yea, and further than this you may sowe therein for three yeeres more, one kind of graine or other, whether wheate or mellin, whereof you shall not repent you in the time of haruest, you shall finde it so faire and profitable. There is one inconuenience in rice, which is, that it causeth an ill aire by reason of the aboundance of water which it craueth whole five monethes space, but to recompence the same withall, it prooueth very profitable for foode and sustenance, for thereof is made pottage, and thereof also is bread made, either with rie or miller, or all three together: it is true that it is much giuen to make obstructions, and it retaineth fluxes as mightily: and this is the cause why such as haue great loosens in their bodies do vse it oftentimes, especially if it bee parched and build in coves milke, wherein many little flints of the riuer haue beene quenched: if you boile it in milke adding thereto sugar and cinamome, it will prouoke vnto venerie. Many do thinke that it maketh fat, but seeing that (according to the Physitions) it is not digested in the stomack but very hardly, it must needes nourish but a litle, and then how can it possible make one fat? indeede it may be saide rather to pusse vp then to make fat.

Hempe.

Hempe must be sown in fat and well dunged grounds, and watered with some litle brooke, or else in flat and moist countries, where much labour and ploughing hath beene bestowed: for the faster the ground is, the thicker will the barke or pilling be. It must be sown in March, and gathered when the seede is ripe, and afterwarde dried either in the sunne, winde or smoake, and then laide in water for to be watered, that so the pilling may the more easily depart from the stalks, afterward to be vsed in making of ropes and cloth, a labour & trauaile well befeeming & fit for women. Hempe seed is good to make hens lay many egges, and that in the depth of winter, and greatest coldnes of the same. Many doe burne the thickest rootes of the male hempe, and of the same so burnt and made into powder, doe make gunnie-powder. The iuice or decoction of the greene herbe, being strongly strained and powred in some place where there are earth-wormes, doth cause them to come forth by and by: likewise being dropt into the eares, it causeth the wormes or other beasts which shall be gotten in thither to come out presently, and this wee haue learned of the hermen, which by this wile doe take wormes to serue them for their hookes. Hempe seed must neither bee eaten nor drunke, because it sendeth vp many fumes vnto the braine, which will cause the same to ache, and therefore women do greatly transgresse the rules of physicke, which giue this bruised seede in drinke, to such as are troubled with the falling sicknes or head ach. This is a thing to be woondred at in hempe, that seeing there are two sortes of it, the male and female yet

The seede of
hempe.
To make hens
lay egges.

yet the female beareth not the seed, but the male.

Line.

Line must not be sown in any ground, but where there riseth great profite, and this followeth and is caused by reason of the seede which impairerh all sorts of grounds verie much, and for that cause it must be sown in a very fat ground, and such a one also as is reasonable moist. In any case the ground where line seed is sown must be curiously handled and clenfed, and with manifold earings plowed and turned ouer so oft and so long, as that it become like dult: and furthermore the good huswife must be carefull when the line is growne, to free it from being intangled with the weede vsing to winde about it, and which of some is called linegowte, and that not once but oft, to the end that in gathering the seed, in beating it with beetles, heckling & spinning of it, such filth may not remaine among the towe. It must be gathered when it is ripe, and when the colour of it groweth yellow, and after laide vp in some drie place, that so it may be defended from the raine and dewe, which are vtter enemies vnto it: when it is dry, it must be threshed alsoone as may be (to the end that the misle eate it not) with wooden mallets, to get out the seed out of it, & presently after that it shall be carried to the water about the change of the Moone, that it may lie therein three or foure daies in July or August, till it become soft and tender, to the end that the pilling or barke thereof may the more easilie be separated from the stalkes for the making of cloth. When it is drawne out of the water it must be laid on a heape, all round, but two or three fadomes broade loading it about with boordes and stones, and after that spread in the sun, to the end it may dne the better. The finest line, which is without seede (notwithstanding it bee the least and lower of growth then the rest) is the best, being soft and fine after the manner as it were of silke: whereas that which is long and thicke, is also more rough and boysterous in spinning. You shall make very fine and white sowing threed of your fine flax in this sort; Let it bee watered in running water five or six daies in July or August in the change of the moone: so soone as it is drawn out of the water, spread it in the sun, that it may drie, neuer casting it into any heaps, for that which is laid vp in heaps after the coming of it out of the water, that it may take a heat & being pressed down to that end, doth become black and turneth into a darke and obscure colour.

Out of the seede of line you may presse an oile which will never freeze be it neuer so cold: it is vsed of Physitions, Painters, and many other sorts of workmen. It is singular good to softne hard things, for the paine of the hemorrhoides, chaps & tumours of the fundament called *Coudylomata*, being washed in rose water, it cureth burnings: it is marvellous good in plurisies, if so be that it be new: for that which is old heateth and procureth vomite.

Naues

To make white
threede.

Oile of linseed.

Nauets and turneps delight in a light and fine mould, and not in a churlish and sad ground, & yet turneps grow better in moist grounds and places, but nauets on the tops and sides of hills, in dry and pettie grounds, such as those are which are sandy and grauelly. Howsoever it is, the ground where they are sowne, must haue beene oftentimes turned and cast, harrowed and dunged: for by these meanes they will not onely grow well, but the ground after that they be gathered being thus prepared will bring forth fairer corne. Turneps are sowne twice in the yeere, in Februarie, and in August, in a well manured ground, and you may not suffer them, after that they haue gotten some little growth, to put vp any further out of the earth, for and if they should still grow more and more about the earth, their roote would become hard, and full of small and little holes. See more of nauets and turneps in our second booke.

The nineteenth Chapter.

*Advertisements concerning corne
and pulse.*

WISE and prudent husbandmen must not plow their groundes, cut their vines, or prune or haue any dealing about trees from the eighteenth day of Nouember vnto the seauen and twentieth of December.

Sowe your corne as soone as you can, and stay not to sowe it in winter. Neither do you euer sowe the corne, which grew in a fat soile, whether it bee wheate, or rie, or any other such, in a leane and barren field: but rather sowe that corne in a fatte and fertile soile, which grew in a leane and barren ground, and to bee briefe, sowe in a well conditioned ground that which was growen in an ill conditioned ground. In sowing your seede see that your hand answere your foote, and standing vpon your feete, see that your right foote especially bee mooued when your right hand doth mooue. In sowing of wheate you must cast it with a full hand, or by handfals, but in sowing barley, rie, oates, and many other kindes of graine, especially such as is shut vp in huskes, as millet, pannicke and rape seede: must be sowne and cast into the earth with onely three fingers.

To prevent the frost that it may not iniurie the corne that is sowne, especially such as is sowne in cold groundes, as those which are most subiect vnto frosts, you must cast and spread lime vpon the said groundes before they bee sowne: or else, which is better, mingle a sixt or eight part of lime amongst the corne which you meane to sowe, and so sowe them together.

To keepe your seede from being eaten of birds, myce or pilgrimes,

mires, water it before you sow it with the iuice of housleeke: or according to Virgils aduice with water wherein niter hath been infused.

To caule peason, beans and other pulse to be tender and easily boiled, you must lay them a day before they be sowne, in water wherein there hath beene nitre dissolved: or else to mingle amongst them in sowing of them some dung and nitre, and if notwithstanding after all these meanes vsed, they cannot be yet well boiled, then put into the pot wherein they are boiling, a little mustard seed, and in a short time they will relent and seeth into pieces.

Beanes being sowne neere trees, cause their rootes to drie and wither: beanes will keepe long if you water them with sea water, notwithstanding that they will not boile any thing at all in salt or sea water.

Cich pease will become greater, if you infuse them in warme water before they be sowne: or if you steep them in their cods in water wherein nitre hath beene infused: if you would haue them early, sow them when you sow barley.

Lentils will grow very faire, if they be infused in their cods in warme water, with nitre: or if they be rubb ouer with dry ox-dung before they be sowne.

You must not sow millet thicke, if so be you would haue it good: for examples sake a handfull is enough to sow halfe an arpent withall, for if you should sow any more you must but pul it vp when you come to the weeding of it.

Sow your lupines before all other kindes of corn, without staying or waiting for raine: before they flowe, you may put oxen in amongst them, and of all the other sorts of herbes they will eate, but they will not touch or come neere vnto the lupines, because that they are bitter: you may make them sweete, if you steep them three whole daies in sea and riuier water mingled together.

Sow all maner of pulse in the increase of the moone, except peason, and gather them as soone as they be ripe: for otherwise their cods will open and the pease fall out.

Gather seedes and all manner of graine in the change of the moone, if you would haue them to keepe, and doe with them as we haue said before. If you haue neede to sell corne sell it in the increase of the moone & not at any other time, because at such time they grow and become bigger in the garner, then they are wont to be at other times.

The twentieth Chapter.

Of the Baks house.

IN vaine should the husbandman toile himselfe in tilling his ground so carefully according to the forme and manner which we haue before

fore described, and in like carefull sort to gather in, heape together, & keepe his corne, if he hoped not for some fruit and profit of his paines & labours. But what that profit is which he receiueth of his corne, I refer my selfe vnto the sale, which he may yeerely make vnto foraine and strange marchants, as whereby there redoundeth vnto him an incredible summe of money. Wittnesse in this point may be the infinite number of rich husbandmen in *France*, and namely in *Beauce*, *Brie*, and *Picardie* who liue in better estate and fuller of money, then many great Seigneurs and Gentlemen: and I refer my selfe likewise vnto the diuers sorts of bread which they make of their corne, for the feeding and sustaining of themselves and their families, as also their cakes, cheese-cakes, custardes, flawnes, tartes, fritters, and a thousand other prettie knackes and daintie conceites, which may be made and wrought of the meale which their corne yeeldeth. And yet further I report me to the beere, (which standeth in steede of wine in the countries where the vine cannot beare fruit) made commonly with wheat and barlie: And lastly to the sale of bread which he may practise and vse euerie daie, without any whit disaduantageing himselfe: as we see in the husbandmen of *Gonesse* neere to the Citie of *Paris*.

Now therefore seeing that matters stand in this sort, me thinkes it should be an vnseemely thing, not onely for the farmer, but also for the Lord of this our farme to vse to send to the towne or else whither to buy bread, custardes, cracknels, cakes, tartes, beere, and other such necessarie thinges, for the foode and sustenance of his house, either yet to borrow of their neighbours strangers, as bakers, paste cookes, and brewers for the vse, or to be beholden vnto them for any of these commodities, when they stand in neede of them: For it is my intent and purpose that this our countrie house should be an other *Pandora*, furnished and flowing with store of all manner of good thinges and commodities, in such sort, as that the neighbour townes might haue recourse and seeke vnto it in cases of their necessities and wants, but without taking or receiuing any thing at their hands but monie, as the price and sale of the wares shall amount and come vnto, which it sendeth and furnisheth them withall day by day. I meane therefore that our farmer should be a baker, panter, worker in pastrie and a brewer when neede shall be: and to be brieue, that he should not be ignorant of any thing which might helpe to keepe, sustaine and enrich his house.

Whereof bread is made.

And to the intent that I may enter into my purposed matter of the bakehouse, I doe not heere intend to trie or search out who was the first inuentour of bread making, or what meates were in vse amongst them of ancient time, before the making of bread was founde out, or whether

whether it was the man or womans labour to play the baker, these I leaue to such as make their whole profession that way, to discourse of, contenting my selfe to teach and instruct my farmer what graine or corne he may imploy and vse for the making of bread: for certaine there may be bread made of all sortes of corne, but not of all sortes of graine, for pulse (as we call them) that is to say, such graine, as is inclosed in coddies or huskes, and which are not cut downe with sieth or sickle, but gathered by plucking them from the earth by the roots, as pease, beanes, rice, lentils, great cich-pease, small cich-pease, lupines, fassels, fetches, fenugreeke and other such like, are not fit to make bread of, except in time of famine and when as other corne doth faile altogether, or else fall to be exceeding deere, according as we see in such times of hard distresse, bread of oats, barley, beanes, rice, miller, and pannicke, (for such haue I seene in *Perigord*) yea of bran, filhes dried in the sun, acornes, chefnuts, and ferne rootes (for such haue I seene in bale *Bretaigne*) or which more is of bricks, tiles, and slates as is reported to haue been made by the inhabitants of *Sancerris*, who during the time that they were besieged, did make and eate bread made of slates.

Of corne and of such differences and sorts of
the same, as will make good bread.

The excellentest, holesomest and best kind of graine for to make *To make choise* bread of is corne, of which as there are many differences and diuers *of your corne*, sorts, according to the regions, countries, groundes and soiles where they grow, and according to the industry of the husbandman: so likewise there are diuers sorts of bread made differing awel in saour and tast as in maner of nourishing. Therefore that you may be able to make your choise wisely of all sortes of corne of euerie country that is fit to make bread of, you must see that it be thicke, full, grosse, massie, firm, of colour somewhat inclining to yellow, cleane, yeelding great store of cleane and white meale, which being steept and boild in water doth quickly swell: which being newly threshed, commeth presently from the sheafe: for that which is old threshed although it be drier then that which is new threshed, as also more light, apt and ready for to make meale, and to keepe in meale, notwithstanding the bread is not of so pleasant taste, seeing it hath lost a great part of his wel relishing iuice, and hath gotten as it were another nature by the alteration of the aire: for certainly euen so deale the corne merchants, who well bethinking themselves at what time to sell their corne, doe not thresh it before the very same moneth, wherein they meane to sell it: and as on the other side the baker will not buie (if possibly he may choise) any other corn to make good bread of, then that which being new threshed, commeth fresh from the sheafe.

The excellentest corne in all *France*, and which they vse most in *Paris*, *Good corne*,
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Paris, are those sortes which come out of *Beauce*, *France*, *Brie*, *Picardie*, *Champagne*, and *Bassigny* in *Burgundie*: howsoever also these in *Berree*, *Poitou*, *Zantonges*, *Angoulmois*, *Limoges*, *Normandie*, *Limagne*, *Languedoc*, and *Annvergne*, be not altogether to be reiected. The corne of *Beauce* maketh a fairer shew, then the corne of any other countrie, because it is growing in a fertile and fat soile, and such a one as is not drie, and it hath in it a band which sheweth great when it is in bread, although there be lesse quantitie of paste. The corne of *France*, hath a shorter and lesse graine, then that of *Beauce*, because it groweth in a ground neither too fat, nor too leane, but indifferent, so that the bread that is made thereof, is not so great shew as that of the corne of *Beauce*, but yet to make some manner of recompence more white and such as eateth better then that of *Beauce*. The corne of *Brie* is of a lesse graine then that of *France* and *Beauce*, as also a lose of this corne is of lesse quantitie then that of *Beauce* corne: and of lesse whiteness and pleasure in eating, then that which is made of the corne of *France*, because that *Brie* is a countrie of sweete cherries: and yet notwithstanding it is found, that the countrie properly and truly called *Brie* doth surpasse and goe beyond the two other in massinesse of corne: and the cause making it so to be, is the shortnes and thicknes of the skin thereof, which is evidently more apparant in it then in the rest, which make it to weigh the more. The corne of *Picardie* is of a lesse graine then any of the other three aforesaide, and so the bread of this corne is not so good, great, white, or profitable: because that this corne is more hard, stiffe, stubborne, and vnease to grinde then the others, and therefore such as out of which the flower cannot be well drawne, which causeth men commonly to call the corne of *Picardie* more vile and filthie then the rest, seeing when it is ground, the bran thereof detaineth and keepeth backe of the flower within it. *Champagne* notwithstanding that it flow and abound with corne, and make a very faire and great shew, yet it is inferiour vnto the other aforesaid countries: because the corne thereof yeeldeth lesse bread then the others, because naturally it is giuen to be choking, and to run vpon wreaibes betwixt the millstones, and more tedious to grinde then others: againe it is long, thinne, and clouen in the middelt, which maketh that it caneth so much waste bulke.

To grinde corne.

The husbandman hauing made good choise of his corne, shall send it to the mill whether it goe with water or with wind, according as the country shall be most fit and conuenient for: or and if he haue choise and may send it to either, then he shall rather choose to send it to a water mill, carried about with a very swift streame for the more forcible turning about of the stone, and which hath his stone of a yerie hard greete and all of one peece: if it be possible, such as are in *Brie* and

and *Champagne*, especially at *Ferte vnder Iourre*: for the millstones that are tender and soft, do easily breake & quickly grow out of frame, and withall do continually leaue some grauell in turning about, which being mixt with the meale, taketh away all the pleasures and good sauiour of the bread, and becommeth oftentimes troublesome vnto the teeth. Many do counsell and aduise to beat the corne in a mortar before it be sent to the mill to be ground, and in beating of it to sprinkle it ouer with water and after to drie it in the sun, and then in the end to send it to the mill. Some will not send it to the mill except it be verie drie, and when as it is not drie, they set it in the sunne to drie, as holding this opinion that the drier it is the more meale it yeldeth. Others besprinkle it with salt water, hoping by such watering of it that the meale will become more white, and that they shall haue greater quantitie of bran. Of old time, as may be gathered out of *Aristotles* problems, barley was wont to be parched before it was groued. In *France* none of these waies of preparing their corne to the mill are vsed, but as the corne is, so they send it to the mill: it is true that the miller is to lay his stones in such sort, as that according to the owners will he may make a greater or a smaller and finer meale, as also according as the corne it selfe shall be more grosse, hard, small or soft.

Of meale, mill dust, flower of meale, bran, fine meale, wheat, starch, and munded barley.

THE corne being ground is turned into meale, in such sort as that meale is no other thing but that which commeth of the corne when it is ground: and so the meale falleth out to be such as the corne was, that is to say, very white, if so be that the corne were pure and cleane, thicke and short, such as the corne of *France* (properly so called) is, blacke and full of bran: if the corne were starued, small, wrinkled, full of filth and dirt, long and flat, such is the meale of *rie*. But the husbandman before the grinding of his corne and turning of it into meale, must thinke with himselfe whether hee will keepe it long or no: such as hee will not keepe, there is no neede why hee should care of what corne he causeth it to be grounde, as whether it bee olde or newe threshed, neither yet how and in what manner: but such as he doth intend to keepe for some time, as in a store-houise, for to answere the times of necessitie, he must chuse the driest corne that he can meet withall, because that if it be not very drie, it might very quickly take heate in the meale: and so it is meete that it should be old threshed & not new & comming from the sheafe, (although the bread that is made of corn old threshed be not so good as that which is made of new threshed corne, and that which commeth fresh from the sheafe) for the meale that commeth of corne old threshed

shed and referued a long time in the garner, keepeth better then that which commeth of new thrashed corne, because that the corne being driuen and laide naked from his first and vtmost huske and coate, taketh the aire, as also his vndermost couering wherewith it is covered, and so groweth drier and harder, not onely in his coate, but also in the meale and marrow inclosed therein: whereupon it commeth to passe that this meale being left naked and voide of any coate by the grinding of the mill, becommeth more apt to keepe, in being the more drie: on the contrary, the meale of new thrashed corne, is not of so good continuance, but spoileth sooner: because that the corne new thrashed, retaining yet his native moisture, maketh the meale the more moist and heauie, and that it can not be so drie, whereupon it falleth out to be more inclinable and readie to corrupt: for euen as drines doth preuent and hinder putrefaction, so moisture doth hasten and helpe forward the same: and that it is so, wee see by experience, that the painfull husbandmen for the good keeping of their corne, do leaue it in the sheafe mowed vp in the barne there to winter and sweate, causing it after such sweate to be threshed, that so they may shift it out of his place into another that is more dry, and laying vp higher in a more open aire; where being laide and gathered together in heapes after a long and not high raised manner, he diligently bestirreth himselfe to cause it to be remooued from place to place, that so it may take the aire by little and little, but specially to aire that which lieth vnderneath, by laying it about, wherefore it is not to be doubted but that the meale which is made of corne that hath bene thus ordered in the garner, is of much better continuance then that which is of corne comming newly out of the sheafe: besides the husbandman must giue in charge (if so bee he would haue his meale to keepe long) to the miller to grinde his corne somewhat grosse: for and if it be ground fine, it is not possible for him to keepe it so long in good state and condition: notwithstanding for the well keeping of all sorts of meale, whether it be of corne new or old thrashed, you must make choise of the highest roome of all your dwelling place, whether it be tower, towne, or towne-house, and being placed there as in a store house, it shall be let rest full fiteene daies, to relieue and ease it selfe of the trauell which it hath had in the grinding: after which time of rest for the better and longer keeping of it, it will be needefull to change it oft from one place to another, and by this meanes it will be kept a whole halfe yeere, and being often remooued and changed from one place to another, it will be increased a fifth or sixth part at the least, of which, notwithstanding there cannot bee made so good bread, as of the meale that is newly grounde. And thus much for the farmers duty about baking, which consisteth in choosing the corne, causing it to be ground, and laying vp of the meale in some garner or

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ther to be kept, or to be presently vsed about the making of bread. The ordering of the meale, and making of the bread belongeth vnto the huswife, according to the custome of the ancient Romans, amongst whom, the women of speciall note and account did worke and knead the meale, and made bread with their own hands, as *Plutarch* reporteth in his Problemes. The huswife then being possessed of so much meale in the garner, shal go about to do her indeuour to make bread: but before she begin to make it, she shall separate the finer part thereof from the grosser, with some temze, searce, or bolter, to the end that of these seuerall sorts of meale, she may make seuerall sorts of bread: the finest part of the meale is called the flower of meale, & of the Latins *Pollen*, whereof the pasterers or cookes for pastry, doe make wafers, and such like daintie knacks: the grossest part is the bran, called of the Latins *Furfur*, which commeth of the coate or huske cleauing next vnto the narrow and kernell of the corne. Betwixt the flower of the meale and the bran, there are yet other parts of the meale, more or lesse fine, or more or lesse grosse, according to the widenes or narrownes of the temze or bolter through which they passe, and according to the difference and diuersitie of these parts, there are made differing and diuers sorts of bread that is to say, more or lesse white, according to the taking forth of two, three, or fowre parts of the bran, by the helpe and meanes of the bolter: besides these parts and seuerall sorts, there is yet another sort of meale which is called mill dust, and this riseth vp from the corne, as it is vpon the mill, grinding vnder the mill-stone, but hereof there is no vse for bread, the millers vse to sell it onely for the vse of booke-binders and goldsmithes, to make their paste withall: there is yet another kinde of meale, which the Italians call *Semole*, which is fine meale, or course flower, called of the Latins *Simila*, or *Similago*, whereof we haue spoken before: We haue it not in this countrey, it is brought vnto vs from Italy and Naples, neither do men vse to make bread with this, but either thicken their meat broths, or else make pap meat. It is as fine as the flower of meale, but not so white, notwithstanding hauing a colour halfe like the straw colour. It is of a very good iuice and nourishment. There is yet further another sort of very white meale that is very fine, which is commonly called in French *Amydon*, and of the Greekes and Latins *Amylon*, as though it were made without millstones. It hath heretofore bene made diuers waies, but in this countrey they vse to make it in this sort: They choose the fairest and purest wheate that may be got, and cause it to be ground very finely: which done, they cast the ground meale into a fat or vessell which the other fill vp with water, scumming off the bran that swimmeth aloft, and after passing all the water through a cloth or strainer, and then they put newe water into the vessell, which they likewise straine in such manner as they did the

former,

former, leauing the white meale in the bottome whither it is seled, & this they dry in the heat of the sun about the dog daies, and when it is dried it becommeth hard, and is afterward broken into gobbets, and so made into fine meale.

You may make meale likewise of other corne then of wheate, as of barley, rie, mellin, secourgeon, and many other sortes of graine, whereof we haue said before, that bread is wont to bee made in the time of dearth and famine, or else in poore countries that haue want of other, or at least of better corne. Barley meale is very full of bran, and hence it commeth that the bread made thereof doth loken the belly: notwithstanding, there was in old time made of barley a sort of meale which was called *Polenta*, that is to say, of barley newlie dried, then fried, and afterwarde ground, and this was vsed to make pappe meate of, or else to put in meate brothes to thicken them. Some doe the like with mundified barley.

The meale of rie is likewise full of bran, but that of oates is yet more full, notwithstanding, that oatemeale which is made of oates husked, be a welcome dish to the tables of great Lords: the meale of rice is whiter then any of the rest; as for the meale of pulse, it is oftner made by being braied in the morter, then by grinding, howsoever it may more comodiously & a great deale better be made with the mill.

Leuen.

Leuen, called in Latine *Fermentum*, because it puffeth vp and swellth in continuance of time, is a lump of paste left of the last masse of dough, couered & hidden in the meale which is kneaded to take away the clammines and cleauing propertie which is in the meale that is purposed to bee made into bread: this leuen becommeth sowre by continuance of time, and thereby maketh the breade more delightfome, and of a more pleasant taste: againe, we see that bread by how much the more leuen it hath, by so much the more holefome and well relishing it is, ouer and aboue that which hath lesse store of leuen in it. It is indifferently hot, and a little cold: hot by reason of the putrefaction which it is cast into, and because of the nature of the meale. This leauen is made diuers sorts of waies, according to the manners and fashions of countries: we make it of wheat paste, to make wheate bread; and of rie paste to make rie bread: some put vnto it salt, some vineger, and many veruice made of crabs. The workers in pastrie do vse the rising of beere to make their wigs withall, as we shall haue further occasion to speake of in laying open the way to make beere. People of old & auncient times did make it diuers waies as *Pliny* reporteth. The Flemings do mightily boile their wheate, and take off the scum that riseth thereof in boiling, which they let grow thicke, and vse the same in steede of leuen, and that is the cause why their bread is a gret deale lighter then ours. Howsoeuer it is, the le-

Barley meale.

Polenta.

The meale of
rye and oates.
Oatemeale.
Rice meale.

uen which men bakers and women bakers do vse to make their bread withall, may be kept fifteene daies and not any more, because after such time it corrupteth and decaith, but to be sure it is not good to keepe it so long: for to keepe it you must worke it vp into a round paste, couer and hide it ouer in meale, and besides in winter it must be couered ouer with good store of clothes in the kneading trough. When the good wife of the house is purposed to bake her paste, she must two or three daies before, or which is better, ouer night, kneade in her said leuens, with hot water, or else with colde, according to the time and diuersitie of the corne, whereof she meaneth to make her bread, as we will speake further of by and by. The workers in paste makes do vse but very little leuen in their crutts, or none at all, either because it would make so small a quantity of paste as they vse to make their crutts of too sowre, or else because the leuen would draw vnto it all the butter, or such other fat as they should mingle amongst their paste, for as much as leuen hath the power to draw moisture vnto it, as we may easily prooue by apoltemes, which when we would haue to ripen and swell vp higher, we vse to applie a plaister or cataplasme of leuen to them. Furthermore, if it should happen that the baker, or good wife of the house should finde her leuen too sowre, and that she cannot come by any other, the remedy must be to knead her leuen with hotter water than she would and if it were in his proper nature and kinde, that so by the heate of the water the leuen may recouer some strength, and somewhat renew his naturall force, hauing lost his naturall heate: whereas on the contrarie, when the leuen is in his kinde and well conditioned, there is not any thing but colde water to be vsed about it.

The making of bread according to the diuersitie of corne whereof it is made.

The huswife must bee ruled and aduised in the making of her bread, by the nature and condition of the meale whereof she maketh it, wherefore if she dwell in *Beauce*, or dwelling out of *Beauce*, doe make her bread of the corne growing in *Beauce* (the meale of which corne for certaintie, holdeth the chiefe and principall place of account amongst all the sorts of meale of *France*) she shall be careful in any case, to make her leuens at certaine and well appointed houres: In Sommer she shall refresh her leuen with colde water at noone day, and renew it againe at fise a clocke, and lastly at nine, without failing of keeping these howres in very precise manner: This water thus vsed in sommer must be drawn fresh out of the well, or from the fountaine and riuer, because that well water as it is more heauy than the other, so it maketh the bread more heauy: and on the contrarie, spring water or water from the riuer as it is the lighter, so it maketh lighter bread. In winter she must renew her leuen with fresh

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water

water warmed or made hot: and with this water both winter and summer, she shall wet her armes, and knead her paste thoroughly, turning it ouer and ouer, hither and thither, on euery side, for a long space and many times, that so all the parts thereof may shew that she hath bene there, and that all the clammines and cleauing qualitie of the same may be thoroughly broken and dried vp, that so the bread may be the more short & finer in chawing, and not eating like paste in the teeth, mouth and stomacke. After such handling of it she shall take the paines to turne her paste oftentimes, that so it become not leuen, for otherwise it would not eat so well. It is true that when the leuen is faultie, the meale of the corne of *Beauce* hath such a band and list as that she might easily couer and hide such fault, provided that the baker whether man or woman, at the kneading thereof would but helpe it a little with some fresh water.

Bread made of
the corne of
France.

If the farmers wife doe dwell in Fraunce, or make bread of the corne growing sometime in Fraunce, she shall not vse so much leuen thereunto as she did vnto the meale made of the corne growne in *Beauce*, both bicause the corne commeth short in yeelding like quantitie of paste, for like quantitie of corne, as also bicause the meale hath not so good a band, neither yet is it altogether so clammy: and therefore you must vse a meane and reasonable measure in your leuen, and withall let your water be lesse hot, then in the kneading of *Beauce* meale: for and if you knead it with water that is more hot then needeth, the paste will swell vp the more a great deale, and after ward will dry out of all reason.

Bread made of
the corne of
Brie.

To make bread of the corne that was growne in *Brie*, you must vse a quite other manner of order, bicause that countrie corne is much more churlish then that of *France* or *Beauce*: the first flower that cometh out of huske or skin of the saide corne, is better bound then the others, bicause the corne is shorter, and so hangeth in the bolter as doth the oatemeale, contrarie to the nature of other corne, in as much as the said oatemeale is sweeter then the other sorts of corne, which causeth that the bolter letteth some small quantitie of meale somewhat roundly ground to crosse it ouerthwartly, and that may be called the second flower: and this was not, neither should it be shorter then the corne of *Picardie*.

Bread of *Picar-*
die corne.

Picardie corne must be much corrected, as being hard to be well ordred, either in paste or in any other such manner of viages, as also for that it craueth a very hot oven, and when it is in it, it maketh such a couering to the bread, as though there were no manner of leuen in it at all. It is harde to bake, and hard to take colour, which may seeme somewhat strange in it; for seeing that it is so fowre and drie, it should argue that the bread should the sooner be baked in the oven: but the hardnes and heauines of the meale is the cause that it is so harde to bake

bake: as also there may be ioyned thereto for another reason the crust that groweth vpon the same presently, for it is asimable to hinder the heate of the oven that it cannot enter into the inward parts so easily as it should; and this is the cause that maketh the bread to be alwaies as it were fat.

The meale of the corne of *Campagne*, craueth a newner made leuen when it is to be made into bread, bicause it hath a scratch of the earth, which would make it to be become woorse in paste, if it should not haue added vnto it such leuen as were excellent good; as also for that the corne comming out of the sheafe, doth smell of the ground whereon it grew, and this cannot be amended without great diligence vsed, and care had in the making of the bread.

Mellin thrieth not so well, as hot yeelding so much when it is made in bread: it is by nature fat, as also the meale thereof being bolted: it is no easie thing to pull out ones hands, when they are in kneading of it: the good hufwife that hath not bene acquainted to worke in this kinde of corne, doth finde her selfe much incombred therewith, and that in part, bicause the better part of the meale vseth to stay behinde with the bran: and therefore for the profite of the house it were better to bolt the meale of rie and mellin, then to sift it: bicause the bolter with the working of the armes, doth cause the bran to let go the meale that is within it, which is more then either the pocket or searce will do, bicause they make no moouing or stirring of the meale, but from one place to another.

The paste therefore being well kneaded, shifted, and prepared, as neede requireth, it must be parted into round peeces, of a reasonable greatnes and thicknes to be set in the oven made reasonable hot, even in such sort as that the bread may (according to the greatnes, thicknes, and qualitie of the paste) be sufficiently baked: for a weightie and thicke loafe of paste made of the corn of *Picardie*, would haue a longer and greater baking then a small loafe, and that made of the corne of *Beauce* or *Fraunce*. If the oven be too hot, the crust will be scorched, and within it will remaine rawe and vn timer, the heate not being able to enter and pierce to the inner parts, the crust that is so hard dried vpon it being a let therunto.

In the meane time it must not be forgotten that when any man is determined to make salt bread, or to mixe anise-seed therewith, or any other such mixture, that he must mingle and put the same thereto, whether it be salt or anise-seed, or any other such thing, at such time as the paste is in kneading.

There are likewise diuers sorts of bread made of one and the same meale, according as the bolters, pocket, noyze, or searce shall be, through which it passeth. Of the meale wholly together, and having nothing sifted out, is made household bread. And when the greatest of

Bread made of
the corne which
was growne in
Campagne.

Bread made of
the corne which
was growne in
Campagne.

of the bran is taken away, then there is usually made thereof citizens bread. Again, when as the bran is cleane taken away, they vse to make thereof small white loaves. And when as the grossest part of the wheate flower is taken away, and nothing left but the very fine, they vse to make chapter bread, wafers, tarts, cakes, and other workes of pasty. Some also do make bread as it were of pure bran, and therein likewise sometimes to be founde straws and chaffe, and that for to feede dogs withall.

The first place for the baking of bread is the oven, because it admitteth the heate of the fire equally and indifferently on all sides: vpon the hearth or gridiron, the one part of the loafe baken, and the other remaineth rawe: and vnder the ashes it is not so well bakedi.

The fire that is for to heate the oven, must be fagot wood, or billet, or shivers of thicke wood that hath no stinking or vnlausory smell, or for want of woode, strawe, or stubble, as is vsed in *Beauce*, or of thicke reedes, according as the cuntry will most conueniently afford.

The bread must be baken in the oven, in a good sort and meane, and with a reasonable heate: for ouergreat a heate would icorche the crust that is aboue, and so debarre it selfe of inward entrance, to the causing of the said inward part to remaine raw and pastelike; a lesser heate then is meete and conuenient would let it remaine all raw: after it is baken inough it shall be drawne out of the oven, and laid to rest and abide in a place that is neither stinking nor vnlausorie, nor yet infected with any euill aire: for the hote bread doth easily drawe and sucke in any venemous or corrupt quality of the aire: in moist places bread doth soone become hoarie and fustie: and in too drie a place it becommeth mouldy and ranke. The good husband that is right careful of his profit to the end that his bread may last the longer, and that they may eate the lesse of it doth set in some cellar or place vnder the ground, or in some other moist place: and his rie bread in some place neere vnto the fire hearth.

Bread made of other sorts of corne as also of certaine pulse.

Barley bread.

Barley bread must be made of the best barly that may be found or gotten, and not of the meale whole and intire, as it commeth from the mill, but of that part of it which hath beene temized and cleafed from his grosse bran: It is true that the bread will be very drie, vert apt to crumble, and of a fowre taste: so that it would be better to mingle amongst this meale, some meale of pure wheate, or mellin. The manner of seasoning it with leauen, as also of kneading and baking of it, is no other, then is vsed in wheate. After the same manner is breade made of *Secourgon*. But neither the one nor the other is fit for the eating either of the Lord of the farme or of his farmery, but rather for the seruants and that especiallie in the time of dearth, for their better

the Countie Farme.

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better contentation, although there be no great store of nourishment to be looked for from the same: After this sort also they make bread of oates, which is seldome or not at all eaten, except it be in the time of extreame famine, for indeede it eateth very vnpleasantly.

Bread may be made of millet as also of panicke; but such as is very drie and brittle, and yet the *Gastons* vse it commonly, and especially the *Biarnoyes*, who for this cause are called millet mangers of their neighbors dwelling thereabout. The *Biarnoyes* doe make hastie puddings after this manner: They take three or fower pounds of the meale of millet for the morning & as much for the evening, they set it vpon the fire in a Kettle wherinto there is powred fixe or six pintes of water: thus they let them boile together, vntill such time as that it swell vp to the top of the kettle, and then taking it from off the fire, they stir it well about with around sticke, so long as vntill the paste be verie throughly broken and made all one, then afterward taking it out of the kettle, they diuide it with a threed into many peeces and eate it in that sort with cheefe, or with thin salted milke.

Bread is likewise made of rie, but such as eateth very clammy, whereof we haue spoken in the discourse of rie: for the taking awaie of the clammines thereof it will be good to mingle barlie flower with it, or rather wheate flower, or else to take the flower of the rie meale: it will be of a waxe colour, if yet whiles it is hore, you lay vpon it some heauy thing.

It is vsed likewise, to make bread of ryce, beanes, spelt corne and many other sorts of corne and pulse, and that alter the same sort that wheate corne bread is made.

In like manner the industrie and indeuour of the baker may be the cause of the making of many sorts of bread, as that which is called the finest bread, or Court bread which is the lightest of all the rest, and which is very exactly kneaded, full of leauen and of a well raised paste. Bisket bread which is of three sorts, one that is made of rie, another that is made of mallin, or barley or oates, or of all the foresaid mixt together, fit for Saylers to live withall, which vnder take long voyages by Sea, or for such as are besieged within some fort or holde, because it will keepe a long time: This kinde of bread hath not much leauen in it: the second kinde of bisket is made of pure wheate without any mixtura; fit for the poore that are infected with the pockes; to make their diet bread vpon. The third sort is made of the flower of meale, and it is vsual to put to the paste thereof sugar, cinnamom, pepper or ginger, and sometimes anise feedes, and it serueth to eate in the time of abstinence, as Lent and such other. As *Reyns* they vse to make spiced bread with hony and a litle quantitie of pepper or cinnamom. The bakers of the Court make their bread with milke.

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The

The one and twentieth Chapter.

Of the Pantrie.

IT is most certaine that bread is the chiefest thing whereby man is fed and nourished: and that it is so, we see that other victuals, how pleasant soever they be vnto the taste, how well soever prepared and set out with good sauces, do (for the most part of them) cause very oft a distaste and loathing of themselves: but onely bread holdeth out without dislike growing thereupon whether it be in sickness or in health, it is the thing which appetite doth last of all refuse, and first like of and receive againe in the time of sickness: in health it is the beginning and ending of our meate, very pleasant and delightfome with all kinde of meates. In like manner of a certaintie bread is by a marvellous benefite of nature, indowed with all sorts of tastes or relishes, which particularly are the prouocations and allurements causing vs to affect and eate this or that or any kinde of meate whatsoever. Some whereof do please vs by reason of their sweetnes: other some by reason of their sournes, some by reason of their saltnes, and other some by reason of their sharpnes, and some by reason of their pleasant smell: and all these well pleasing relishes, making sauerie vnto vs all other sortes of meate, doth bread containe and comprehend in it selfe. Againe other victuals haue they neuer so good a taste, cannot be pleasant or profitable for the health in eating, if bread be not eaten with them, in as much as bread by his good nature doth correct the faults that are in other meats, and maketh them stronger and of more power in their properties and qualities: and hereupon grew the common prouerbe, which is, that all meat is good and profitable, when it is accompanied with bread. Againe we finde by daily obseruation, that such as eate their meate, whether it be flesh or any such sort of victuals without bread, haue alwaies a stinking breath: so that I cannot but greatly maruell who was the author of the common prouerbe: viz. That all repletion of whatsoever meate was euill, but especially that of bread: if it be not, because that bread (by reason of much solide and firme nourishment which it bringeth vnto the body, if it happen to be eaten in excessive quantitie) doth fill the veines with abundant store of blood, but such as is not apt to flow and stir, and such as is not apt and easie to be evaporated and disouffed, being giuen to indure and continue like solide things in a constant and staied course: of the which blood all the bodie being nourished, is made more corpulent, full and massie, and so by reason of this fulnes the lesse perspirable, because the pores and passages of the skin, by the which the whole bodie should haue meanes for the breathing out of his superfluous vapours, are stoppt; and thereby the

*Omnia repletio
mala, panis au-
tem pessima.*

body made subiect vnto many diseases, and sodaine death: such was the illue ordinarily befalling professed wraстlers, and that as we may gather by reading, procured and wrought especiallie in those men, by vsing of much bread and swines flesh. And I will further confesse (as *Galen* teacheth vs) that of all the errors, and inconueniences happening to the health, through the bad digestion and ill concoction of the stomacke, those are the most grievous; which grow of the ill digesting of bread, rather then where flesh or such meate are badly digested, because that bread doth more trouble nature and is a longer time in digesting. But all this notwithstanding there is no cause, why bread should not still bee preferred before all other sortes of victuals, seeing these discommodities arise not of the meane and reasonable vie, but of the excessive vs rather of the same, which is the high way to mar and make hurtfull not bread onely but whatsoever other good and excellent thinges: so grealy euery where and in all good things, is the merrie meane commended. Againe whatsoever hath bene hitherto said of bread, hath bene not to charge it with begetting the said vices and diseases, by any euill iuice that is in it, but indeede by the superfluities of humours, which may rather bee accounted for a vertue and commendation vnto it, then any dispraise; but the further discourse of this matter I leaue for an other place. Seeing then the life of men consisteth more in the vse of bread then of all other things, who so is carefull of his health and life, must make choise of his bread; according as his substance, calling and naturall disposition shall direct and guide him.

The bread that is made of wheate meale whole and intire, as from which there is nothing taken by temze, is fit and meete for hindes and other workfolkes, as deluers, porters; and such other persons as are in continuall trauaile, because they haue neede of such foode, as consisteth of a grosse, thicke and clammy iuice, and in like manner such bread fitteth them best which hath no leauen in it, is not much baked, but remaineth somewhat dowghie and clammy, and which besides is made of the meale of *Secourgeon*, of rie mingled with wheat, of chefnuts; rice, beanes, and such other grosse sorts of pulse.

The bread that is made of the flower of the meale, being the purest and finest part thereof, is good for idle & vlaboured perions: such as students, Monkes, Chanons and other fine and dainty persons, which stand in need to be fed with foode of light and easie digestion. Such is the white bread which is sold of the bakers, and chapter bread: as also that which is well leuened, knodden, somewhat salt, somewhat hollow, and well risen, like vnto court bread.

The bread that is made onely of rie flower, is very blacke, heavy, clammy, slimie and melancholicke, and for that cause hard to digest, as also fit to be eaten of the countrey people and poore inhabitants of

*Bread made of
the whole flower.*

*Bread of the
flower of meale.*



the land, but not for men of note and birth living at their ease: It is true that Physicians doe thinke it commend it in somer in the beginning of meat, for to loosen the bellie, as we see it practised in the courts of great states: but such bread must not be made of the intire meale of rye, but such as is well sifted: and it must beare the colour of wax, and be new baked, for that which is old groweth fowre, and loofeth his pleasant smell. The women of *Lyampis* to the ende they may be faire and haue a fresh colour, and solide and substantiall bodies, doe vse no other bread, but such as is made of rye: such as are much altered and changed, in steede of ptisanes, cidre, beere, or anie other such drinke, may drinke of breaded water, that is to say, water wherein rye bread hath bene well beaten and laboured.

Bread made of barlie meale onelie is verie drie, easie to crumble awaie, and of very small nourishment, and therefore fitter to loosen the bellie then to feede or nourish, by vertue and force of a detergent facultie, wherewith barlie is greatly furnished: And this is the cause why at Rome this kinde of bread is made no accompt of, as for to be vsed of men leauing it as a foode for cattell, or else in reproche, for faint, harted and dastardlie souldiers, for it was vtterlie forbidden for euer being set before such as were valiant and couragious in fight, because of the small quantitie of nutritiue parts or nourishment that is in it: It is true that manie doe imagin that the vse of barlie bread doth make them lesse subiect vnto the gout: contrarie to that which Aristotle saith in his problemes, that bakers and such as vse baking are weakened thereby, but yet more then the rest, such as vse to handel and worke much in barlie stuffe. The thing I leaue to be tried by the sequele.

Oaten bread is not commended, both because the employing of oats that waie were to rob cattell of their due foode and prouander (a great argument of famine) as also because such bread is of a verie vnpleasant taste: It is better to vse oatmeale made of oats freed from their huske: as we haue said before in the treatise of pottage vsed either in flesh time, or in the time of Lent.

Bread made of millet and panicke is very common in *Bearens* and *Gascogne*, not onely amongst the vulgar sort, but also in the houses of great Lordes, but these doe vse it rather for daintines sake or for want of a good stomack then otherwise: it is very dry, light & easily crumbling, and so fit for to dry vp a stomacke and body that is very moist. It is pleasant to the tast when it is new and well baked, especially when it is eaten coming hot out of the oven, for then it tasteth and eateth with a marvellous pleasant sweetnes: Likewise in countries where such bread is made account of, the bakers carry it presently after it is drawn into the towne, and etie hot millet bread hot; but after it is become hard, it loofeth all his grasse, and is not so fit to be eaten. Bread

Bread made of pure and cleane mellin, is very good to be eaten according to the mediocritie of the substance thereof, in such sort as that many compare it with the bread made of *Similago*, which was in olde times the best and most excellent wheate that was.

There is no regarde to be made of the bread made of the bran *Bread of bran* which commeth of the meale, that hath had flower taken from him, & is commonly called meale-bran: it is better to leaue it for the hounds or shepherds dog, or such as serue for the keeping and watch of the house.

Soft bread (otherwise called of the French *Pain mollet*, or *Pain de Soft bread*, *bonche*) is to be made for none but great Lords: bisket bread made of the flower of wheate meale, is for such as take the diet: bisket made of rie and such other graine of the inferior sort, is for mariners and such as are besieged in towns. The spiced bread is for such as are sweet toothed and licourishly giuen.

The most excellent and best bread of all other (if you haue neede *The market* at any time to make choise) is that which is made of good and pure *figures of good bread* wheate, that is new, not old, not corrupted, or any way spoiled, moist, or long kept, hauing been well ground, well sifted, well wrought into paste with good store of leuen, and sufficient quantitie of riuer or spring water rather then that which is taken out of wells, but neuer out of fennes, pools, or fishponds, nor yet out of troubled, dirty, muddy, vncleane or salt water: being well raised and thoroughly kneaded and turned on euery side, and let rest certaine howres, being well couered and somewhat salted, of a reasonable masse of paste, not to exceeding great, that so it may take the heat of the fire equally on euery side as well aboue as below: which is baked in the oven heated with a reasonable fire, and such a one as did burne cleete, feeding vpon wood rather then vpon straw, stubble, reede, rotten or medicinable wood; which is indifferently baked, so as that by ouer much and long baking the crust is not scorched, nor the sweete iuice of paste, which is as it were the life and substance of the meale, is not spent and consumed: or so as that by too slight and slender baking, the inner part of the bread remaine raw, and so become a heauie and burthen some bread vnto the stomacke hardly to be digested, and ingendring great store of windines and spittle, drawn out of the oven in time and place, and set vp where there is a good aire, and not in any filthie or stinking aire, that there it may euaporate the superfluous moisture that is in it. Such bread hauing bene thus prepared and ordered, must not be eaten too hastily, as when it is new baked, nor yet the same day, but the day following in sommer, or the third day after in winter: for new bread especially that which is hot, doth retaine a great part of the moisture, clammines & limines which it had in the kneading, & so being eaten new, would procure the inflation and puffing vp of the stomacke, pro- uoke

uoke thirst, be hardly digested, subuert and ouerthrow the stomacke, and cause obstructions in the liuer and inward partes. It is true that physitions doe greatly commend in faintings & swoonings the smelling of the crummie part of the loafe comming new out of the oven, and sprinkled with wine. Olde baked bread especially that which is three or foure daies olde, looseth all his best grace and saour, and in steed thereof falleth into drinesse and hardnesse, and so becommeth hard of digestion, passeth slowly downe into the bowels, causeth costiuenes, and begetteth a melancholie iuice and nourishment. The crust of bread notwithstanding it bee of better taste and relish then the crums, and that the common people doe thinke that it maketh a stronger body, yet it ingendreth a cholecticke, aduit and melancholie iuice, and that is the cause why in houses of great personages they vse to chip their bread.

Crust of bread.

The quantitie of bread that is to be eaten.

What quantitie of bread must be eaten.
The quantitie of bread that euery man ought to. eate euery day, cannot precisely and strictly bee set downe, with regarde had of the time, (for in winter men eate more then in sommer) age, disposition of the body, euery particular mans manner of liuing, and the custome of the countrie or place, without the omitting of many other circumstances. It is true that courties, chanons, monks, and schollers of colleges doe keepe and obserue some rule that way, but not so constantly, but that it may be broken, as occasions may be offered, which may perswade either to vse more or lesse.

The diuers vses of bread.

Bread is diuerly vsed: but the two most common waies are to eate it either alone, or with other meates, whereunto it serueth not onely, as we haue said before, in steed of a sauce that is full pleasant and delightfull: but also to correct their vices and faults if they haue any, and to helpe and strengthen their properties and vertues, in so much as that all meate is wholesome and healthfull, if it bee accompanied with bread. Sometimes it is toasted being cut into diuers thin shiues, for to eate after all other meate, for the drying of the stomacke that is too moist, and to hinder especially in fat folkes, that the meate which they haue taken, bee not so sodainly disperfed into all the parts of the body. Some say likewise, that toasted bread being often eaten, doth make fat folkes leane, and consumeth such flegme as may be gathered in the stomacke: and being eaten all drie, in a morning fasting, likewise drieth vp and staieth all manner of rheumes and humours falling or gathered into any part or member whatsoever. This is the cause why physitions appoint bisket bread for such as are troubled with rheumes and destillations. Some vse toasted bread steeped in wine with sugar and cinamome, to procure an appetite vnto a dull stomacke, either in sickness or in health. Some doe make suppers or small slices (as they

they call them) of bread dried vpon the coales, which they steepe an howre or more in water and wine, and after force them through a strainer or temze, adding thereto the powder of some small spice, and so make very pleasant sauces therewithall.

Washed bread is a meate very profitable for the health, in as much as it giueth a light kind of nourishment vnto the body, without making of any obstructions; and this because the washing of it doth wholie take away the heauines and clammines belonging vnto the earthie parts thereof, and so maketh it light and altogether aerie: That this is true, you shall finde by experience, because that if you cast it into the water it swimmeth aloft like a peece of corke; and againe, if you waite it after that it is washed, you will wonder at the lightnes of it, for indeed you shall finde it not to be so heauy by the halfe. Old men of ancient time did cut it in shiues, and washing it in water made great account of it in sharpe agues and such other diseases, because it is of smal & light nourishment, according as is required in such sicknesses: & in these daies we make no lesse account of it, saue that we vse not to wash it in water, but in the broth of meate, as of veale or capon possible, because of the daintines of this age, or else for the parties feeblenes sake, which (it may be) falleth out to be greater then it was in the bodies of those which liued long agoe. In steed of this washed bread, we vse a sort of bread which we call *Panade*, or a cooling bread, which is thus prepared. They take and crumble small the crummie part of a white loafe, not new, but old baked, or they grate it very small, after which they steepe it certaine houres in warme water or in colde water, changing the same three or fouer times, and in the end boiling it at a small coale fire in an earthen pot, with buttered water, or some other fat put thereto. They that will make it after a finer fashion steepe it, and boile it in some capon broth, or the broth of a pullet, or some other such like meate, stirring it a long time and oft with a spoone: this *Panade* is good for such as are troubled with long diseases, as also for such as are in helth, but are troubled with crudities vpon their stomacke, of what cause soeuer they come, as also for them that haue but bad digestion: but chiefly good for such as by exquisite diet doe go about to cure the pockes. This *Panade* doth not heate as bread doth of it selfe, not being washed, or prepared thus in *Panade*. The meale of *Amydon* made in bread or papmeate, doth nourish in like manner that *Panade* doth. We haue let downe before how *Amydon* is to be made. Yoong children that sucke in like manner may be fed with *Panade*, and it is a great deale better meate for them then the pappe meate accustomed to be made them with cowes milke and wheate flower, because that such papmeate causeth infinite obstructions, feauers, headach, and wormes.

Some vse the meale of certaine sorts of corne, and of many sorts of

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of

of pulse, after the manner of papmeate, as we haue already saide, when we spake of mundified barley, which is a thing to highly commended of ancient physicians: but besides such manner of preparing of it, as we haue already deliuered in the chapter of mundified barley, these two following may seeme vnto me to be most excellent. Boile your barley in a great deale of water, as it were almost to the consumption of the water, gather the creame that is vppermost, and take it with a spoone, and make thereof mundified barley. Otherwise take the meale of barley well sifted, put it in a bagge and boile it in a great quantitie of water the space of five or sixe houres, afterward draw the bagge out of the pot, and let it drop, and straine it in a presse, let it stande dry, and being drie, grate it as you would do drie paste, and make mundified barley of it: some are of iudgement that barley thus prepared is not so windie. Some doe now and then put vnto it bread crumbs, and brused almondes, to make it more nourishing. It moistneth, nourisheth reasonable, but cooleth much, it procureth not any gripes in the body, neither doth it pusse vp and swell the body of stomacke, but to be brieft, it performeth all the helpes whereof Hippocrates speaketh. Some likewise doe make papmeate of wheate meale and rice, which in truth do nourish more then mundified barley: but they loade the stomacke heauily, and cause great windines, and that because for the most part they are boyled in cowes milke. The papmeate made of millet, pannicke, oates, and especially of lentles, besides that, they are very vnplesant, are of very hard digestion, in so much, as that the day after that they be eaten, they are to be found in the stomacke: the papmeates made of cich pease, fables, beanes, fetches, lupines, and other such like pulse, do swell vp the belly, and beget groile and melancholike blood,

The two and twentieth Chapter.

Of pastrie or baked meates.

WE haue spoken of the making, differences, and profite of bread, which may be made of any manner of graine, come, or pulse: now we will say somewhat of the skill, to make cakes, cheefe cakes, flawnes, tartes, and other baked meates, the which we desire to be in our huswife, that now and then she may take occasion at some times of the yeere, to present her master and mistresse with one dish or other, as also be able to serue, and set before her familie somewhat extraordinarie at feast times to cheere them vp with all. Such baked meates are of diuers sorts, according to the matter whereof they are made, the manner of their baking, their shape and fashion, the time when they are to be in vse, and the countrey wherein they are made. The matter is as it were the ground worke of all sorts

of baked meates, and that is, the flower of wheate meale forced through a bolter or fine searce, whereunto many other things being added, do cause a varietie of baked meates. That it is so, some make wafers of the flower of wheate meale very well soaked in water, and tempered a long time therewith, vntill it come to a certaine thicknes, mixing therewith a little salt finely powdred, and after causing the same to be baked betwixt two irons made hot, first with a reasonable gentle fire, and after annointed with the oile of nuts; these kindes of wafers a man may see made in many places openly and abroad vpon festiual and solemne feast daies. There may be made a tender and more delicate kinde of wafers, in soaking the flower of the wheate meale in white wine and water mixt together, and thoroughly laboured and wrought, putting thereto afterward the yolkes of egges, a little sugar and salt, & so baking all together betwene two irons, hauing within them many rased and checkered draughts, after the manner of small squares, after that the saide irons haue bene annointed with fresh butter or oile oliue. This sort of wafers is wont to be set on tables at the second courses in solemne banquets. That which the Parisians do call *Mestier*, is made of the same flower of wheate meale tempered with water and white wine, putting thereto a little sugar, and boiling it all betwixt two irons, after the manner which you vse in making of wafers, but that it must not be altogether so thicke. The kinde of wafers called *Oublies*, are made with hony in steed of sugar. Singing breads are made after the manner of *Oublies*, saue onely that the meale whereof they are knodden, is not mingled with hony, sugar, or any manner of leuen whatsoever. *Esfriez* and *Bridaneaux*, and such other daintie baked things, are made of the same stuffe, and after the same manner that fine wafers are, before described: marchepaines are made of very little flower, but with addition of greater quantitie of filberdes, pine nuts, pistaces, almonds, and rosed sugar, and they are the most wholesome, delicate, and pleasant tartes, of all the rest. The Poplins are made of the same flower, knodden with milke, yolkes of egges, and fresh butter. The leaued cakes take not so much flower, and they are made without milke. Tartes are made after diuers fashions, & according to the time: some with fruits, that is to say, apples, pearces, cherries, & plumbs, especially in sommer: others with gooseberries, kernels of crabs and strawe berries in the beginning of sommer. The Italians do make tartes of herbs as scariole, lettuce, blite, sorrell, buglosse, and other herbes: chopt small and finely tempered together. The greatest part doe make them with cheefe or creame, and manie of all these things mixt together: if so bee that the tartes be of diuers matter and colour, that is to say, of plums, cherries, gooseberries, cheefe, or creame. Some make with butter, cheefe and yolkes of egges diuers sorts of cakes, flammicks, cheefe cakes, talmouses

talimoules & little lenten loaves. *Wigs* are made with paste of flower of meale and fresh butter. Fritters and other such sweet conceits accustomed to be in request vpon great daies and before Lent, are made of the flower of meale knodden with the yelks of eggs and milke, and fried in a skillet with fresh butter: To conclude, looke how many countries, so many fashions of paste works, in all which notwithstanding this is for the most part common, namely that they vse not any leuen in any of them al, but onely the rising of beere, and that because leuen made of paste would make them too fower, or infect them with some other taste too vnpleasant and vnbecoming baked meate, and hinder the whole & intire incorporating of thinges mingled amongst the meale whereof it is made.

Whatsoever it is: All manner of baked meates are more for the pleasing of the taste then for the health of the bodie, in as much as they are giuen to load the stomacke very heauily, and not to digest very easily. It is true that being eaten at the end of meales after other meates, they may serue in steed of marmalade, to send the former vitailles downe into the bottome of the stomacke; and to presse together the belly.

The three and twentieth Chapter.

Of the brew-house.

IN many places of France the vine cannot grow to prosper: but to recompence such a want, there groweth all sortes of corne verie fruitfully and in great abundance, as in *Normandie*, *Britaine*, *Picardie*, and other coastes lying vpon the north side of the land, where the cold seazeth most strongly, and where the rugged and sterne windes doe ouerblow the earth, with their coldnes: so that in those countries; necessitie, the mother of all skill and cunning inuention, hath stirred vp the men to deuise some kinde of drinke made of corne to serue them in steede of wine. Of that sort is their drinke called beere, ale, small beere, meade, gootale, beere and bread, and many other drinkes, which the Germans, Flemmings, Polonians, Bohemians, English, Scots, and other nations towards the north, doe vse in steed of wine.

This is the manner of making beere at *Paris*. The fairest, purest, and clearest barly and oates that may be gotten, being provided, and thrise as much barlie being taken as oates, but of both such a quantitie as may be proportionable to the intended quantitie of beere, they put them to steepe together in a fat for the space of fower and twentie howers more or lesse, according to the age of the corne in a sufficient quantitie of riuer water, rather then either spring or well water; and after this steeping time, they take and carrie them vp into a garner, to lay them on heapes to sprout: being sprouted they spread them abroad round about the garner for to rot and putrefie: being rotten they

they cast them into rowes: from out of the garner they carrie them to the kill for to drie: being dried, they carrie them againe into the garner or some chamber, or into some other place for to fan them and cleanse them from all their dust and filth, and from thence to the mill there to grinde them and make them into meale. Which done they put this meale into a fat, powring vpon the same hot scalding and boiling water, proportionably and according to the quantitie of the meale, that is to say, fower barreles of water, and a tun and halfe of water, to fower seame or quarters of meale, leauing the same for the space of an hower to drinke in this water: afterward they put the meale aside with their stirrers: being thus cleered the one from the other, they powre in againe as much boyling water as they did before: then afterward they take two maunds (made like vnto beehiues) of ozier, and these they sinke and thrust downe amongst the corne, and cause to be so kept by two or three men, to the ende that in the meane time some other man may by the inside of these maunds draw and draine out the water wherein the meale hath steeped, and powre it into another fat close by. Then they take all this woort or drained water and powre it into some sufficient large copper, holding betwixt fise and sixtuns more or lesse, causing it to boile in a furnace a good hower, and afterwarde emptying the copper of the boiling water that is therein, they put it in with kettles or pans againe very softly, and all boyling into the fat amongst the corne, or drosse of the flower from which it was drained before, and there they let it remaine a certaine time, afterward they draw forth the thinnest of the licour, as cleere as may be, by a stopple which they haue for the purpose in the bottome of the fat, and that they powre againe into the copper suffering it to boile there for the space of twelue howers. And into this thin cleere licour being thus in the copper they put some fise or six pounds of the flowers of hops very drie and sweete. When the hops and licour shall haue thus boiled twelue howers, they emptie the copper againe and put the woort to coole at leasure into other vessels called flotes or coolers, and they be broad like vnto the fats, but onely one foote deepe. When it is cold, they put it to turne into a small vessell containing halfe a tunne, with two kettles of beere and of the rising of beere *Beere rising*, already thoroughly made, for the better cleansing and purifying of the same. This rising is made of the froth which riseth out of the fat, when the best and clearest woort is newly turned in and falleth to the bottome in the tubs, which froth turneth into leuen and becommeth hard, and with the same doe the bakers or cookes making baked meates now and then serue themselves to make their wigs, buns and most part of their finest baked meates. They renewe the force and strength of the yeast or leuen euerie hower with beere already made, so long as till the said leuen or yeast become strong inough of it selfe,

which you shall know when you see that it is well risen, even as workers in paste doe gesse and gather, when they see their paste well risen. The beere being sufficiently ripened and leuened, they tunne it vp into barrells or halfe barrells, and there they let it boile and worke sower and twentie howres in their said vessels, then they bung vp the said vessels, and giue them vent sometimes, for otherwise they would burst. And thus much concerning the maner of making of beere amongst the Parisians, for with this beere thus made they content themselves, and it indureth all times and seasons, and standeth out good both winter and sommer, harvest and spring. And whereas it goeth for good payment and sound, that the beere brewed in March is the best, it may possibly be so, by reason that then the hops are in their prime and chiefest force and vertue.

The Germans doe make their ale with barlie onely, not vsing any hops: sometimes they put thereunto a fourth or sixth part of wheate, to make it more substantiall and nourishing. Very often in steede or for want of the flowers of hops, they put in of the seede of the saide hops.

The Bohemians and Polonians doe make theirs with barlie and wheate, which they steepe in the decoction of the seede or flowers of hops, so greatly standing vpon the requisitenes of their hops thereunto, as that they were wont to punish greuously such as did cut downe or vnprofitably destroy any hops amongst them. Againe, they husband and dresse their hops as carefully, as wee doe our vines, they gather the flowers and fruit at a certaine time, not suffering anything to perish and bee lost: in as much as the decoction of hops doth not onely ferment and leuen the corne and graine that is steapt therein, but withall indueth the ale or beere with a resemblance of some sort of wine.

The English, Flemmings, as also the Picards, doe make their beere with equall quantitie of barlie and wheate very well boiled, which the Englishmen and Flemmings doe call Ale, & Gud ale, or double beere, and the Picards call it double *Quinte*. They sometimes put thereunto some damell, to give it a quicker and sharper taste. The Flemmings doe put thereto the cruins of bread, apples, butter, and a little nutmeg, to make it the thicker. The English, to make it the more pleasant, doe put into the vessels sugar, cinnamon, and cloves, stirring and rowling the said vessels afterward very much. The Flemmings also doe mixe therewith sometimes hony and spices, and make as it were a kinde of hippocras, which they call *Mede* or *Mese*. But howsoever they beare up the mingling, steeping, fermenting, and boiling together of the graine in yle for the making of their beere, at the last it becometh sharpe, bitter, sweetish, waterish, strong, mightie, weak, cleere, or blinde, more or lesse durable, and of other qualities, as shall be seen.

To prevent the decay of beere, and to raise it that it may continue, and stand good a long time, that two or three vessels a great bag, full of many tender staves of wheate, and there leaue them a long time: And, if it begin to fade and wear out, that two or three whole eggs in the vessel. If it haue lost his good relish, you may recover it againe, by casting into the vessel the reines of limes, ginger, cloves, nutmegs, bay berries and organes, and so forth.

As concerning the temperature of beere there is no doubt but that it is hot, and that more or lesse according to the things going to the compounding, and making thereof: for notwithstanding that barly by nature be colde, neuertheless by means of the steeping, fermenting, putrifying, killing and boiling that is indureth whiles the beere is making it is impossible but that it should be made and become somewhat hote, then furthermore the hops, whether flowers or seedes, being mixt therewithall, doth by his heate, temper and alter very much the naturall coldnes of the barley. If that wine (as *Galen* saith) be nothing else but a water, which in processe of time purchaseth a hote substance to it selfe, in the smoke and woodie partes of the vine, by the meanes and force of the heate of the sun, in like case, barly in the making of beere purchaseth a heate by his long lying in steepe, boiling and putrifying, which is indubitable. Againe the taste and relish of beere doth argue the same to be hote, seeing for be good it must be either sharp, or bitter, or sweete: for that which is lower or sharpe, like vineger, or eager, is not good nor well made: The effectes of beere doe likewise prouue it to be hote, for it maketh drunken, yea and that a great deale more then wine doth, by reason of his vaporious and thick substance: it feedeth also and nourisheth, especially that which is made partly with wheate or the graine called *farmentie*. Yet further, if it be distilled in an alembicke, it maketh *Aqua vite*, no lesse then the wine: It is true that beere though it be hote, yet it is in diuers and sundrie degrees of heate according to the temperature of the ingredients: for that which is made of barley and spelt corne without hops, or with a verie small quantitie of hops, is the least hote of all the rest: and that in such sort as that it becometh a fit drinke to quench the thirst and to coole the body during the scorching sommer heate: that which is made of barley and oates is a little hotter: as that which is made of barley and malt is yet more hote and very much giuen to feede and nourish. Furthermore, all beere of what corne neuer it be made, is of a thicker substance and harder of digestion then wine: and which (if either it be ill boiled, or newlie made or troubled) ingendreth obstructions and inflations or puffing and swelling vp of the inward parts: head-ach, colicke, stone, grauell, strangurie, the heat and scalding of the yrine, especially if it be sharp withall: if it be too olde and drawing

toward sowrenes, it hurteth the stomacke and sinewie parts: as also it begetteth the leprosie, if we will beleene *Discorides*. And therefore you must learne to drinke only such as is well boiled, fined and grown to a meane and indifferent age.

Norwithstanding that beere (as *Discorides* will haue it) be enemie vnto the sinewes, and that those which are drunk by taking excessively of the same, haue their members and partes more weake, then they which haue become drunken with wine: yet the truth is, that it comforteth the wearied by running or much walking, if so be that such persons doe but foment and bathe their feete in beere reasonable warme.

*The fattening of
hens and capons.* You may fat your hens and capons in a short time, if in sheede of water you giue them beere to drinke: or if you mingle their meat with beere.

Toothach. If you boile new hops with beere and keepe them in your mouth, it will stay the toothach.

Bakers or makers of baked meats (as we haue said before) doe vse (in steed of leuen to knead their crusts withall) the hardned froth of beere, which because it is windy and flatuous, doth make the bread light as it were full of cies.

*To scoure
vessell.* The grounds of beere doth serue to polish and scoure brassen vessel, if they be laid to steepe therein some certaine time.

The end of the ffith Booke.

THE SIXTH BOOKE OF THE COUNTRIE HOUSE.

The Vine.

The first Chapter.

*Of the profit rising of a well dressed vine
and vineyard.*

Hitherto we haue intreated of the husbanding, tilling, ordering and dressing of garden plots, orchards, and arable ground: it now remaineth that wee speake of the vine, whereupon for certaintie dependeth the greatest part of the reuenues and riches of a householder, howsoeuer many make small accompt of the vine, and doe more esteeme to haue possessions of medowes, pasture, woods, and other grounds, then to stand to the reuenues growing by

by vines, in as much as for the most part, they yeeld not the fruites which may recompense the charges laid out about them: But for all this the vine is not to bee diseredited, seeing this is not the fault of the ground, but of the people that till it, and either for couetousnes, or ignorance, or negligence offend in the tilling thereof. It is true that the husbanding and ordering of the vine is chargeable, painfull, and a matter of great care, by reason of the tendernes of the wood: which being well considered, may seeme to haue come to passe by a speciall providence of God, directing the same and making it so weake, tender and feeble, to the end that this plant might not serue for any other thing, then to bring forth the excellent and precious licour of wine, which is so needfull for the sustentation and life of man. For and if it were fit for any thing else, as the wood of other trees is, it would bee employed, and wine thereby would become a great deale more deere then it is.

The greatest part of vine dressers doe nothing esteeme or make any regard in what ground the vine bee planted, but doe make choise of the worst quarter in all the countrey, as if the worst ground, and that which is good to bring forth nothing else, were the best to plant vines in. Others haue not the iudgement to know and chooise their plants, and for that cause doe oftentimes plant their vineyardes with such yong vines as are naught. Againie many hauing no respect of the time to come, doe in such sort order and dresse the vine, as if they thought to liue but an hower, burdening and loading it with so many branches and shootes for propagation, and leauing vpon it so much wood, as that it cannot continue and prosper any long time. Others although they know the way to order and dresse it well, doe yet continually omit certaine courses and seasons, as being more busily employed about their owne profit, then their maisters welfare.

Likewise I would alwaies aduise the Lord of our countrey farme, that he would not altogether commit the care and charge of his vineyard vnto his farmer, but that he himselfe would lay the cheefe burden about it, vpon himselfe: for as the maisters eie maketh the horse fat; so the carefull industrie of the Lord or chiefe owner, maketh the field fruitfull and to beare great store of increase, and for that likewise the owner and lord of the vine will not onely spare it better, but also see that it be not defrauded of any such toile and labour as it requirereth, contrarie (for the most part) to the practise of such as are but secondarily interrested in such matters: the vine being such a peece of inheritance as wherein euery small fault committed, doth draw after it great losse, & such as oftentimes cannot be remedied or repaired, but by replanting what is done and replanting it a new. And that it is no otherwise, but iust so, marke and see, if euer you heare the *Guespines* of *Orleanse*, or the *Beauuois*, & those of the duchie of *Burgundie* (which haue

The Parisians
negligent over-
seers and hus-
bandes about
their vines.

haue large grounds imployed in vineyards; to complaine themselves of their vines, & that because they take the whole care and to see the principall oversight vnto themselves. On the contrary, the Parisians haue no other complaints or aggrecouances to talke of but of their vines, and that because they credit deceitfull & ignorant workmen wholly to sway the worke; who so queetly busie ignorance, negligence for the most part be easie, that they reape not the fruit of their vines in such plentifull manner, as they should; or at the least that the fruit which they do reape, is not so durable as it would. And thus you must thinke that vines will yeeld a larger reueneue a great deale then gardens or other arable grounds; if they be well and diligent husbanded, for there are few arpents of vines to be found, which yeeld not euery yeere, one yeere helping another, ten or twelue times of wine which is a great reueneue, and yet remaineth vreckned the benefite and auailles which may be made of small plants and impes, which may be gathered to transport or transplant into any other place, which will easily amount to more then will satish and answere all the costes and charges which are laid out any manner of way about the vines. Wherefore either the reueneue rising of such plants by sale, or the hope of the vintage and gathering of wine, must be the spur to pricke forward the master of this our country farme, to looke to the ordering & dressing of the vines himselfe.

The second Chapter.

What soile and aire the vine doth most
delight in.

Two things to
be considered in
the planting of
vines.

THE vine groweth not but in certaine places that are fit and naturall for it, which is a thing to be accounted of by vs, so much the more excellent, because the speciall propertie of this plant is more commended by men then any other, in respect of the good it ministrereth, which is that in such places as it groweth in the men are found to be more strong and mighty by the vse of it, then other men are, which for want of it, are forced to vse other drinckes.

As concerning the soile to plant it in, there must two things be considered, the quality of the ground where it is to be planted, and the disposition and inclination of the aire, which ruleth in that place. As concerning the quality of the ground, you shall choose such a one as is not very clurlish and close; neither yet very light and open, but yet of the two more inclining vnto a small mould and open ground, neither leane nor very fat, and yet somewhat the rather inclining vnto the fat; not champion; nor a very plaine and flat; (and yet in such grounds there growe more wine) neither very stiffe and straight, but rather somewhat raised then otherwise; that so it may be the better

aided and succoured by the favourable beames of the sunne; neither dry nor moist and waterish (because in such ground the vine continueth not long, neither doth it bring forth good wine, but such as is quickly perished) and yet indifferently serued with water: not such a one as hath any fresh springes or fountaines, either breaking out euene with the vppermost face of the earth, neither yet carried along within, in the depth of the earth belowe, but onely in such sort, as that neere vnto them there may bee water to moisten their rootes withall; and the same moisture must not be either bitter or salt, to the end that the taste and sauour of the wine may not be spoiled. So that by this it appeereth that it is not meete to plant vines in deepe and lowe valleys, albeit they might, and would bring forth grapes in great abundance, and that because they would not ripen in due time, and to there would be made of them, no better then a greene wine, of small value; adde heereunto that vines feared in lowe vallies, are very much endangered by the frosts of the winter and spring time, and are also subiect to have their grapes to burst, and to run out their iuice & to rot, which would cause a mustie and fonghie taste in the wine; and there withall when the yeere is rainie; the kernels cleave and burst out through the abundance of moisture, by reason whereof the grape being in this sort too much moistned, and nothing at all dried, the wine becometh vnsauorie & apt to growe fower, and fall into many other faults. And if you happen to light on such a place, then chuse to plant there such plants, and yooing shoores as may beare clusters, not too thicke, but growing somewhat thinne, that so the sunne may easily pierce through them: much lesse may you plant those vines which haue their pith taken out, and bring forth a firme and solid grape in colde and moist grounds: as neither yet in a hot and dry ground; such vines as haue substance inough in them; and beare a grape somewhat soft. But chiefly if your place be so well appointed by nature, as that it consist of and containe grounds that are fit and meete vpon the tops of great hills, together with some lowe and small hills, then make chioice of them to plant your vines thereupon: it is true that it will hardly grow there at the first, but hauing once taken roote, it will yeeld a very pleatant and noble wine, such as the wines of *Aj*, *Hardre*, *Argentuil*, *Mendon*, and *Searre* be.

In generall, if you would plant a vine which may profite you in bringing forth a boord and store of good swire, you must see that the ground be gentle, easie, flat, and indifferently light to be tilled: not as though such a ground only were good for vines, but for that it is most kinde, naturall, and best agreeing for vines to be planted in sandie, stonie, grauelly, and stintie ground, as also such as consisteth of a potterseale in the bottom, and couered ouer with earth is good; provided that they be not mingled with some fat earth, and that they be often

often refreshed by being digd euento the reine of stones, or rocks. In a sandie, clayie, and churlish stubborne groundes, the first digging and casting of it must bee good and deepe: and such groundes also would be thrise digd or cast at the least. Such groundes bring forth strong and delicate wines: but such groundes as haue of stones or flintes great store vpon the vppermost face of the earth are not fit for vines, because in sommer they stande at a staie, by reason of the great heate of the sunne, being beat backe vpon them by the saide stones: and they doe no better in winter bicause of the excellen colde which in like manner then troubleth them. True it is, that if a vine be planted in a grauelly, rockie, and stonie groundes, that then it will not bee needefull to caft so deepe, because the toothe is not so farre downe into the earth, as is the new planted vineyard which is made in a sandie soile, and it is contented with twise digging for the most part. A soile standing vpon Walkers clay or marle, as *loegny* vpon *Tame* is very good for vines, but the ground standing vpon a potters clay is not good. In like sort the grauelly ground is not altogether fit, for though it yeeld a daintie good wine, yet it yeeldeth but a very little, and there also the new planted vineyard is very subiect vnto the hauing of his grapes washed away: the dry and burning earth doth yeelde leane vines if it be not helped by the dunghill.

What aire is
fit and requisite
for the vine:

As concerning the power of the sunne and disposition of the aire, the vine delighteth not to bee planted vpon the tops of mountaines, and much lesse in places lying open vnto the Northeast winde: but it delighteth in an aire that is rather hot then colde, and faire rather then rainie, it cannot abide tempests and stormes: it reioiceth in a small, gentle, and frindly winde, and woulde be turned towarde the East or South. It is true that generally in colde places vines must stand vpon the South: and in hot places vpon the North or East: provided that they be sheltered at such time from the windes, as well of the South as of the East: if the place be subiect to windes, it will be better that it shoulde be to the Northren or Westerne windes then otherwise: in temperate places either vpon the East or West, but the best is towards the East.

Furthermore in as much as it is a verie difficult thing to finde all these commodities and good properties of groundes and aire in euerie countrie: the good workman shall fit the plants of his vines vnto the nature of the places and countries. Wherefore in a fat and fertile ground he shall set the yoong plant of a small vine, and such a one as beareth but little, as the *Morillion*, the *Melier* and the *Aubaine*: and in a leane ground the plant that is verie fruitefull, as that of *Samourcan*, *Tresscan*, *Lombard*, *Ouch*, *Muscadet*, *Beauuois* & *Pu'cean*: in a thicke & close ground, the plant that is strong and putteth forth great store of woode and leaues; as that of *Morillon*, *Morlou*, *Tresscan*, & *Pu'cean*: in

in a small mould, and reasonable fat ground; the plant which putteth forth but a little wood, as that of *Samourcan*, *Lombard*, and *Beauuois*: and by this meanes the defect and want, or the excellen and superfluitie of any qualitie in the yoong plant of the vine, shall be supplied or corrected by the nature of the ground, and that in such sort and manner as that of two excesses shall spring one meane and well tempered thing, which is a point to be wished and requisite in the growing of all sorts of plants. Furthermore he may not plant in moist places the yoong vine plant which is giuen to beare tender and grosse grapes, as that of *Samourcan*, *Gouet*, *Mourlou*, *Pu'cean*, *Cinquaine*, & *Tresscan*: but such as haue woont to beare hard and small grapes with manie kernels in them, as those of *Pinot*, *Saminian*, *Aubaine*, and *Tresscan*. In places tossed with windes and stormes, he must prouide to plant such a kinde of vine, as is woont to bring forth hard grapes and sticking fast and close vnto the stalke: but on the contrarie, that which shall haue accustomed to beare tender grapes in places that are hot and giuen to be milde. In dry countries he must plant those vines, the fruit whereof is woont lightly either through raine or the dewe to rot: as those be of *Samourcan*, *Gouet*, *Pinot*, *Blanke*, and *Beauuois*: and in a moist place, those which are woont to spoile and perish through drines. In countries troubled with haile, such as are of a hard and large leafe, for such are able the better to defend and couer the fruite.

The third Chapter.

How that there is not planted any vine by the way of making a seede nurserie, except it be onely for pleasure.

I Am of that minde that a man cannot but hinder and iniurie himselfe in making nurseries of vines, for besides that the tree doth not grow sooner of kernels then it doth of the plant, there is also this inconuenience, namely, that the vine growing of kernels doth not yeeld any thing of profite or good for vse: This is indeed a worke for such as loue their pleasure, and haue in their purses largely to defray the charges thereof, being able thereby to sowe seedes out of some strange countrie, afterward to raise a nurserie of stocks of the same when they are growne vp for to be transplanted and remooued into a better ground, and that they may graft thereon, & afterward againe remooue the stocks so grafted into a better ground also, that so about two yeeres after they may reape the fruite thereof, which is woont to be both great and daintie inough: but yet this same newe vineyard thus planted is the least durable of all others. Againe, in this countrie we do not trouble our selues in planting vines to run vpon trees, in such sort as any man may easilie see that they do in *Lombard* trees.

disc

*Pines after the
fashion of an
arbour.*

die and other places: neither yet with such as are raised vpon single and double shadowing arbours, neither yet with such as vle to creepe along and spread themselues vpon elmes or other trees: for the wine neuer prooueth so good, as well because the roote of the tree is corrupted, after the manner as it falleth out with colewoorts; as also because this plant loueth not to be hoisted and mounted too high: neither yet shadowed with any building of timber worke, higher then the stature of a perfect man.

The fourth Chapter.

How that before you plant your vine, you must learne out, what wine the earth will beare, where you are purposed to plant it.

*How to trie
what wine the
ground will best
beare.*

HE that is purposed to plant vines, must not so much trust vnto the markes and signes of a good ground, declared and let downe before, as first to see that he haue made triall what wine the ground will best beare, where he mindeth to plant his vine; for it were but labour lost and money cast away to plant a vine for so small increase as can nothing like Ianswere and content your expectation. Thus then you may trie and prooue your ground: make a pit in the ground where you meane to plant it, of two foote depth, and of the earth cast out of the pit, take a clod, and put it in a glasse full of raine water that is very cleane, mingle and beate together this earth and water, then let it rest, vntill such time as the earth haue made his perfect residence and settling in the bottome of the glasse, which is easily perceiued by the cleerenes of the glasse which will follow thereupon: and after that the earth is thus thoroughly settled, taste the water, and looke what relish or taste it hath, such would the wine be, and therefore a vine yeelding such a relished wine fittest to be planted there. Therefore if you finde therein a bitter taste, a saltie or allumlike, or any other such vnpleasant taste, auide and cease to plant any vine in any such ground. Which if it be true, then to dung and manure vines is altogether to be condemned: because it is very hard that earth fed and nourished with dung, should not taste and reaine the smatch of the dung, and so by consequence communicate the same with the wine. Wherefore the Parisians are fowly and foolishly ouerloome to load and lay vpon their vines yeere by yeere such store of dung, and that is the cause for the most part, why their wines haue an vnpleasant taste, and doe easily and very quickly corrupt: and yet further the dung doth cause the vines to grow old by and by and become barren, because they put forth all their goodnes the first yeere.

*To manure
vines is a dan-
gerous thing.*

The

The fifth Chapter.

Of the choise of yong vine plants.

THe choise of yong plants whether they be crossoers, marquets, ^{*The choise of yong vine-plants.*} or the renais, must not be put to the discretion of the seller, who little careth to take the fittest season for the gathering of the saide yong plants, neither yet for the goodnes of them, but altogether to his diligent and heedfull care which is the workmaster: and for that cause it would be best for men to take them of their owne vines, or els at the least to haue those which he shall buie, warranted to be good: he must also haue regarde vnto the quality of the aire and situation of the ground where he will set his plants, that so he may fit them for the same. For and if the ground lie vpon the south he shall choose the yong branches of vines which he will plant from the same part and quarter: if he meane to plant them in a high place, he shall gather the plants vpon some high and tall vine: and if low, then out of some low vineyard: planting in a hot, cold, dry, or moist ground, he shall choose his plants for the renewing of any failing or decayed, of the like situation: by this meanes the plant will fasten it selfe the sooner in the ground, and it will bring forth fruit sooner and a great deale better then and if it should be otherwise. Likewise he must not keepe the yong plant any long time before he plant it; for, no more then trees which are to be remooued, can the vine well and easily endure after it is cut to be long kept vnplanted: neither yet would it be caried far, or remooued out of his owne soile into another, because it feareth the change of earth and aire: and thereupon it commeth that the yong plants brought out of strange countries, as from *Beaune, Rochell & Burdeaux*, cannot prosper so well in our soile, as those which grew there first. To make good choise therefore of crossoers to plant new vines of, you must see that the vine from which you gather such crossoers be but sparingly furnished with pith, because that such a one is not onely fruitfull and bearing abundantly, but because also it is not so subiect to the iniuriousnes of time, as snowe, fogges, frostes, and the burning of the sunne in sommer time, as those which haue much pith in them, afterward when the vines begin to bud, you must diligently view, about the beginning of September, those that are most laden with grapes, and which are most fruitful, and haue most eies in their branches, which haue not become iniured or hurt by the hardnes of weather, and which are neither yong nor old, but in their chieftest strength, & middle age, or not much past. Of such vines must your branches be gathered (in the increase of the new moone, somewhat late of the day in the afternoone) not of such as grow most low, nor yet of such as grow highest, but of the middle growth, and such

such as are round, smooth, and firme, hauing many eies, and about three fingers of old wood together with the new. It must be planted presently, that so it may take the sooner in the earth, while yet it is in life: or else presently as soone as it is cut off to wrap it in his owne earth, not tying it hard, as also, if you would keepe it a long time, to put it in a vessell full of earth, well closed and stopped perfectly on euerie side, that so the aire may not any way wrong it: or else, if it be to be carried into any far countrie, to sticke it in an onion, or wilde garlick, and then before planting of it to steepe it in water, especially if the ground from whence it is gathered be dry by nature. The vine dressers of the dutchie of *Burgundie* before the planting of crosstrees do cause them to be steeped one whole day or a night in running water, and finde by experience that the said crosstrees doe take more easily. Others cause the branch to be set and planted by and by, that so it may take the sooner.

The sixth Chapter.

The manner and way to plant vines.

THe first casting of the earth for to plant the vine must be done in the spring or sommer, in which first digging or casting of it, the ground must be cleaned of all superfluities, as rootes, weedes, and stones: it must be digged and renewed oftentimes, to the end that the earth which is vppermost, may be brought vnto the bottome, and that in the bottome may be turned vppermost, to moisten and refresh that which is drie, and to hear and dry that which is moist and thicke: and afterward made euen and cast into many furrowes and pits of a foote and a halfe bredth, and of depth, till you come to the hard stone in the bottome, & the knights or guides of the one side and the other, of such a thicknes aboue, as may answere to the depth of the furrow, which yet must be made hollower in a rough and crabbed ground then in a sandie, flintie or wet ground: in the bottomes of the sides of which furrowes, there may be put stones, so that they be no bigger then a loafe and couered with earth, for the cooling of the vines in the heate of sommer, as also to the end that vpon great raine, the water may finde passage, and not stand at the roots of the plants. Whereupon your ground being well laid with stones in this sort, and rested and settled after the first dressing of it, and being in the time of this rest turned ouer and wrought for the taking away of the couch-grasse and other weeds, you must spie out some calme and quiet weather to plant in, according to the place where you shall be and the nature of your ground: prepare, make readie, sharpen and cut off the roote and haire threads of your young plants, and fit them well for

Chenaliere.

the South sunne: plant them in the middle of the furrow, in the plain flat, where your foote vseth to tread, and one eighteener against another, and after the manner of a Burgundian crosse, for to make them (after that they are couered with earth, and olde made dung, or with the earth which hath been cast out of the furrowes, and throwne vpon the ridges) leape to the two sides of the furrowes towards the ridge of either part: for so they beare more fruit, and this is called the double plant, which must be vnderstood of the plants onely, which are so planted in doubt that if one doe die, the other may escape, or that and if they both take, the one of them may be taken vp, to put in place where others haue failed. For howsoeuer the planter of a crosstree may make the better foote and roote, yet for certaine it is harder to take then the marquot, although the marquot be not so lasting and of such continuance, in as much as the crosstrees do put forth rootes of themselves. Furthermore, you must cut off the greatest woode, and most knottie from the vine stocke, which you know to be the fairest and most fertill, and it must consist both of old and new wood: it continueth fower yeeres without fruite, and on the other side, without some misfortune it is secne to continue thirtie yeeres in his vigour and lustinelle. After it is cut off, it must be cut fit not leauing aboue three or fower joints at the most, two whereof (in planting it) may stand aboue ground: and if it haue put forth any eiclet, you may rub it off with your finger, or nip it off with your naile.

If you make lesser furrowes, you must plant them after the fashion called *Engodeau*, after the *Angenin* fashion, setting euerie one distant from another two foote, one marquot betwixt two knights or guides as is vsually obserued in planjing of stockes in the nurserie of fraite trees: and after that to leaue it fower yeeres in the same state; that it may be laide downe againe when it is growne, that is, some two or three yeeres after it hath put forth strong and able woode: in such sort, as that to vines so planted there neede no propping or vnderbearing: for the chiefe and principall foote as it is in trees, doth sufficiently beare vp the sciences putting forth of the same. In *Languedoc* and *Prouence* they plant them in this sort, but they pricke them downe a great deale further off one from another, and set an oliue tree betwixt euerie two, which nothing hindreth by his shadow either their growth, or the sun from hauing full power vpon them. And yet they leaue not so, but as is vsed in Italy, they set in euery furrow fise or sixe rowes of pulse or wheat, and yet so as that there groweth no intanglement betwixt them and the vine, as not being set or planted amongst them, and yet they let not to plant the oliue trees in come fields, providing as hath beene said that the shadow thereof doe not any thing hinder the growth of the graine.

The marquot would be planted as soone as it is raised from his marquot, stocke,

Bbb

stocke,

Chenaliere.

*The manner of
planting of vines
in Languedoc
and Prouence.
The oliue tree is
no hindrance
to the vine.*

To plant the

Roche, with his whole furniture of twigs, and that alone in the midst of the furrow, because of his small sprigs, seeing there is no doubt made of the taking of it: againe, it must haue a bed and spreading place of greater length: it groweth sooner (as hath bene saide) then the Crostler, but in like manner as the grafted one, it endureth the least and shortest time of all the rest.

After that you haue planted your Crostlers or marquots, you must bow them wel at the foote to make them take roote, & afterward cast downe the earth of the ridge: both of the one side and the other, that so it may fall vpon the saide plants. At *Chablis*, *Tounerou*, and *Auxerrois*, in planting of marquots (but not hauing any hairie rootes) they writh them halfe about very gently, and vntill they cracke and cleaue a little, not suffering them to come together againe.

There is another manner of planting of Crostlers and not the marquots (for his hairie roote cannot endure and abide it) which is called by the termes of planting, *en barbe*, *en fiche*, or as it is called in *Amou*, *en goden*, and it is by pricking downe on a rowe the saide plants, or else so as that two may stande right ouer against one that is alone, as the manner is to do with willows: and afterward to couer them ouer, and to pile and beate them as hath bene saide.

Furthermore, to the end that the new plant may take roote verie speedily, it will be good to put to the foote thereof acornes and fetches brused and grounde together somewhat grosse, or else beane straw, or dung that is old and made long since, or the chaffe of wheat which is fittest of all, if there may be any found that hath laine rotting some where in standing water for the space of one yeere or more, or fat earth, if in case that the grounde where you plant your vine be but a leane earth; but and if it be a fat soile, it will bee fit to put therein the drosse of the pressing of grapes, mixt with dung made of the drosse of white grapes, if the plant bee of a blacke vine; or of blacke grapes, if the plant bee of a white vine. Some do powre vrine thereupon, to worke the feate withall, and others the lees of wine: It is true that some hold it for certaine, that vrine is altogether contrarie to the vine plant, and that it causeth the same to looke pale and white, and in succession of time to kill the stalke, whether it be Crostler, or a Marcot.

You must not mingle if it be possible, any other plants amongst the vines (howloeuer some doe sowe amongst them beanes, gourdies, and cucumbers, (because that whatsoeuer is sown amongst the vines, doth steale away from them their nourishment, and becometh woonderfull harmefull and iniurious: above all other things the vine hateth the colewoort, as we haue already said in the second booke.

Again, vines must not be planted of diuers plants, because all vines doe not grow at one time, neither are they all of one nature: for

To cause the new plant to take roote very speedily.

That nothing must be sown amongst the vines.

That vines must not be planted of diuers plants.

some beare easie fruits, and some late fruits: likewise the fruits themselves do differ one from another, for some are red, some blacke, some white, some sweete, some eager and sowre, some durable, and other some not durable: wine is better old, than new: some is drunke presently after it is made: one delighteth in one manner of dressing, and another in another. Wherefore you must not mingle diuers plantes together, for there is nothing that so much spoileth wines, as when the grapes that are early ripe are gathered with the late ripe ones, and the white with the blacke, because they are of contrarie natures. And if any man be desirous to haue many sorts, then he must plant them apart one from the other, that so he may order them, enrich, cut, and gather them in their nature and season, that is to say, the more forward and fruitfull first, and the backward and late ones last: or which is better, if a man desire to haue diuers sorts of yong plants, to the end that if one misse he may be in possibility to haue others that will speede; in steed of mingling diuers plants together in the same ground, he must haue so many inclosures, or quarters for vines (to the end they may by them be euerie one separated and distinguished from another): as he will haue sorts and diuersities of plants.

The seventh Chapter.

In what ground, with what manner of enriching, and at what time, of the yeere, the yong vine plant ought chiefly to be planted.

TO plant a newe vineyard of a French vine, it behooueth the Lord of the farme (if hee himselfe would see the fruites of his first labours) to haue care and consideration of the ground and of the yong vineyard; which he meaneth to replenish with yong plants, as we haue said: for he may be well assured, that in a sturdie, stiffe, iucie, and fat ground, the vine will beare much fruites, and requireth lesse to be enriched and helped, saue that it may after some two or three yacres stand in neede to haue some little supplie of fresh and new earth, wherein pulses haue lately growen, or else some little reliefe at the foot, according to the time and nature of the countrey. In a grauelly and slintie ground, as suppose it might be in *Vaugirard* and *Venuet*, where vines yeeld not so much increace, the earth must be the oftentimes tilled, dressed, and dugged for the purpose; but such manuring must bee with neares dung, and not with the dung of horse, swine, sheepe, or fowles, with all which all manuring of ground, whatsoeuer, is made worse, rather then amended: besides that such amends doth impair the taste of wine, and maketh the vine sooner to growe olde and out of date, because the overmuch trust that the workman putteth in the heart of these, doth make him negligent, euen as it fareth

To put vine
quench lime
to the routes
of vines.

The qualities
of bad vine-
dressers.

with them which put vniquencht lime to the faces of plants, to make them beare the timelier fruit, as also for to make them the sooner ripe: seeing also that the workemen giuen to follow these courtes, doe not vouchsafe the labour of digging about the feet, neither yet to turne vp and dig their vineyards diuers times, as the season shall fit and require, louing rather to put their masters to the charges of dung, yong plants, and props, then that they would in a rainy & fit time take pains and digge them oft, yea rather spending the time of their labouring in tauerning, or else in wrangling with some of their neereft and deereft kinsfolkes, and that oftentimes for nothing: notwithstanding that the thing which is the principall and chiefest cause of the bringing forth of wine as well commendable for goodnes, as abounding in store, is by bestowing as many dressings vpon the vine, as can be deuised, or any way afforded.

Wherefore you may vndertake the planting of the French vine in the increase of the moone, when it is fowre or fiue daies olde, and that from about the beginning of December, or the middest of December, vntill the next frosts that followe, and then also according to their fiercenes and sharpnes, which if it fall out to be great, you shall surcease and giue ouer your worke, for to goe about to breake the ground, and lay open the earth, when it is taken and hardened by the frost, is but so much labour for you, and so much losse vnto the earth, because that vnder the crust of the frost it inwardlie gathereth his strength together afresh, that afterward it may shew forth his whole force and power in the spring. Wherefore in cold places it will bee better to plant your vine before the spring, as on the contrarie, in hot, drie, and vnwatered places in Autumne, to the ende that the raine which shall fall all winter, may supply the defect of other water, and that the rootes may the sooner take in the earth, and then and at that time principallie when nature ministrereth most nourishment vnto the rootes.

My counsaile is, that in planting vines there be not any holes made, but rather little pits of a fadome and a halfe in widenes, and as much in depth, and this to be done in October if you mind to plant your vines in Februarie: or else in August, if you meane to plant your branches before winter.

The principall tooles of a vine dresser, are the mattocke to digge and turne ouer the ground withall, the forked picke axe to make pits withall, the spade, the weede forke to cast vp weedcs withall, the hille, a little saw, a great hedging bill, a little hedging bill, to chop and cutt off the wood, and to make yong branches, and an augur to graue the vine withall.

The

The eighth Chapter.

Of the plant of the blacke vine.

THE naturall and reclaimed plante of the blacke vine groweth euery where: the wilde doth yeeld a sharpe & rough wine such as that which groweth of ground newly broken vp: but the vine that is intended to be for claret wine, is planted halfe of black & halfe of a white vine, and thereupon standeth in neede of another manner of dressing and seate, then the common vine doth in like sort it is harder to order well, as requiring a very great care to be taken about it, because the wine which commeth thereof, is most pleasant to the cie, and of excellent taste, albeit that it doe not nourish so much.

The yong plants of the blacke vine are the Morillion, the Samoyreau, the Negrier, and the Neraut: Besides which for to make claret wine, it is accustomed to adde the yong white vine plant. And for the mingling of them afterwarde to make a claret, it will in a manner suffice, if among three or fower plants or branches of the blacke there be one of the white.

The best of the blacke plants is the Morillion, the wood whereof being cut, sendeth forth a redder licour then any of the other: & the best of this sort is the short one, being jointed, within the bredth of euerie three fingers at the most, and growing more or lesse thicke according as the countrie is bearing and nourishing it: it beareth a well packt fruit, and hath a rounder leafe then any other of that sort.

The other Morillion hath a long wood, jointed with ioints at the ende of euery foure fingers at the least, it is thicker and fuller of pith within: and in cutting also it is pithie, and so more loose: the hark, except that on the out side, is very red, & the leafe three furked after the manner of a goose foote, and like vnto the leafe of the fig tree. This second Morillion is otherwise called wilde Pinot; it beareth but few cleere grapes, and those also small, but the wine prooueth strong, yea better then that of the first Morillion.

The third Morillion called Beccane hath a blacke wood, and the fruit is like vnto it, in the blossome it maketh a great shew of wine, but when it commeth to ripenes, halfe the fruit and sometimes more falleth away: the branche is longest jointed of all the rest, and groweth more in length and height of wood then any of the other. This third kinde of Morillion is called *Le frane Merillon Limperreau*: it ripeneth before the other vine plants, and yeeldeth good wine and as much as both the other.

The Samoyreau is likewise found to bee of three sorts: the best of which branches is short jointed, and of a very hard wood: the other draweth very neere vnto it: The third sort is called indented Samoi-

Bbb 3

reau,

reau, otherwise white Prunelar; and that because that his wood is whiter then the other: the wine it yeeldeth is of an vnpleasant taste, and it beareth but some yeeres: It hath furthermore this fault, that when the fruit should come to bee gathered, it is for the most part found fallen downe and shed vpon the earth.

The Negrier called red Prunelar hath a red barke, the woode is long jointed, of a thicke and grosse pitch, a leafe very much cut, and the grape great, cleere, very red and last ripe. Wherefore there needeth to plant but a few of theseder plantes, for the colouring of the other blacke and saltning of them: it keepeth and defendeth it selfe from the frost, because it hath a high stocke.

Nerant Bour-
guignon.

The Nerant called the black Bourguignon, hath the same nature with the white Bourguignon, a hard and very blacke wood, a fast and small pith, joints one vpon another, an indifferent leafe and altogether round, the foote thereof being very red, the fruit very thicke & close standing one by another, as though it were a piled or packed thing: it saueh it selfe better from the frost then any other: there needeth not much to be planted of it, for it maketh a deepe colour, in such sort as that they which haue great store of it planted, make wine for woollen diers, and sell it very deere.

The small Rochell and Bourdelais of the same nature, are scarce to be found, because they are not any great bearers, neither yet good for any thing but making of arbour: the wood is red, as shall be said afterward in intreating of the white vine, except because it is found a little redder, and of a very vermillion colour where it is cut off.

The ninth Chapter.

Of the plants of the white vine.

Frumentau.

Muscadet.

Pinet of Anion.

Gouest.

THE best yoong plante of the white vine is the Frumentau, whose wood draweth towards a yellow colour: next vnto it is the Muscadet, which beareth a red wood: next vnto the Muscadet is the fine Pinet of Anion, which hath a wood drawing neere vnto a greene, and the fruit yellow as wax.

There is no yoong plant that is more apt to beare and indure the frost then the Gouest, which beareth the tawny coloured wood, and is very thicke in his stocke, hauing a round leafe, and yeelding much fruit. There is another sort of Gouest which is called sage Gouest, so called because of the taste that it maketh in the mouth: it is smallie in request, notwithstanding that it yeeld great store of wine, and beene more subiect to the frost then the other Gouest of the same sort.

The Bourguignon.

The fruitfullest of all the white vine plants is that which is called the white Bourguignon or Mourlon, or else the Clozier, whose joints are distant some two fingers and an halfe, and the fruit hauing a short

taile

taile is thicker and closer growne then the Rochelle, the leafe is very round, after the manner of Gouests: in continuance it defendeth it selfe from frosts.

That which the Parisians by reason of his operation doe call Fol-^{The Folard.} rard, and the Burgundians Cinquian, because it beareth but vpon the fifth part or quantitie, notwithstanding it bring forth very great fruit, and the wood thereof is drawing somewhat neere vnto a blew and as it were affording much worke for the hedge bill, yet notwithstanding it is the least of all in value and goodnes of iuice.

The Mellier, otherwise called the Saruiniem, beareth much fruit:^{The Mellier.} and for this cause manie giue themselves to plant it abundantly. It hath a wood of colour betwixt a yellow and a red, and yeeldeth not very much to the frost: the leaues thereof are in a manner round. As concerning the differences of this kinde of vine branch, I find them to be three: the one is called the common Mellier, and this beareth great store of fruit: the other is called the grosse Mellier, as hauing his wood and fruit very grosse and great: and the third is called the franke Mellier, and this beareth a better and an opener fruit then the rest.

Three sortes of
Mellier.

The Bourdelais, otherwise named *Legrais*, is best to make arbour:^{The Bourdelais.} of in gardens: and yet some plant it because it is a great bearer of fruit: The wood thereof is red, and grosser then any other yoong vine plant, and accordingly growing vp in greater height, craueth also a longer frame to run vpon: in like manner it yeeldeth a grosser fruit, and for a good plant, there is small neede of it, as there is also of the Rochelle, which hath a whiter wood then any of the blacke vines haue, and notwithstanding it is but little subiect to the frost: but howsoeuer, it ripeneth more slowly, and there must not be set about a quarter of a hundred of branches in a quarter, for it maketh a greene wine, notwithstanding that it giue it his sharpnes, and make it drie, and holding little of the liquor.

The tenth Chapter.

Of the manner of dressing of the vine as well that which is newly planted, as that which is growne vp and olde.

After that the plant hath beene dressed and ordered in such sort as hath already beene said, and that you may perceiue that it beginneth to put forth wood the first yeere, and to take earth (which is a thing that should be knowne by mid May) when also you finde that his shoote is able to endure dressing, you must begin with it and cut it with a hedge bill: this may be done if it haue any shootes put forth more then one principall branch, that so by this means it may ioineall his force and strength together into one stocke or

Bbb 4

leg,

leg, but in cutting it you must take heede and see that it bee done, as take off from the dodie of the stocke as possibly may be, and not betwixt two earthes, least the body and trunke thereof might drie vp; so likewise you must see, not to let it enioie his wood, but to prune and loppe it, taking awaie such sprigges, as may growe vpon it, that so it may swell vp into a grosser and firmer stalke as is woont to bee practised in *Aniours* and *Langnedoc*. It must likewise bee obserued that the cutting of it in the olde of the moone, caueth the fleshie partes of the grapes to be more grosse and better fed; and that such cutting doth serue and profit much in vines growing in a grosse ground, or in valleyes, as also in those vines which are giuen to be ouer ranke of wood. Afterward you must trim them, for the first dressing of a plant hath his first manner of worke & trauell. In trimming of them the second time, there must paines be taken about the ridges, least that weedes should ouer grow and get the head of the plants, and yet alway with this charge and care that in digging and stirring of the earth you do not wound the rootes of the vine, being assured that it alwaies more feareth and is hurt by the incounter of edge tooles then a man coulde thinke. And it must not onely be digd with a mattocke somewhat deepe, or forked pickaxe, but also the weedes which could not be wholie cast vp, must be turned in, beaten downe and broken in their roots: and first before this be done, there must good regard be taken euery where, what plants of branches or vnder growth are dead since the first seating of them, which was in the end of December, or in the beginning of Ianuarie, and in their place to plant others in this time of Maie, if so be you be disposed: in which moneth, they are sometimes seene to growe and prosper, but and if you do not in this moneth make such supplie of those which are dead, then you shal staie till the beginning of December following, and you shall note very well the places where any are wanting, that so you may the better beare them in minde.

The second yeere you shall begin to giue the yoong plant, all such helpes of dressing and trimming as are thought meete for the vine that is already growne, and hath beene planted a long time, the matter of propagating of it onely excepted: for the more paine and labour that is bestowed vpon this new and yoong plant in the newe of the moone, and in a time of mild and gentle raine, by so much alwaies it prooueth the better and the more precious.

If the third yeere when you digge and trimme them, there be any perceiuance and shewe that the budde will likewise blossome and flower, you must nip it off with your naile.

In the same yeere, the plantes first planted must be dunged, and the furrowes made very cleane, and scowred of all manner of weedes, and by the same meanes there must bee dung laide vnto and spread about

about it, which that it may be the best and most agreeable, would be cowed dung, but for want thereof, the best next is horse dung, and last swines dung, and where it cannot bee come by, then any such as the poore workeman can get, except it bee maile, or fresh and blacke mould which is the best helpe of all others for the vine: and yet the good vine dresser saith that the good vine of *Pierrette* or *Griotte* craueth and loveth more paine, and lesse manuring, that it may not bee constrained to cast and let fall his fruite before the due time.

The fourth yeere likewise it must bee picked and freed with the hand in verie nimble and fine manner, and not be touched with any iron instrument, to the taking away of the feeble and bad buds, the faire and beautifull being let alone, to see if they will prooue as good as the yoong planted branch it selfe out of which they sprung: and this must be done about May.

Therefore to speake in generall of the tilling, ordering and dressing of the vine whether it be newe planted or old growne, the first labour to be bestowed vpon it, is called the digging of it after the first fashion, which others call the tanning of it, for by it the earth is made the more supple and tractable. In this peece of worke is contained the laying bare of the rootes of the principall stockes, and if the plant be growne high, then this must bee done in the calme and quiet time of March, according to the difference and alteration of places: for in this chill and cold place, which is subiect vnto frosts and blatings, as also in places seated in the vpper parts and tops of mountaines, this first order and fashion of dressing them, must be done in the after ende of winter which is called mid-May.

The second fashion of dressing and tilling the vine, is to weede, rake, and cut the same, as hath beene saide before, but before this worke come in hande, the plants must be fixed by being cut, that so they may bee able to continue in the place where they are planted, and not to be tossed and carried to and fro with strong and blustering windes.

The thirde sort of labour to be performed in dressing of vines, is to propagate them: but this worke fitteth them not, for the seconde yeere, no nor yet for the third yeere, except in some certaine places, and in such vines as at that age are growne to very strong wood.

The third yeere besides the foresaide dressings, if the plant bee strong, and seated in a good ground, and that it hath put forth faire and goodly woode, it is woont to be propagated betwixt the times of mid-Aprill, (and for surenes sake) vnto mid-May: and then the propagated branches are buried in the places, where the ridges are broken and cast downe, and that alike on both sides, by which meanes is made the checker whereof *Columella* speaketh.

In this same thirde yeere of the newe plant, according to the strength

To prune and picke the new vine.

To dig and turne over the ground after the first manner and fashion.

To dig is after rake, and cut the same, as hath beene saide before, but before this worke come in hande, the plants must be fixed by being cut, that so they may bee able to continue in the place where they are planted, and not to be tossed and carried to and fro with strong and blustering windes.

Propagation the third manner and fashion of vines dressing.

To lunge the young vine.

strength of the woode which it hath put forth; notwithstanding for the cause aboue mentioned, you haue with your naile nipped off such buds as were readie to blossome: yet according to the store that it hath of strong woode, after you haue cut it and amended the stocke, some begin to prop, vnderfet, and binde it, for the bearing vp of the faire and iolly branches thereof, that they may not fall & lie flat vpon the ground; which done, you must go ouer it with the second fashion of dressing of it: and yet before this be done, it must be raised, thrust vp and bound with his first band.

To propagate
vines.

Vines are propagated in Aduent and Ianuarie after they haue bene cut, howbeit in places that are more chill, they be let alone till Februarie and March: and for the dooing heereof, they make choise of the fairest branch, that they can find growne out of the stocke, cutting off the rest of the branches some two joints from the stalke. Sometimes if they were of a faire stocke, some vse to take two of the fairest branches of the chiefeest plant, and lay them gently one after another lowe vnder foote, in a pit that shall haue bene made in the ridges, afterward they must be couered with earth: some doe laie the chiefe branch that is to be propagated very deepe, to the ende that the yeere after that it shall haue bene dressed, and the branches handliomely laide down in the earth without any offence or hurt done vnto them, it may abide the manuring with dung: for the chiefe and mother branch is not wont to be manured at any time, but rather it is to be vncouered and laid open at the foote in Ianuarie, and in the beginning of December, when the propagated branch is manured, to the ende it may the better take in the snowe and raine water which may make it to haue a thicke foote: In *Chablies* and throughout all *Tounerroies* and *Anuerroies*, they vse to propagate their vines in October, and in the beginning of December when they fall calme, in stonie and grauelly groundes. And from mid-May vnto mid-Aprill they propagate their vines in the saide countries, in their sandie groundes, and such as stand on a potters clay, and not sooner then that, because the water that would stand in the pits, would rot and kill the yoong branches newly planted, because of the frost there continued both in winter and in the spring.

The second
dressing of the
vine.

After August you must dresse your vine againe, whether it bee yoong or olde, binding it ouer againe by reason of his former yoong sprigs which might haue bene hurt by the first band and withered away, and now at this time it must haue two bands bestowed vpon it, though they vse not so to doe in *Anion* and *Tourraine*, because their dressing of their vines is diuers, and differing from that which we vse. We haue forgotten how that at mid-May, before the raising of the plant, it must bee stripped of his buds, and in doing heereof to be heedie and warie, that the principall sprigs which shall bee about to blossome,

blossome, be not hurt or touched, except there be too manie of them vpon one stocke.

For the third dressing of the vine, which shall be in August, it is wont to be trimmed and tied againe, after which in a gentle and calme weather, after some raine hath fallen, the earth must be stird with the pickaxe, verie gently, and softly, and the weeds turned yndemeath. And sometimes it is weeded, if the yeere haue bene rainy. Besides which ordinarie dressings, you must be further aduertised that indeed it is requisite neuer to goe without a spade in your hand, whiles you are amongst vines, if so be that you would haue them to prosper, and that this busines be not posted ouer to rascally fellows or maides, especially the propagating of them, and the stripping of them of their buds. To conclude and shut vp the whole matter of the dressing of the vine set downe in his diuers sorts heere before, it is to be vnderstood in generall, that in the moneth of December and Ianuarie, the new propagated plant must be cut, & the old one of the yeere past looked vnto, in laying bare the foote of the old, & dressing anewe the propagated one, and manuring of it, if there bee any neede. In March and April it must be cut, and moe new plants made at the same time, also some lay bare the vines, and manure such as haue neede: within a shorte time after, they must be laide bare againe, as also couered again afterward; before they blossome and flowre, they must be stripped of their buds with your hand, especially whiles the branches shall appeere so tender, as that they will scarce abide touching with ones finger, for feare of spoiling and breaking off: then shortly afterwarde to prop them vp with railes and staies, to tie them with soft and nimble bandes, and of all this while, not to forget to giue them their severall orders, such as haue bene mentioned and spoken of before.

The third
dressing of the
vine.

The conclusion
of the three sorts
of dressing due
to the vine.

The eleuenth Chapter.

Of the manner of grafting the vine.

THE vine in this countie is seldome grafted, notwithstanding we will speake a worde for two of it, hauing alredie in the thirde booke handled this point more largely, where we haue spoken of all the sorts and properties of grafting. The vine then may be grafted either vpon it selfe or vpon other trees: The vine grafted vpon a vine, is after two manner of waies, the one in the stocke, the other in the branch. To graft a vine in the stocke, you must make choise of a grosse and firme one, and such as is full of moisture, not being too olde, cutting it close by the grounde, or which is better a foote within ground. The graftes, that you meane to graft, must be round, firme, full of little eies and set one neere vnto another, and cut in the decrease of the moone, and taken from the stocke and foote of the

To graft vines.

the vine. The maner of grafting of them, is to insert and set the graft into the body of the vine about two fingers deepe. And you shall do the like, if you would graft the vine vpon the branches of the vine.

At *Auxerrois* and especially at *Chablies*, they haue another maner of grafting besides the former and they vse it much; it is in this sort: They cut off all the green buds and sprigs from the stock, except only the shoot or branch which was put forth the yeere before, which they leaue of the length of some two foote. This branch they cleane the breadth of two or three fingers, they hollow and also make fit the cleft within on every side, to the end that the graft of the brach being made cornered, may fit the said cleft the better, and in this cleft they put the graft (consisting both of old and new wood) made sharpe at the end, which shall go into the cleft with his pith, shaped in maner of a wedge, ouer which they cause the said clouen branch so to close and come together in such proportion as that the rindes of every part of the cleft may ioin, after which they binde it gently without straitning of it much, with a clouen ozier hauing the woody part taken away; in such sort as that there remaine almost nothing but the very pilling, that so it may be the softer to tie them and the sooner rotten. This done they lay the said graft in the earth about halfe a foote, and couer it with soft earth. Neither doe they forget to picke off the buds or sprigs that may grow vpon the same stocke that yeere, to the end there may be no attraction or rising of the sap, for the putting forth and feeding of anything else but the yong graft, which for the first yeere, groweth for the most part about two or three foot: Then at the end of two yeeres they propagate the stocke and the graft, which by such meanes will put forth many new shootes. The like may be practised in one of the twigs putting vp at the foote of the stocke.

The vine is grafted after the same maner vpon trees, as cherry trees, plum trees and others such like; and thereof *Columella* intreateth very largely in his *Elme groue*, whereunto I will referre you, seeing in this our country of France there is account or estimation made of the grafting of vines.

The twelfth Chapter.

Of certaine petie practises and experiments touching and concerning the vine.

*Abundance
of grapes.*

YOU shall haue your vines to beare abundantly and withall a very good and durable wine, if your vine dresser weare a garland of iuie at such time as he croppeth and cutteth your vines, if we may beleue *Palladius*; but indeed the surest way is if there be cast into the pit with it when it is planted, the acorns of oakes braied, and ground fetches.

You

You shall peretue before the vintage, that there will be great abundance of wines, if whiles you plucke very lightly with your fingers, one grape off from the bunch there follow and issue forth some licour after it. In like manner a plentifull harvest of wheate, doth prognosticate a plentifull vintage of wine. Raine in the spring time doe foreshew that the wines comming after will be strong and mighty. *The treacle*

Men of old and ancient times past haue highly esteemed of the treacle vine, in respect of the great vertue which his wine hath against the bitings of serpents and other venomous beasts: and not onely the wine but also his leaues stamped and applied in forme of a cataplaime vnto the greued part, as also the ashes of the branches. The manner of preparing of it, is to cleaue three or fouer fingers of the neather end of the branch, which you meane to plant: and after that you haue taken out the pith, you must put in steede of the pith some quantitie of treacle: afterward you must couer it and wrap it in paper, and set the clouen end into the ground: Some others not contented with this course, doe powre treacle vpon the rootes of the vine.

A vine may after the same manner be made laxatiue, as, if in the clouen branch you put some soluble purge, or if the roots thereof be watered with some laxatiue things. Note notwithstanding that the branch, taken from the treacle or laxatiue vine to be planted, will not hold the properties of the said vine whereof it was gathered: because the treacle and laxatiue drugs, doe loose their force and power in the vine in proceesse of time.

Your vine will beare a wine apt to procure sleepe, if after the manner vsed in your treacle vine, you put Opium, or the iuice of mandrakes, in the cleft which you shall haue made in the bodie of the vine.

To make grapes to grow without kernels, take the pith out of the branch that you meane to plant, and yet not from the one end to the other, but onely so much as is to stand within the ground, afterward wrap it in wet paper, or graft it in an onion (for the onion helpeth the branch very well to grow) and so plant it. There are some that doe aduise to water it oft with water wherein hath laine to steepe some Ben-iouin, and that so long as till it hath put forth some buds.

To haue grapes in the spring, you must graft the branch of a black vine vpon a cherrie tree.

To cause a vine to bud betimes, you must rub the eies of the branch newly cut, with water wherein hath been steeped *Sal nitrum*, and within eight daies after it will bud.

To make your clusters to consist partly of white, & partly of black grapes, you must take two diuers branches, differing the one from the other, and cleaue them in the said having regarde that the cleft run not

*Abundance of
wines.*

*The treacle
vine.*

*The laxatiue
vine.*

*To plant a vine
whose wine
shall procure
sleepe.*

*Grapes without
kernels.*

*Grapes in the
spring.*

*To make a vine
to bud earlie.*

*Clusters bea-
ring both red
and white
grapes.*

not through any of their eies, as also that there be not any part of their pith lost, then afterward you must ~~join~~ ^{join} them together, ~~so that it may~~ ^{so that it may} sort as that their eies may bee neere one vnto another; and that in such sort as that they may touch, & of two, there may become but one onely: afterward the branches must be well tied together with paper, and couer them with clammy earth, or with the leaues of the heade of onions; and to plant them in this order, and to water them often, so long as vntill the buds doe put forth.

To keepe grapes.

To keepe grapes all winter long, you must cut them downe after the full moone in a faire and calme season, about eight a clocke in the morning when the dew is vanisht, and afterward dip them in the sea water ouer head and eares, or else in salt brine mixt with a little boiling wine, laying them afterward vpon barlie straw. Some put them in a vessell full of new wine, or else in a vessell close couered and lard: Other some doe keepe them in honic; others annoint them ouer with the iuice of purillaine: others keepe them in oate chaffe.

The thirteenth Chapter.

Of the diseases of the vine, and the remedies
for the same.

THE vine is sometimes troubled with violence of windes, or else by the vnwarines of the vine dresser, wounding the same with his pickaxe: in these cases you must couer the bruised or hurt place, with goates dung or sheepes dung, mingled amongst very choise earth, and cast the ground round about them oftentimes with the pickaxe.

To gard the vine from the frost.

The vines will not be spoiled with the frost, if in diuers places amongst them there be made heapes of drie dung or chaffe, and when you perceiue that frostes are towarde, to set the same on fire, for the smoke rising thereof, will breake the force of the frost: notwithstanding if it come to passe that the vine be alreadie spoiled, and the fruit destroyed, it must bee cut off very short: that so his strength may yet continue in the remainder for the yeere following it will beare fruit so much fruit.

The blasting of vines.

The vine will not be blasted, if when it is about to bud, you cut it as late as it may; for this late cutting of it, will make it to bee in blossom at such time, as the sunne is in his greatest and most fervent heat.

Against mist and fogs.

To breake off such mistes and fogs as are already gathered in the aire, for feare they should fall vpon the vines, you must make a smoke round about the vineyard, with the dung of goates kindled and set on fire. Against such fogs as haue already hurt the vines, you must stamp the rootes or leaues of wilde cucumbers, or of *scilicet* *quintida*, and lay them

them to sleepe in water, and with the same to water the vines, after the mists. Some say that if there be many bay trees planted in the vineyard, that then all the maliciousnes of the mists will fall vpon their boughes.

Some say that the barren vine will become fruitfull, if the bodie thereof be watered with man or womans water that hath bene made long before, and dropt vpon the vine stocke by little and little, and if therewithall presently after, it be laid about with dung mixed with earth and this cure must be done in autumne.

Vines are perceiued to want moisture, when their leaues turne very red: this disease must be holpen by watering them with sea water, or man or womans vrine.

The vine sometimes powreth forth great store of teares, whereupon it commeth to passe that it looseth his force altogether: The remedie is to breake the barke of the vine vpon the bodie thereof, and to annoint the wound with oyle boiled to the halfe; or else with the lees of oyle not salted: and afterward to water it with the strongest vinegar that may possibly be found.

The vine sometimes falleth into such a scattering disease as that it letteth his grapes fall off: the markes and signes thereof are when the leaues thereof become white and drie, and the branch falleth broad, lenow, and soft: this is to be remedied with ashes beaten and mixt with strong vinegar, and rubde about the foote of the vine, and by watering all that is round about the stocke.

The vine sometimes shooteth out into ouer many branches, must be cut off very short, and if for all this it giue not ouer, it must be barred at the rootes, and riuier grauell laide rounde about the stocke, together with a fewe ashes, or else some stones, for to coole the same.

If the grapes wither and drie away as they hang vpon the vine, you must take away such as are already withered and water the rest with vinegar and ashes of vine branches: or for the more certaintie, water the foote of the vine with strong vrine which hath stood a long time.

There are some vines that do rot the fruite, which they haue newly brought forth, before such time as they become fully growne and ripe: to cure this mischief you must put old ashes vnto their rootes, or grauell, or else barley meale mixt with the seed of purcellane, about the stocke and bodie.

To preuent that the byting or breath of oxen and kine (which are verie hartfull vnto vines) may not do them any hurt at all: you must water the foote of euery vine stocke, with water wherein the hides of oxen or kine, or some such other beaists haue bene steeped and mollified, for oxen and kine haue the stench of this water in such detestation, as that they will not abide to come neere vnto the vine.

Caterpillers

Against caterpillers and lye.

Caterpillers, lice, and such other small vermines will not hurt the bud or the leafe of the vine, if the hooke or hedgebill, wherewith you prune & cut away the superfluous boughes of your vine be annointed ouer with the bloud of a male goate, or the fat of an asse, or of a beare, or with the oile wherein caterpillers, or braied garlicks haue bin boiled, or if you annoint and rub them with the purie and sheath of a badgers stokes after that it hath bene ground.

Against locusts.

To driue away little noisome beasts which are called locusts, from the vines, you must procure smokes to bee raised amongst the vines of the dung of oxen, or Galbanum, or of some olde shoe soles, or of harts-horne, or of womans haire, or for to plant amongst the saide plants some pionie.

Against the mouselike beast called a shrew.

To preferue the vines from being annoied of the small beasts called shrewes, you must cut them in the night when the moone is in the signe Leo, Scorpio, Sagittarius, or Taurus, or else you must water your vines with water wherein haue bene steeped in the sunne for the space of ten daies, ten riuier or sea craie fishes.

Disinures.

Pismires fretting in funder the woode of the vine, euen vnto the matrow, wil not hurt the same at al, if you annoint and rub the stocke with the dung of kine or greafe of asses.

That Colewoorts are hurtfull to vines.

The baie tree, hasell tree, and colewoorts do likewise hurt vines very much if they be planted in the same ground, and especially the colewoorts, which the vine hateth aboue all the rest, there being a naturall and deadly contrarietie betwixt these two plants, in so much as that colewoorts are a preferuatiue from drunkennes, as wee shall further declare by and by, wherefore the good vine dresser shall neuer sowe or plant any colewoorts, baie trees, or hazell, in his garden of vines.

The foureteenth Chapter.

Of the manner of gathering grapes, or of vintage.

The gathering of the fruit of the vine.
To know when grapes are ripe.

THe last paine and labour to be taken with the vine is the gathering of the fruit, which may not be attempted by the vine dresser, vntill the grapes bee ripe, which is manifestly perceiued by their growing blacke, as also by hauing their kernels blacke and all bare, as being altogether separated frō the flesh or pulpe of the grape, if so be that there be any pressing of the grapes. Or else, if after taking away a kernell or two out of a grape, you finde that the roome where out they were taken, doth not lessen, but abideth as large as it was, not being filled vp by the other kernels comming in place. You must gather them in faire and calme weather, not in rainie weather, nor when the grapes are full of dew, but when it is waiked and gone, and the

The time and houre of gathering grapes.

aire is become somewhat hot rather then cold; for so the wine will be the better, and endure good & longer time; yea (if it be possible) in the waine of the moone, and when it is vnder the earth; at the least after that the moone is eightene or twentie daies old, for so the wines will be stronger, and last better, then if the grapes should be gathered in the newe of the moone. It is true that before the gathering of them you must haue all the furniture necessarie thereto in readines, as baskets and vessels to gather them into, great hedge bills, and small ones very sharpe, caske well hooped, and made very cleane by washing, cleane fars, and euery way well fitted, rubs, great and small stands, well pitched and fitted for the purpose, and presses aired, scoured, washt, and furnished with their necessary implements.

The grape gatherers shall doe their indeuour to put asunder the leaues, Greene, lowre, withered, and rotten grapes, from those that are ripe and whole, to the end that the wine may not be indamaged and made woorse then it woulde be. And for the making of perfect good and daintie wine, to chuse out the finest of the grapes from amongst the common and grosse ones, as also the white from the black, not mingling the two best sorts together of any kinde, as if there shoulde be a mingling of the well tasted grape with those which are sweete: or of the white which is strong, with an other which is weake and of a sad colour. The gathered grapes must bee left in the ground at the least for a day or two, and that vncouered (provided that it raine not) for so they will become better, in as much as both the sunne, the deawe, and earth, doe refine and purifie them, as taking from them whatsoeuer bad and vnprofitable moisture that is in them; then after that to leaue them in the fat, but not aboue two daies, after which time, the next morning they must be troden out equallic, and in such sort, as that there may not any of the grapes of the clusters remaine whole. It is true that the treaders must not goe into the fat before their feet be well washed, and their whole bodies be made verie cleane, and couered with a shirt, to the ende that their sweate may not hurt the wine, and they must likewise abstaine from eating therein.

The grapes being troden, the wine or liquor must be let boile and worke together for the space of fower and twentie howres, more or lesse, according as it is purposed that the wine shoulde be; for the longer it worketh together, the grosser, deeper coloured, and mightier it will be: as the lesse it worketh together, the finer, more thinne, subtile, and delicate it will be. Likewise, if you would haue a strong and mightie wine, you must in this time of the working, couer your fat with some couer, that so the vapor thereof may not breath out, or his force and strength spend.

The grosse and grosse parts of the grapes that are troden, which shall haue some iuice and liquour yet left & remaining in them, shall be

Ccc

carried

The duties of grape gatherers.

Treaders of grapes.

That time wines must worke together after they be troden.

carried to the presse for to be pressed but, and there it shall abide three or fouer strokes: It is true, that this which is thus pressed out will make the other lesse pleasant, and therefore it will be best to put that which floweth and runneth out of the owne accord by treading by it selfe, and the other which is pressed out by it selfe. But howsoever you bestowe them, the caskes into which you shall put them must not be quite fild vp: but haue some space left emptie for the boiling vp of the newe wine, and the casting forth of such scum and froth as shall rise out of it with ale: It is true that you must be filling vp of it every day, so long as till it appeere that the wine hath rid it selfe from all his scum and froth. And yet as then it may not be bunged vp, but rather some stone or wisse of hais laide vpon the bung hole: and after when it shall manifestly appeere that the wine is thoroughly settled and pacified, then you may bung the caskes. The caskes must bee all this while either in the open aire or else in some barn that is well aired: for it is not to be laide into any cellar vnder ground, before such time as the new wine haue vterly ceased and cast off his rage. And withall, you must beware not to fill vp the wine alreadie cooled and turned vp with wine which is yet hot and boiling, for be it either white or claret, it will make it fat.

*The cousing
of the wine in
the cellar.
What manner
of cellar must
be provided.
Wine apt to be
infected.*

After that the wine is thoroughly settled, and ceaseth to boile and worke any more, it may bee carried downe into some cellar, which must stand vpon the North, paved with grauell or drie earth, and free and farre off from all ill smells, horse stables, sinkes, bathes, and marshie places: not hauing any thing shut vp and kept in it which is of euill smell, as cheese, garlicke, onions, oyles, or hides: for there is nothing more subiect to be infected then wine, especially that which is newe.

Your vessels must bee so ranked in order, as that they touch not one another: hauing some distance left betwixt them, that so they may the more easily be looked vnto all the ycere. The vessels to avoid the venting which commonly hapneth vnto wine, must haue the bunghole very well stoppt with grauell, and not sturd or touched at any time, vntill the time to drinke the wine be come: If vpon some happe the good housholder, presently, or a little after the time of vintage, be not minded to sell some part of his wine, according as opportunitie may serue for his profite: Notwithstanding I finde that men in times past (to the ende they might haue a purer, neater, and more subtile wine, after that the wine hath purged and cast forth his scum, ceasing to boile) did vie to put it into new vessels, that is to say, did change it out of one vessell into an other, hauing this opinion, that wine separated from his lees, doth make a more subtile kinde of mother in winter, and becommeth more delicate and durable, and refineth it selfe farre better in the spring time, then it would haue done vpon the first lees: as also that when wine standeth long vpon the first lees, which

which are thicke and sowe it easily looseth his naturall verdure, and getteth a sharpe and vnpleasant taste, and a thicke substance. They did furthermore obserue the time and the course of the heauens: for they neuer drew wine out of one vessell into an other, but when the northern winde did blow, when the moone was either newe or vnder the earth: and when as roses had put forth their first flowers, and the vine his buds. And Hesiodus following this custome, doth counsell men that in changing wine out of one vessell into an other, they shoulde separate the wine which is the vppermost in the vessell from that which draweth somewhat neere vnto the lees, and both of them from that which is in the midit, because that the wine which is next vnto the bunghole, is euaporated much, as being next vnto the aire: and that which is in the bottome corrupteth very easily, as being nere vnto the lees: but contrarily that which is in the midit is most durable and conuenient for nourishment. Such custome vied by those of ancient time, is not obserued nowadaies, especially in the countries of France, and therefore we will not say any thing of this changing of wine out of one vessell into another.

*The wine in
the midit of
the vessell is
the best.*

The fifteenth Chapter.

*Of the time of pearcing the vessels and tasting the wine
and how to draw it without causing it
to take winde.*

MEN of ancient time did attribute so much vnto the influence of the stars, as that they did neuer pearse their vessels either for talting or drinking of their wine, at the rising of the sunne or the moone, hauing this opinion, that at such times the wine doth moue, and therefore ought not in any case to be touched or dealt withall. We doe not so curiously prie into the matter, but we pearse our vessels at all such times, and as oft, as either necessitie or commoditie will perswade and doth require. Notwithstanding in pearcing of them you must haue this wisdom, as to beware that they take as little winde as possibly may be, and when there is but a very little drawne of it, you must presently fill vp the vessell againe for feare of the spending of it selfe. As concerning the talting of wine, whether it be to sell or drinke, or if it be to finde out whether there be any that is in danger to be turned, some doe giue counsell, that it is good to make the assaie at such time as the northeast winde bloweth, because at such times it is more pure and neate then at others: others thinke it best when the South winde bloweth, because this winde stirreth and mooueth the wine greatly, and sheweth it in decde to be the same that it is: but howsoever it is, it is not good to taste the wine salting: for before meat wine hath but a dull and dead taste: neither yet after that you haue drunke

*The time to
pearse wines
according to
these of an-
cient time.*

*The wine to
pearse wines.*

To taste wine.

*At what time
and how wine
is to be tasted.*

drunke of other wine : nor after you have got a full belly. Further more the assaier of wines must not have eaten any fower thing ; salt, bitter, or any other thing, which may alter his taste, but must onely have eaten something without having digested it.

When our householder is disposed to pearse his wine, and that he meaneth to draw it by a little and a little for his owne drinking, and leisurely without giving of it any vent, he must pearse it in the vpper part of the vessell with a pearser, and put into the hole the quill of a feather open on both sides, and as long as three fingers are broad: and that vpon the top of that end of the quill which shall be vpward, hee put some cotten, couering the said cotten afterward with halfe a wall-nut shell, and vpon it againe some ashes or wet lime laid : and when he hath done all this, let him set the tap in the vessell : and by this meanes he shall draw his wine easily, and vnto the lees without giving of it any vent.

The sixteenth Chapter.

Certaine small things to be obserued concerning wine.

When the case so standeth, as that the vintage proueth small, and that the Lord of the farme in respect of sowing, desireth to make a small wine, wherewith hee woulde passe ouer the requisite prouision of his house in steed of a better and stronger wine, he shall make it in this sort after the manner of a rappe vine. In the time of vintage he shall cause to be taken a good quantitie of the knots of the grapes called pinots and sarminians when they are very ripe and haue a hard skin, and of these knots alone and whole, without burting of them, he shall cause a vessell to be filled neere full, which he shall cause to be set downe vpon one of the ends, and afterward cause it to be taken downe againe, and set vpon a cantling, and so shall cause to be turned into it two pintes of good wine that is olde and mightie. This being done, he shall cause there to be water boiled, whereof when it is hot, he shall goe forward and proceede to the filling vp of the vessell, and so shall leaue it vntill his small wine haue done boiling, and be become thoroughly cold (which is sometimes sooner, sometimes later, according as the yeere proueth hot or colde) whereunto he may then put a tap to draw out of the same, and to begin to drinke thereof. And as oft as he draweth out thereof, hee shall fill vp his vessell againe with so much cold water, as he drew forth of his wine, and so by that meanes keepe his vessell alwaies full. And by this meanes his saide small wine will passe ouer the greatest part of the yeere in one state of goodnes. And when this small wine shall begin to grow too weake, he shall draw out thereof a quart, and put in place thereof

thereof as much good old wine. And in drinking of it he shall liold on (if so it seeme good vnto him) his putting in of water as before, except that it be found to weake to put in any more wine. and then he shall make his worke folkes to drinke of it, filling it vp still daily with water as before. The colour of this small wine is verie pleasant and faire.

The way to keepe new wine that it shedde not in the time of the boiling in the vessell, is to put about the hole at which the newe wine cometh forth, a wreath of penny-roiall, calamint, or organy: or else you shall annoint the edges of the saide hole within with milke or cheefe made of cowes milke, or else you shall cast into the vessell a morsell of cheefe, for it will keepe in the great heate of the newe wine.

To cause new wine to be quickly purged, you must put in fifteene quarts of newe wine halfe a pinte of vineger, and within three daies it will be fined.

If you desire to haue newe wine all the yeere, you must take the new wine which distilleth by it selfe from the grapes before they be troden, and put it the same daie in a vessell pitched within and without, in such sort, as that the vessell may bee halfe full, and very well stoppt with plaister aboue, and thus the newe wine will continue a long time in his sweetenes: and yet it will bee kept thus a great while longer, if you put the vessell in a well or riuer, couered with some little skinne, and so leaue it there thirtie daies: for in not hauing boiled, it will continue alwaies sweete, and will be preferred by the heate of the pitch: or else it will be good to bruisse the grapes very gently, without much straining of them, and the newe wine which shall issue out of them by that meanes will keepe new a long time: Other some do lay their vessell filled with sweete wine in moist grauell: some doe pitch their vessels within and without, and so lay it onely out of the water: other some doe couer it with the drosse of the wine presse, and afterward to heape vpon it moist grauell.

To know if there be any water either in new wine or other, take a withered rush, and cast it into the wine, so if there be any water in it, it will draw thereof vnto it: or else take rawe and wilde pearces, and cutting them in the midst make them cleane: or if you will, take mulberries and cast them into the wine, for if they swim aloft it is a neat wine, but and if they sinke there is water therein. Some do annoint a reed, or a peece of woode, or paper, haie, or some other little bundle of herbes, or of straw, which they drie, and put into the wine, and after drawing them out, they take triall and knowledge thereof: for if the wine haue water in it, drops thereof will gather vnto the oile. Others cast vnquencht lime into the wine, and if there be any water amongst the wine, the lime will dissolue and melt, whereas if the wine be neate

it will binde and fasten the lime together. Some take of the wine and powre it in a frying pan where in there is boiling oile, and if there bee any water it will make a great noise, and will boile ragoulthe: againe, others cast an egge in o the wine, for if the egge descend and sinke downe, then there is water in the wine, but and if it doe not descend, then there is no water in it.

The waite to
correct the o-
uer much wa-
ter, which is
in the wine.

If the yeere fall out raine, and that it happen that the grapes hang-
ing yet vpon the vine be much wet, or if it fall out that after the time
of gathering them, there fall some great store of raine, so as that the
grapes are watered and wet more a great deale then is needfull, they
must of necessitie be troden, and then if you perceiue the new wine
comming of that vintage to haue small strength in it (whick know-
ledge you may come by in tasting it after that the wine shall be put
vp into the vessels, and shall first begin to boyle and worke in them)
it must presently be changed and drawne out into another vessel, for
so all the waterie parts that are in it, will stay behinde in the bottome:
and for as much as the wine will yet stand charged, you shall put to
euery fifteene quarters of wine a pinte and a halfe of salt. Others doe
boile the wine vpon the fire, so long as till the third part be consumed,
and the rest they vse foure yeeres after.

To rectifie the
new wine
which begin-
neth to fower.

If it should happen that the new wine prepared in such sort as we
haue spoken of, after long time should begin to fower and turne
eager: to meete with this mischief, you must cast to steepe therein, a
pinte of grapes boyled, till they be full swollen, afterward straining
them out into an eight part of new wine; or else cause the said new
wine to run through finer grauell.

To cause the
wine to settle
quickly.

If you would haue new wine settled in fower and twentie hower,
without boyling of it, that so you might presently vse it, fill a vessel
with the small chips of the wood called in French *Sayette*, which the
inhabitants of *Champagne* doe call *Buckettes*; vpon these chips cast
your new wine, and within the foresaid fower and twentie hower,
you shall haue a settled wine without hauing cast any scum. The inha-
bitants of *Champagne*, especially the townes men of *Troye*, vse this re-
cett not onely to cause wine to settle quickly, but also to make rappe
wine withall.

To separate
water from
wine.

If it come to passe that wine haue water in it, and that we finde it
to be so, by the meanes lately laid downe: to separate then this water
from this wine, you must put into the vessel of wine melted allome,
and after stopping the mouth of the said vessel with a sponge dren-
ched in oile, to turne the mouth of the vessel so stopped downe-
ward, and so the water onely will come forth: Or else cause a vessel
of iunc wood to be made, and put therein such quantitie of wine as it
will be able to hold, the water will come forth presently, and the wine
will be pure and neate.

You

You shall make an odoriferous and sweete smelling wine in this manner. Take a few myrtle berries, drie and bray the same and put them in a little barrell of wine, and letting them so rest for ten daies, afterward open the barrell and vse the wine. You shall worke the like effect, if you take the blossoms of the grapes (those especially which grow vpon the shrubbie vines) when the vine is in flower, and cast them into the vessel of wine, the brims of the wine vessel being rubb'd over with the leaues of the pine and cypres tree, and after cast into the wine, for they make it very odoriferous: or more easily, you must hang therein an orange, or a pome citron which is not verie grosse and thicke, and pricke it full of cloues, and that in such sort as that it may not touch the wine, and after shut vp the vessel close: or else infuse and steep in *Aqua vite* the simples or such matter as you would haue your wine to smell of, and afterward straining the same *Aqua vite*, to put it into the vessel amongst the wine.

To make red wine of white, and contrariwise of red wine white. Take common salt eight drams and put it in five pints of red wine: or else powre into red wine some whay with the ashes of the branches of the white vine, and turne and rowle it well for the space of fortie daies, then let it rest and it will become white wine. On the contrarie, white wine will become red, if you put into it the ashes of the branches of the red vine: or if you cast into white wine the powder of honny bodied to the hardnes of a stone, and then made into powder, changing it from one vessel into an other to mingle them together: you may doe this the more easily if you cast into the white wine the dried or Greene rootes of all the sorts of sorrell.

To make claret wine, beate the whites of three eggs in a dish, vn-
till the froath arise, and adde thereto some white salt and as much wine, beat them all together againe vntill such time as that they be-
come very white, afterward fill vp the platter with wine, and put all in-
to the vessel of wine and keepe it.

You shall make a wine that will beare great store of water, if dry-
ing the rootes of hollhockes you shaue and scrape them, casting the
saide shauings into the wine, which afterwarde you must rowle and
mingle together very carefully.

Wine will haue no flower, if you put in the wine the flowers of
the vine gathered and dried with the meale of fetches, changing the
wine into another vessel, when the meale and the flowers are settled
downe to the bottome.

You shall make the boyled wine called cure if you boile new wine
that is good, louely, and very sweete, vntill the third part thereof be
consumed, and then when it is growne cold, you must put it into ves-
sels for your vse.

To make sweete wine that will so continue all the yeere, you must
gather

gather your grapes whole, and let them lie spread three daies in the sunne, and tread them the fourth about noone. The sweet wine, that is to say, the very licour which shall run out into the fat, before the drossie substance come vnder the presse, must be taken away, be put by it selfe, and boiled, and after it is boiled, put to nineteene quartes of it an ounce of Ireos or corne flag well braied, and straine this wine without the lees: which being done it will continue sweete, firme and wholsome for the bodie.

Greeke wine.

To make wine like vnto greekish wine, you shall gather from the vines early grapes very ripe, and those you shall drie in the sunne three daies, and tread them out in the fourth, and the wine thus made you shall put in a vessell, hauing care to cause it to purge and cast out the filth within it, as also his lees, at such time as it shall boile. And the fifth day after that it shall be purged, you shall put into it two pounds of reboiled salt, or very small beaten salt, or at the least one pound in eighteene quartes and a halfe of wine.

To make a weake and feeble wine to become an excellent good wine: Take a handfull of the leaues of *Tota bona*, and a handfull of fenell and smallage seede, and cast them into the vessell.

Good household wine.

To make good household wine, you must cast how much the tenth part of the wine cometh to which you haue drawn or made in one day, and to cast as much spring water vpon the drossie, out of which the said wine was gathered and pressed: with this you must mingle the scum taken off from the wine in the boiling or seething of it, as also the lees remaining in the bottome of the treading fat, which shall be let lie and steepe in the same a whole night: the day following you must tread them all together with your teete, and afterwarde presse them out: then you must put that which shall come forth into two vessells, and stop it vp when it hath boyled and purged.

To cause troubled wines to settle.

To cause troubled wines and such as are full of lees to settle, powre into thirtie quartes of wine, halfe a pinte of the lees of oile boyled till the third part be wasted; and the wines will settle by and by, and returne vnto their former estate: or else, which is better and more easie, cast into the wine vessell the whites of six or seauen eggs, and stirre them together very well with a stick.

The taking away of the strength of the wine.

To drinke much wine and yet not to be drunke.

You may take away the force and strength of wine, if you put into it some iuice of colewoorts, which you shall haue bruised before hand, and thereupon drawne out the iuice.

To drinke great store of wine and not to be drunke, you must eat of the roasted lungs of a goate: Or otherwise, eat sixe or seuen bitter almonds fasting: Or otherwise, eat raw colewoorts before you drinke, and you shall not become drunke. Some say that a great drinker shall neuer become drunke, if he weare a wreath of *lunamoscata* about his head: Or, if at his first draught he repate this verse of *Homer*:

mers: Iupiter hic alta senhit clementer ab Ida: which is to say, *Iupiter* was heard speaking in a soft and gentle manner from the high mount of *Ida*.

To prouoke hatred of wine, you must take the thin licour which droppeth from the branches after they be cut, and put it in the drunken mans glasse against such time as he shall drinke, but so as that he know not any thing of it, and thereupon his appetite and lust to drinke wine will depart quite away from him: or else, cause him to drinke with white wine the blossomes of rie, gathered at such time as the rie bloometh: or else, take three or foure eeles alieue, and let them lie in wine till they die, and afterward cause this wine to be drunke off by such as are giuen to be drunke: Or else, take a greene frog, which is ordinarily found in fresh springs, and let the same lie in wine till she die. Otherwise, marke diligently where the owle haunteth, that so you may get some of her eggs: drie them and giue them the drunken gallant to eat.

To hate wine.

To make drunken men to become sober, you must make them eat colewoorts and some manner of confections made of honic: Or else drinke great draughts of vineger.

To make them which are drunke sober.

To be the meanes that wine shall not become strong, take a peece of salt larde, & tie it to the hole by which you turne vp your wine into the vessell, with so strong a threed as may beare vp the larde, which larde must hang in such manner as that it may but touch the vppermost part of the wine. And this will keepe the wine from becoming strong, through his fatnes and saltneesse, which hinder the separating and refining of the same, which is the thing that giueth strength vnto the wine.

To cause wine that it shall not become strong.

To cause new wine to become old by and by: take bitter almonds and melilot, of each an ounce, of licorice three ounces, of the flowers of lauander as much, of aloes hepaticke two ounces, bray them all and tie them together in a linnen cloth, and so sinke them in the wine.

To make old wine of new.

You shall finde out and know whether the wine will keepe long or not after this manner: when the wine shall be turned vp, you must within a certaine time after change it into another vessell, leauing the lees behinde in the first vessell, which must be very well stopt on euerie side, and then afterward you must diligently trie out and see whether the lees do change and begin to get any ill smell or no, or whether they breed any gnats, or such other little wilde beastes, and if you perceiue that nothing of all these falleth out, then you need not feare the turning of your wine: but if it fall out otherwise, you may assure your selfe that such wine is apt to corrupt and become naught. Others doe put downe to the bottome of the vessell an elder pipe, or some other of such like woode as may be made hollow, through which they take the sent of the lees, and so are thoroughly ceruified how they smell, and

Wine that will keepe long.

and according as they finde the lees to be conditioned, so they iudge of the state of the wine. Some take vpon them to foretell by the couers of the vessels, wherein if they finde and perceiue the fauour of wine, they by and by iudge the wine to be good: but if in them they finde the fauour of water, they make no great reckoning of any such wine. Others iudge them by the fauour and relish of the wine, which if they finde to be sharpe in the beginning they hope well of the goodnes thereof: but and if they taste flat and soft, then they feare the contrarie: if when the newe wine is put into the vessels, it bee fat and glewie, it is a good signe: but if it be voide of all strength, it will easily be turned.

The keeping of wine.

To keepe wine at all times, cast of the powder of roch allome powdered verie finely into the vessel whereinto you shall turne your newe wine: or the powder of salt finely powdered: or pebble stones, and little flints, taken out of some brooke: or aqua vitæ: or else hang in the vessel by the bung, a glasse violl full of quicke siluer, but very well and close stoppenerie where, and let it lower and lower as the wine shall sinke lower and lower, so that the violl may hang within the wine continually: or else powre common oile vpon it.

The seauenteenth Chapter.

A discourse of certaine wines that serue for the vse of physicke

To make medicinal wines.

As we haue saide in the second booke, that the prouident husewife must sowe and plant vpon some bed in her kitchen garden, certaine medicinable herbes: in like manner it will not be amisse that the farmer or his wife shoulde yeerely in vintagetime make and compound wines for the necessities that may grow by reason of diseases happening amongst their familie. Wherefore to the ende we may not forget any thing which may fall out to be necessary for the better keeping of our countrie farme, we woulde not omit the manner of compounding such wines: which notwithstanding the good wife must not vie or giue others counsell to vie hand ouer head, at happe hazard and without good reason: for it is not good to vie them where there is an ague, neither yet till sortie dates past after that they be made. Their vessels must be alwaies kept close shut, for else they will grow soure, or else spende themselves very easily: and after that it is perceived by the taste that they retaine the relish of the simples infused, it will be good to take the said simples out of the vessels.

Rose wine.

To make wine of roses: take drie roses of the mountaines, anise, and hony, of euerie one alike, and a little saffron, binde them together and put them in the wine: this wine is very good in the weaknes

of the stomacke, and for pleurifies.

For to make wine of wormewood: take sea wormewoode, or for want thereof common wormwoode, especially that which hath the small stalkes and short leaues, about eight danis; stampe them, and binde them in a cloath which is not ouer thicke wouen, and so cast it into the vessel, afterwarde powre new wine in vpon it, and that after such a proportion, as that for euery three pintes of wine, there may be an ounce of wormwoode, and so to holde on till the vessels bee full, leauing a vent open, that so it may not fall a boyling againe. The vie of this wine is good for the paine of the stomacke and liuer, and to kill such wormes as are in the guts.

To make wine of horhound that is good for the cough in the vintagetime, you must gather of the crops and tender stalkes of horhound growing especially in such places as are leane and vntilled, and afterward cause them to be dried in the sunne and made vp into bundles tying them together with a rush sinking them in the vessel in fixtie five quarts of new wine, you must put eight pound of horhounde to boile therewith, after that the horhounde shall be taken out, and the wine stopp vp very diligently.

The wine of anise and dill, against the difficultie of vaine, the wine of peares against the fluxe of the bellie: the wine of bayes against the achie of the bellie and wringings in the same: the wine of alarum bacchar, against the jaundise, drop sicke, and tertian ague: the wine of sage against the paines and weakenes of the sinewes, and they are made as the wine of wormwood.

For to make wine of thyme: you must gather the thyme when it is in flower, and drying it, stampe it and put thereof the quantitie of a twelfth part in a vessel of thirtie quarts of white wine.

To make wine of betonie: take betonie the leaues and seede about one pound, put them in twentie quarts of new wine: when seuen moneths are past, change the wine into a new vessel.

For to make wine of hyssop: take the leaues of hyssop well pouered, make them fast in a very fine cloath, and cast them into twentie quarts of new wine: this wine is good against the diseases of the lungs, an old cough, and shormes of breath.

Wine of pomegranates is made of pomegranates that are scale ripe, being thoroughly bruised and put in a vessel in three quarts of thicke red wine, to vie against the flux of the belly: to the same ende serueth the wine made of seruices, mulberies and quinces. You may see a larger discourse of wines in the fifth Booke of Dioscorides.

The eighteenth Chapter.

*Of such faults and accidents as happen to wine.**Now wines must be ordered in cellars or rooms vnder ground.*

Wine is not exempt from losse and inconueniences, ^{and} more then all other things which are contained vnder the cope of heaven, therefore to meete with all the inconueniences which may happen to wine, you must carefully and often looke vnto the wine vessell; notwithstanding, from the time that the saide vessells are couered and stopped vp vnto the spring equinoctiall, it will be sufficient to fill vp and handle the wine once euery fixe and thirtie daies, but after this time, twise in the said space: and if the wine begin to flower, then you must looke to it more oft, least the flower thereof should fall to the bottome and spoile the wine. Look by how much the heat is the greater, by so much you must visite and looke to your wines the oftter, and euer keepe it with filling of it vp, refreshing it and giuing of it vent, for so long as it holdeth cold, it will remaine and continue sound and intire.

Against the engernes or fourenes of wines.

If your wine should begin to waxe sowre: you must put in the bottome of the vessell a pot full of water well stoppt, and thereupon also stopping the vessell leaue therein some small hole to vent at, the third daie after you must draw out the pot, and you shall finde the water therein stinking, but the wine sound and neat.

At what time wine is most apt to turne and corrupt.

Wines are most subiect to turne, especially about the eleventh day of Iune, being the sommers solstice, and the time when the vine flowereth, somewhat before the dog daies enter through the great change of heate and cold, and generally when the southern winde bloweth, whether it be in sommer or winter: as also in time of great raine, of great windes, earthquakes, or mightie thunders, and when as vines or roses begin to flower: to keepe them from turning, you must put into them when they boyle vp and worke, boyled salt: or else the seede of finaliage, barley bran, and the leaues of the bay-tree, or ashes of the branches of the vine, with fennell seed brayed.

Others do appoint these remedies: take the rootes of mugwort, and cinquefoile, make them in powder: and when the wine shall haue boyled put them in, and it will not turne nor change. Likewise if you lay your vessells in vaulted cellars, or if you put in them a plate of iron or flint stones, or leauen made of rie paste, or a couering vpon the vessell, you keepe your wine from all inconueniences that might happen vnto it by thunder or lightning.

Sweete almonds cast into red wine, keepe it from turning: the ashes of oake wood cast into the wine doe the like: the meale of the white fetch doth saue the wine from turning and keepeth it in his foundnes. Allom broken in peeces doth the like. As also brimstone, lyme,

lyme, sande, and plaister.

If it happen that the wine be turned, you must cast into the vessell ^{To helpe the wine that is turned.} a good quantitie of beaten pepper; and which is better, change his vessell: take certaine whites of egges, which after that you haue beaten them very well a long time and taken off the froth rising vpon them, cast them into the vessell and rowle it. Or else: take twelue kernels of old walnuts, draw a thread through them, roste them vnder the ashes, and whiles they are yet hot, hang them in the vessell within the wine, and leaue them there so long as vntill you see the wine to haue recovered his former colour.

If the wine be become troubled, it will quickly grow cleare and ^{For troubled wine.} become fined againe with the kernell of a pine apple, or of peaches, or with the whites of eggs and a little salt. Otherwise: take halfe a pound of rochallome, and as much sugar, make a verie small powder thereof and cast it into the vessell.

If it appeare and shew manifest vnto you that your wine would ^{To helpe wine that becometh to waxe awaie and die.} marre and spoyle, take this course with it: If it be claret wine, take the yelke of an egge; and if it be white, take onely the white of an egge, putting thereto onely three ounces of cleare bright stones taken out of some swift running riuer: make them into powder with two ounces of salt powdred very small, and mingled all together: after that put the wine into another vessell that is neat and cleane, and not tainted with anie manner of smell before hand: which done, cast into the same all the foresaide composition, and mingle it with the wine fise or fixe times a day, vntill three or foure daies be past: remember and marke to doe this same before such time as the wine be all together marred: for when it is once thoroughly corrupted and marred, this composition will serue you to no ende, and the labour and time is but lost that you bestow about it.

To restore againe into his former and sound estate the wine that is growne fat, fustie, and hath taken winde: cast into the vessell cowes milke somewhat salted: some cast thereinto allom, lyme, and brimstone, but not without their great hurt that shall drinke the same: but indeed it would doe better if they would put into it some Iuniper berries and Ireos rootes.

If that your wine doe continue to hold and still retaine anie ill qualitie by his hauing taken winde: you must make it loose the same, by making two or three towers in the vessells, and afterward setting it againe vpon his cantling and then to fill it vp.

To take away the fustie smell of wine: you must take medlars ^{To take away the fusties of wine.} ripened vpon the straw, and opening them in fower quarters, tie them with a small threed, and thereby make them fast vnto the bung hole of the vessell in such sort as that they may hang all couered ouer in the wine; hauing left them thus for the space of a moneth, then take them out

To helpe the
fowrenes of
wine.

To keepe the
wine from
fowring.

Oyle oliue a
peruencor of
the fowrenes
of wine.

For waterish
wine.
Against ve-
noms or vne-
mous beasts
falling into
wine.

Vineger is a
faulst of wine.

out, and by this meanes you shall likewise take away the ill smell of your wine : or else take bayberries, and boyling them in wine, cast the same afterward into the said vessell. Otherwise, make a bag and fill it with sage, putting it in the vessell, but not laying it in the wine: the same remedie serueth to recouer wine that is become fower : if you had not rather chuse for the helping of your wine to cast into it some lecke seede.

To keepe wines from fowring : you must place the vessell in a cold place, very full and well stopped, so as they may not haue any breathing place : or else if you want the benefit of a cold place, and that you are forced to set it in a place that is hot : or else if the wine faile through hauing bene a long time pearced : to keepe it from falling quite lowre ; you must hang at a small coard a great piece of larde well wrapped in alinnen cloath, and let it downe by the bung hole into the middelt of the wine. And as the wine shall grow lower and lower, so you must still let lower the larde, that so it may alwaies continue in the midst : in the meane time, the vessell must be continually well couered and stoppt : and by how much the peece of lard shall be the greater, so much the better will it keepe the wine from fowring. Some aduise and giue counsell for the same purpose to put into the vessell oyle oliue, in such quantitie as that it may onely couer the vppermost face of the wine : and when the wine is all drawne out, the oyle may easily be separate from the lees and gathered into a vessell by it selfe.

To take away the waterishnes and ouermuch moisture of wine, you must put into the vessell the leaues of the pomegranate tree.

If any beast be fallen into the vessell of wine and dead therein, as an adder, rat, or mouse, so soone as the dead bodie is found, you must burne it, and cast the cold ashes into the vessell where into it had fallen before, and stirre it about with a wooden sticke : others giue counsell to put hot bread into the wine, or any iron ring, and then the venome will vanish and depart.

The nineteenth Chapter.

Of the manner of making vineger.

Vineger cometh through the fault and defect of wine, as we may vnderstand by that which is gone before : the riotousnes and pleasure of men, hath been the cause that vineger came neuer in request, not onely for saues, but also for many other vses : It shall not therefore be thought vnreasonable to vse a word or two about the making of vineger.

The most common way to make vineger is on this sort : They vse to take good wine, and therewith to fill the vessell to the halfe, leauing

it vnstoppt and ser in a hot place, as in some corne loft, or in some gutter betwixt the tiles.

If you desire to make vineger in haste, you must cast into your wine salt, pepper, and fower leuen mingled together: And yet to make it more hastily, you must heate red hot some stone, tile, or gad of Steele, and put it all hot into the wine, or else the mouth of the vessell must stand alwaies open, or else the vessell must be set in the sunne three or fower daies, and therewithall a little salt put in the vessell. Or else fill a new earthen pot, that is not past halfe baked with wine, and stop it well, afterward put it in a kettle full of boiled water vpon the fire, and letting it there remaine a long time in the boiling water, it will growe fower : Or else put into the wine a beete root stamped, or a radish roote, or medlars, ceruises or hornes, mulberries, vnripe sloes, or a shiue of barlie bread new baked : or else you must take of the bloisomes of the ceruise tree in their season, and drying them in the sunne after the manner of rose leaues, either in a glasse vessell, or in one of blacke earth, fill vp the same vessell with pure vineger or wine, and so set it forth againe into the sunne or in the chimney end to the heate of the fire, and in a short time it will become strong and very sharpe vineger : but and if you would restore it againe to his former state of wine, then you must cast of colewoort rootes into it.

Radish and
beete rootes
make vineger.

The rootes of
colewoort make
vineger to
turne againe
into wine.

The twentieth Chapter.

Of some obseruations and instructions concerning vineger.

To make strong vineger take the fruit of the cornell tree, when it beginneth to grow red, and of bramble berries, such as grow in the fields, when they are halfe ripe, drie them, make them into powderr, & with a little strong vineger, you shall make little prety balles, which you shall drie in the sunne, afterward you must take wine, and heate it, and when it is hot put into it this composition, and it will be turned very speedily into very strong vineger.

Strong vine-
ger.

To make vineger with corrupted wine : Take a rotten and corrupted wine and boile it, taking away all the scum that riseth in the boiling thereof, thus let it continue vpon the fire till it be boyled away onethird part, then put it vp into a vessell wherein hath bene vineger, putting thereto some cheruile, couer the vessell in such sort, that there get no aire into it, and in a short time it will prooue good and strong vineger.

To make vine-
ger of marred
wine.

To make drie vineger to carrie whither a man listeth, take of the wilde cherries when they begin to be ripe (and yet the fruit of the cornell tree is better) of mulberries when they be red, and vnripe grapes that are very thicke, and of wilde acorns before they be ripe, stampe

Drie vinegers.

stampe all together : then take of the best vineger you can finde, and mingling all together, make vp the masse into small loaves, setting them to drie in the sunne; and when you would make vineger, temper some of these small loaves in wine, and you shall have very good vineger. Otherwise, take the vnripe iuice of corne that is very Greene, and stampe the same putting vineger thereto, and thereof make a paste, whereof you shal make little loaves to be dried in the sunne, and when you would haue vineger, temper of these loaves in so much wine as you shall see sufficient, and you shall haue very good vineger.

Rose vineger.

To make rose vineger: Take good white vineger, and put therein red roses, either new or dried, keeping them manie daies in the vessel, and afterward taking them out, put them in another glasse, and so keepe them in a coole place: After the same manner you may make vineger of elder tree flowers.

To make vineger without wine.

To make vineger without wine; put into a vessel soft and daintie peaches, and vpon them perched barlie, letting them putrifie all a whole day, then straine them and vse the licour. Or else take olde figs and burnt barley, together with the inner parts of oranges, put all these into a vessel, and stirre them vp verie well and oft, and whenas they are become putrified and resolued, straine them out and vse the liquor.

Sweete vineger.

To make sweete vineger: Take fine pintes of strong vineger, and with as much new wine reserved vpon the treading out of the grapes, adde some quantitie of pitch, and put all together in a vessel which you must stop very carefully: and after that all these haue continued together for the space of some thirtie daies, you may vse thereof for vineger. Otherwise: Take a vessel of new wine, and mingle it with two vessels of vineger, and boile them together till the third part be consumed: Some doe adde three vessels of spring water vnto two of new wine and one of vineger, boiling them all together vntill the third part be consumed.

Mightie strong vineger.

To make mightie strong vineger, drie the drosse of grapes, two whole daies, then put it in new wine, put thereto some of the vnripe iuice of corne, and you shall make a strong vineger, whereof you may haue the vse within seven daies after. Or otherwise: put pellitorie of Spaine into vineger and it will make it strong. Furthermore if you boile the fourth or fifth part of vineger vpon the fire, and put it vnto that which is before prescribed, putting it after all this in the sunne some eight daies: you shall haue a pleasant and strong vineger. The rootes of couch grasse when they are olde, boiled grapes, the leaues of the wilde pear tree stamped, the rootes of brambles and whay, the quicke coale of burned acornes, and boiled cicke pease and hornes, euen euery one of these by themselves being cast into vineger doe make the same strong.

Pepper

Pepper vineger is made, by casting into vineger or hanging therein, whole pepper, made vp in a linnen cloath for the space of eight daies.

You shall know if there be any water in the vineger, if you put in to it any *Salmurum*, for then if it swell vp as though it would boile, you may boldly say that there is water in it.

To make vineger good to helpe digestion and for your health, take eight drams of the sea onion, and two pintes of vineger, put them together into a vessel, and with them as much of pepper, mints, and iuniper berries, then vse it afterward.

To make vineger of sea onions, you must put ten such onions salted into fittie quartes of sweete new wine, and fower pintes and a halfe of strong vineger, and if it be not sharpe enough, then twise so much, in a pot holding fittie fower quartes, and boile them till the fourth part be consumed: or if the wine be sweete, it may bee boyled to the spending of the third part, but such wine must be of his owne distilling out of the grapes before they be troden and very cleere. Otherwise, put into a vessel thirtie pintes of strong vineger, wherein let steepe for the space of twelue daies, the inward part of a white sea onion which hath bin in the sun thirtie daies: after that take the vineger and let it settle and abide in some place where you will to vse it afterward. *Dioscorides* in his 2. chapter of his fourth booke describeth another manner of making of it.

It is to bee obserued and noted that all sorts of vineger are best helped to keepe their tartenes, by putting into their vessels, at the bung hole a stick of red withie.

The one and twentieth Chapter.

Of the manner of making of veriuice.

THE most common manner of making of veriuice in this country, is to gather the Greene grapes from off the vine frames, or the grapes which are not yet ripe, and are left vpon the vines after vintage, and having gathered them to tread and presse them afterward, after the manner of ripe grapes, putting the liquor or iuice thereof into vessels, and salting the same by and by after that it hath purged out all his scum and filth, by boiling as new wine doth. In the northern countries they doe also make veriuice of crabs mingling a little salt therewithall. Some make a drie veriuice after this manner. They take the greenest that they can get, pressing the iuice thereout, which afterward they boyle in a brassen vessel vntill it become thicke and as it were congealed, then they drie it in the sunne, and keepe it for their vse: Other some boile it not at all, but drie it in the sunne till it come to the thickness of honic.

Ddd

To

To make your veruice looke more greene; and to be better; and to preuent that it may not turne and become mouldie or hoarie, you must the day after it is turned vp into his vessell, plucke a bunch or two of blacke grapes, and cast them into the vessell at the bung-hole, euen in whole clusters, and then to salt it after that it hath bene boiled.

The two and twentieth Chapter.

*Containing certaine discourses by the way of the inuention,
nature, faculties, differences, and
necessitie of wine.*

AS we haue in the former booke at large intreated of bread and of the differences thereof, according to the vse wherein it is employed, namely, the nourishment of mans body: so now after the manner of ordering and husbanding of the vine, and of the fruite which commeth of such husbanding thereof, which is wine, it shall not seeme vnreasonable if summarilie wee discourse and stand vpon the necessitie, nature, faculties, and differences of wine, whereof we make so great account ordinarilie in our drinking thereof.

*The necessitie
of drinke.*

And to the end that now we may come to the matter: Seeing that not onely the substance of mans body, but of all other liuing creatures is subiect, (through virall heate continually working in them) vnto a perpetuall waste, and expending of it selfe: nature being prouident ouer her owne workes, hath giuen vnto and put in all sortes of liuing creatures, an incredible desire of eating and drinking, to the end that this waste and losse of substance might be repaired and restored by the well bounded increase conning of eating and drinking: for otherwise naturall heate destitute of such her foode and nourishment, woulde quickly be choked and quenched. Now the substance of euery liuing body is threefold; the first is, and consisteth of spirits; the second of humours; the third of solide parts. All which three substances may possibly be repaired by a solide substance, if so be that such solide nourishment coulde easilie be digested and distributed throughout the whole habite and vniuersall masse of the bodie. But seeing that such is the solidenes, hardnes and grossenes thereof, as that it cannot, it was needfull that it shoulde be accompanied with some floting and fluide liquor, which might stand in steede of a wagon or chariot to conueigh and carrie it vp and downe the bodie. Ioine also thereunto that this fluent liquor hath without comparison a greater power then the solide nourishment to let and hinder the drying vp of the solide partes, and to temper all such heate, as otherwise vpon euerie light motion might at euery moment offende and hurt them. This losse and continuall expence of this threefold substance (which in the end doth first
bring

bring old age, and afterwarde death) doth growe through that iarre and disagreement which is in the fower elements, whereupon the whole body is compounded and framed, which elements also notwithstanding that they may seeme vnited and ioyned together in a certaine kinde of harmonie, concert, amitie, and inuolable bond, yet by reason of secret rancour & mutuall disagreement hapning through their contrarie qualities, they do so warre one vpon another, as that by little and little they doe procure the ruine, dissolution, and vtter ouerthrow of that body which before they had consented to frame and compose. Physitions ouer and besides this do acknowledge another cause of this expence of nature, and bringing in of olde age, and lastly death, which is forelloved and kept off by eating and drinking; and that is naturall heat, which feedeth vpon the radicall moisture, seated in the substance of the solide parts: which moisture, the sooner that it is dried vp, wasted, and consumed by the foresaid heat, so much the shorter is the course of life. But this radicall moisture and the continuall losse of spirits is repaired by the addition of eating and drinking, and so the life drawne forth to a longer terme. Wherefore, nature being carefull of the preservation and long continuance of the bodies of liuing creatures, which otherwise for the occasions about named woulde grow old & perish in a few houres, taketh not any other course for the same but by eating and drinking, which are the two meanes to susteine and preferue (so much as is possible) the liues of all liuing things. And as for eating, let vs leaue of to haue any thing to do with it, as hauing spoken thereof in the former booke, and let vs come to the second, which is drinking.

*The common drinke of all liuing creatures
is water.*

Old and ancient histories do sufficiently testifie that water was the first drinke which men vsed generally throughout the worlde, and wherewith they contented themselves a long time, to vse it onely for the quenching of their thirst: but afterward when voluptuousnes seized vpon mens appetite, they inuented and set before them diuers sorts of drinckes. Wherefore hauing reiected water as a tastelesse and vnfauorice thing, they haue in place thereof in all such coasts and countries, (as where the heat of the sunne might bring forth and leade along the grape vnto his full ripenes) chosen wine for the most excellent and delightfull drinke of all others: as in other colde countries and such whereas the vine coulde not growe, they haue either still continued their drinking of water, or fetched and procured wine from other places, or else haue prepared some other kinde of drinke coming neere in some measure vnto wine, which by the delicatenes thereof might reioice the heart, and gratifie the taste. Whereupon, some in stead of water haue taken vp the vse of wine, and others of beere and
D dd 2 ale;

ale; some of cyder and perrie, and others of all sorts: some of honied water, or water sweetened with sugar, and others of other drinks pressed and strained out from fruits, or the decoctions of roots. All France, Italie, Sicilie, Spaine, and all other countries which are farre off from the north, do content themselves with wine: the nation of the Turkes excepted, which being incensed either by the superstition of *Mahomet*, or stirred vp thereunto by the ancient custome of Turkes do vterly abhorre wine, and vie in steed thereof honied water. England, Scotland, Dalmatia, Polonia, Sarmatia, and other northren countries do vie partly wine, as procuring the same from other places, and partly beere, in such sort, as that by how much the countries are the colder, by so much the more they are giuen and addicted to wine and drunkennes. Witnes heereof is not onely Germanie, but also Frizeland, Dalmatia, and Flaunders, the inhabitants of which countries doe not onely strue who shall drinke most, and extoll drunkennes vnto the skies: but also doe scoffe at sobrietie, and so highly disdain such people as strue to liue soberly and temperately, as that they thinke them the most vnwoorthie of their alliance and companie. And yet (notwithstanding that so many sorts of drinks be growne in request in steede of water in many countries) wine seemeth to me to beare the bell, as being the most pleasant, delightfome and excellent drinke that can be found or thought vpon.

What is ment by wines.

The iuice then of the grape, which either runneth from the grape being full ripe, or is pressed out with seere or the presse, before it be boiled, is called new or sweete wine, but after that it hath boiled and thereby cast forth all his scum and dregs, it is properly called wine. Wherefore this boiling or working, by which in fine it is fined and settled from all his excrements, is not any manner of putrefaction, but rather an effect of naturall heate ingendred and naturally rooted in the same: for whereas the iuice newly drawne out of the grape, doth containe in it many excrements and those diuers in nature, which the naturall heate thereof cannot (without great strife, enforcement, and contending) concoct and overcome: it is necessarie, that in this contention it should worke out a heate, boyling and very great perturbation, by reason of the struglings of the two contrarie heates: (that is to say) the naturall, which doth concoct the crude and raw matter of the new wine, and by that meanes separateth the excrementous parts from it: and on the other side the strange and accidentall heate, which is kindled and raised in the crude and raw partes of the new wine, which incountereth the naturall heate no otherwise, then is done in the crises of sharpe sicknesses, at such time as naturall heate doth concoct the crude and raw matter of the disease, and attempteth to make separation of the noisome and annoying matter, many disturbances,

shakings;

shakings, heates, and other greuous symptoms doe fiercely assaile the partie, vntill such time as naturall heate (having overcome) proceede to the separating of the good and naturall humours from the excrementous ones, and expell those which were the cause of the maladie. And euen so it falleth out in the boiling or working of new wines, wherein the accidentall heate is overcome by the heate of nature without any worke of putrefaction: the heterogeneous and vnnatural matter being separated from the homogeneous and naturall: the vnprofitable and excrementous humour consumed, and the flatulent or windie parts thereof discussed, and to be briefe all the profitable iuice is in such sort concocted & digested, as that that which before was crude, flatulent and hard to be digested, is become gentle, tractable, fanourable, and very agreeable for mens vse, as though it were quite changed and altered from his nature. Of new pressed wine is made the wine called *cute*, in Latine *Sapa*: and it is by boiling the new pressed wine so long, as till that there remaine but one of three parts. Of new pressed wine is also made another *cute* called of the Latines *De-* ^{*Sapa.*} *frutum*: and this is by boiling of the new wine onely so long as till the halfe part be consumed, and the rest become of the thicknes of honie. Sometimes there is a wine made called *Passum*, and it is when the grapes haue endured the heat a long time vpon the vine.

The inuentors and first finders out of wine.

Such as haue written in Hebrew, as also the scripture it selfe doth testify that *Noe* was the first author of wine. *Nicander Colophonius* saith in his verses, that wine was called *oinos* in Greeke, of the name of a man which was called *Oenus*, and first pressed out the new liquor out of the grape into his drinking cup. Others write that *Icarus* was the first inuenter thereof: and that very shortly after his inuention he had condigne punishment therefore, as being slaine of the desiers of his vineyards they being drunke. Whereupon *Propertius* saith,

O Icarus th' Atheni in clowne,

Deferuedly thy life throwes downe.

Athenus saith that the vine was first founde neere vnto the mount *Etna*, and that a dog passing that way, plucked vp a little branch of a vine tree out of the earth, and that *Orestes* sonne of *Deucalion* which rained in that countrie caused the same branch to be planted againe, whereout there sprang many shoote of vines, which he called *Oenus* of the name of the dog, which had pluckt the same branch out of the ground: whereupon also the ancient Greekes called vines *Oenas*. The Latines say that the vine is called *Vitis, quasi vita*, because that wine doth quickly restore the vitall spirites being wasted and spent, and doth comfort, repaire, increafe and strengthen the naturall heate that is weakened, which is the principall instrument of life, in so much as

D d d 3

that

that by the vse of wine, it is made more freely disposed then it was before to performe all manner of actions requisite for the life of man. Olde writers are not of one minde concerning the first originall and inuention of the vine, for every one of them almost hath his severall opinion. But as concerning my selfe I thinke that the vine was brought forth of the earth as other grasse, herbes and trees were from the beginning of the world, and that it brought forth grapes of it selfe without any tilling or dressing, and those like vnto them which the wilde vine (called of vs *Labrusca*) doth now bring forth, but that the first fathers did not so quickly know the vse and profite of the vine. For in *America, Florida*, and the new found countries, there are great store of vines growing plentifully and in great abundance without any arte or industrie of men, although the vse of wine be as yet vnknowne to the inhabitants of those countries. *Plato* in his *Cratylus* saith, that wine is called in Greeke *divos quasi dionysios*, that is to say, iudgement, consideration and aduisednes, because it furnisheth the intellectuall part with iudgement and aduise, because by his quicknes it restoreth the spirits, whereby it strengthneth the minde as well as the bodie, as *Mnesibius* hath very well reported of it. Some likewise say that the Greekes call *divos quasi dionysios*, that is to say, profit and vtilitie, because it is infinitely profitable. The Latines call it *Vinum à vi*, by reason of the violence it offereth to the spirit of man, when it is taken out of measure. The cause likewise why the olde writers called it *Tementum* was because the immoderate vse thereof holdeth captiue and corrupteth the minde, that is to say, the vnderstanding. We will define wine to be a iuice extracted and pressed out of ripe grapes, purified and fined, contained in vessels fit for the receiuing of the same, conuenient and agreeable vnto mans life, and therefore the liquors of the grape newlie pressed out is not to be called wine, because it is not fined, neither yet doth veriuice deserue the name of wine, because it is pressed out of grapes as yet not ripe.

The temperature of wine and of the liquor newly pressed out of the grapes.

The new pressed iuice of the grape is of temperature hot in the first degree, but wine is hot in the second degree, yea in the third if it be olde, it is likewise of drines proportionable to his heate. It is true that according to the regions, grounds, inclination and disposition of the yeere, and such other differences which doe alter and change his temperature very much, it falleth out to be sometimes more sometimes lesse hot. The wines that *Spaine, Italie, Languedoc*, the country of *Narbonne* in *France, Gascoigne* and other hot countries doe bring forth, prooue hot and drie in the end of the second, yea in the beginning of the third degree, especially when the constitution of the yeere falleth

Why it is called
Vinum.
Why *Tementum*.
The definition
of wine.

out to be hot and drie, and when they are of a middle age. But such wines as grow in grounds about *Paris* or other countreies which draw towarde the westerne or northren quarter, doe scarcely fall out to prooue hot in the beginning of the second degree, no not in a hot and drie yeere, and though they be growne to a middle age, as not hauing passed the age of the first yeere. For when the yeeres fall out cold and moist, all these kinds of wines for the most part growing in these countreies become greene and rawe, and for the same cause called greene wines, and those so weake, that hardly may they be iudged to be hot in the first degree, and the yeere expired and gone about, their heate being likewise expired and spent, they either become altogether fower, or hauing lost their smell and taste proue to be naught and corrupted. Whereupon that which the olde writers have deliuered concerning the temperature and qualities of olde wines cannot be proued true of such wines as growe in these countreies, wherein the greatest part of *French* wines within three or fixe monethes, or at the furthest by the ende of the yeere, growe to the full top and perfection of their goodnes: whereas on the contrarie, such as grow in hot countreies, and become themselues more hot, will not be at the best, before the fifth, sixth, yea before the tenth yeere: which if it be so, you must thinke that the sinewes and other senses of the body, doe receiue most harme by olde wines which growe in hot and dry countreies: and that they are the lesse offended and hurt of the olde wines which growe in this our *French* soile which is more colde. In this countrey new wine being sufficiently boyled vp and fined, ^{as} it is more pleasant to the taste, so it is more hot, cleane contrary to that which groweth in hot countreies. *Dioscorides* writeth that olde wine for as much as it is hotter, doth hurt them very much which feele some weakenes in some of their inward parts: but we cannot say the like of our wine when it is old, but rather of our wine when it is new, for the same reasons. Wherefore it followeth, that the opinion of *Dioscorides* and diuers other physicians, touching the heate and temperature of old wines, is to be vnderstoode of wines that growe in countreies that are more hot, and not of such wines as (if they be daintie and delicate wines) will attaine the height of their goodnes and summe of their perfection in fixe or eight monethes, or at the furthest by the end of the yeere, in such sort as that the same being ended, they waxe fower: yea, if they be right noble wines they be well forward vpon and towarde their perfection in the beginning of the seconde yeere, or somewhat after. The force and naturall heate of the delicatest *French* wines is gone after the first yeere is once past: but if a noble wine it sadeth and falleth away by little and little, not before the second yeere be past. The wines of *Gascoigne* and *Aniou*, growing in a hot and drie season, draw very neere vnto the nature and

Olde wines are
hotter then the
new.

New wine is
hotter then old in
France.

temperature of the wines whereof old writers haue spoken : because the greatest part of them may bee kept vnto the thirde yeere. The wines of *Orleance* are at the best the second yeere, and it staith with them to the end, but when the second yeere endeth, they beginne to loose their goodnes.

Now if the case stande thus in hot countries, it is better to abstaine from old wines, then from new which are not yet altogether fined, for their old wines do heate out of measure; but the new wines stirre not vp any heate that may molest and trouble, and yet they also be verie hurtfull, because they digest very hardly, and beget many obstructions. Wherefore in countries that are more hot, newe wines may be drunke without any preiudice to the health, being of a thinne substance and well fined, because they haue but a weake heate. But in these our countries which are cold and moist, old wines may be vied, as also the new which are of a thinne substance, well purged and fined. Notwithstanding our countrie olde wines, in as much as after some long time they loose their heate, and thereby heat the lesse, are no so hurtfull vnto the head as the new, or those which are of a middle age.

The iuice of
the grapes not
having yet
wrought.

New wines or
the iuice of
grapes which
haue lately
wrought vp.

The iuice thereof newly pressed from the grape (in as much as it is rawe, windie, and of hard digestion, if therewithall it do not ouerturne the stomacke and prouoke fluxe of the belly) doth stay a long time in the stomacke and places thereabout, swelling and blowing vp the same, and therein begetting rebellious obstructions hardly taken away and remooued, as also it causeth troublesome dreames, and cold and durable diseases.

New wines which are not as yet thoroughly digested, are in temperature and facultie very like vnto the new pressed liquor of grapes, for euen they are so farre off from perfection, as that they also become of hard digestion, and which is more, doe not easily passe through the bowels and veines, or prouoke vrine any thing at all, being the great and soueraigne helps, which are to be looked for to come from wine. Yea furthermore, they oftentimes hang and lie long in the body, and become very subiect to soure in the stomack, if there be but some small quantitie thereof taken more then is conuenient.

The benefite
of wine.

Wine which is well and sufficiently digested and wrought, and thereby purified & fined from all such excrements and lees, as either the new pressed liquor is wont to cast vp, or the same after further digestion is wont to settle downe to the bottome, hath his vertues and properties all quite contrarie, vnto the vices and inconueniences which accompanie the raw liquor and newly concocted wines. For it is concocted easily and caried through the bowels and veines quickly, it bringeth downe and aswageth the fulnes and swellings rising about the principall parts of windie or distending causes, as crudities and such like: it deliuereth the wombe or matrix from such obstructions,

as the naturall excrements thereof are wont to breed therein; it increaseth the strength of all the instrumentall parts: it maketh way for the euacuation of all manner of excrements, and so prouoketh sweate, but principally vrine: it causeth sleepe and cureth cold poisons: it strengthneth the stomacke more then all the rest of the parts of the body, as being first receiued and intertainned into the same, and heereupon it becommeth a great friend to digestion, prouoketh appetite, succoureth and relieueth the hart by speciall propertie, thereby speedily repairing such naturall and vitall spirites, as haue beene wasted by sodaine euacuation, watchings, or other occasions: it nottifieth also, preserueth, sustaineth, and strengthneth naturall heate, whereas it beginneth to faile. Heerby it worketh vpon the vnderstanding, awaking and rousing it vp: cheereth and encourageth the faint and languishing, and recreateth and reioiceth the spirits, in regarde whereof *Homer* saith, that the gods haue giuen wine to men, for the driving away of their cares and troubles. And *Socrates* a guest at *Platoes* feast, praiseth the moderate vse of wine in feasts and banquets, because (as he saith) it quickneth a man to that which is good: and maketh the minde more readie to execute his offices and duties. Lastly, wine maketh the colour more liuely and cherrie-like, and is founde a most excellent, speedie, and singular remedie against all swoonings and faintings which happen through excessive euacuation, or crudities molesting and troubling the vpper mouth of the stomacke. And in as much as it attenueth, concocteth and discusseth crude and cold humours, and flatuosities abounding in flegmaticke and melancholicke persons, it becommeth a most excellent drinke, not onely for flegmaticke and melancholike ones, but also for all such as are of a colde and moist disposition of bodie, but especially for old folkes, and principally in sommer, in such countries as are giuen to be colde.

The annoyances, hurts, and discommodities of wine.

And yet notwithstanding that wine surpasse in excellencie and goodnes all other sorts of drinckes, it worketh many annoyances by reason of his quantitie, qualitie, or vaporoulnes. The most notorious and common annoyance that the vaporoulnes of the wine doth cause, is drunkenness: which as *Athenens* recordeth, maketh men fots and senselesse, and yet so talkative & prating, as that they cannot hold their peace, neither yet conceale any thing they know: whereupon the proverbe groweth, that wine goeth barefoot: because the drunkard lieth open & naked on euery side, & couereth or hideth things no more then the Steele-glasse, for which cause the Poet *Æschylus* hath written that the pictures of mens bodies are commonly to be seene in brasse: but the shape and fashion of the minde in wine; And *Plato* affirmeth that the manners & disposition of euery man is knowne by wine. The Poet

Theognis

The hurts and
inconueniences
that wine wor-
keth.
Drunkenness.

Wine goeth
barefoot.

Theognis doth likewise aduertise vs, that as golde is prowed in the fire, so the vnderstanding part of man by wine, in these verses:

Quale sit ad motis explorant ignibus aurum:

Mens hominis vinum sanasit anas probat.

Notwithstanding, when the braine is full of flegme, the immoderate vse of wine doth not so much make such men to be giuen to much talke, as to feele a great heauines in their heads, and to fall into deepe and sound sleepe. Ancient writers, as saith *Plutarch*, consecrated the disease called the Lethargie vnto *Dionysius*, because that such as spoile themselves with drinking of wine, for the most part fall into such kind of blockishnes, feeling such a drowisie heauines in the head, forgetting to remember what they shoulde doe, and suffering themselves to fall right downe like dead men: For wine (as *Aristotle* obserueth) fitteth the severall natures of diuers humours, and applieth it selfe thereunto, howsoever that when it maketh drunken, it driueth the vnderstanding from her accustomed estate, corrupteth the memorie, and disturbeth all the senses. Notwithstanding, it maketh not all drunkards in all points alike, for some it maketh lumpish and drowisie, as such (as I haue saide before) as haue their braines repleate with flegme: others merrie and iocund, as those which are sanguine: manie to be giuen to contentions, and much prattle, as such as are subiect to yellow choler: other some to be giuen to picke quarrels, do wrongs and worke much harme, and those are such as are subiect to blacke choler. And againe, other some mute and dreaming, as those which are subiect to a cold melancholicke humour. Furthermore, such as become foolish and senselesse by hauing drunke too much wine, their braine being filled with great quantitie of blood and spirite, doe feele a heate throughout their whole body, but chiefly in their head, except they be such as waxe cold and benumbed through their folly, as in whom the naturall heate is not quickned and kindled, but rather smothered and choaked by reason of the excessive quantitie of wine they haue taken; no otherwise then as the fire is quenched when there is too much wood heaped vpon it: and the flame of the lampe put out when there is too much oyle in the lampe. For as a little deale of fire is choaked through a great heape of wood; euen so naturall heat is often times strangled vpon the sudden by the immoderate drinking of wine. But and if it be yet so drunke immoderately, as that it cannot extinguish and suddenly destroy the naturall heat, at the least by snubbing and checking of naturall heat, hurting and infeebling his actions, as also in diminishing the strength of the body by surcharging of it with heauie loades of superfluities: accidentally it cooleth in such sort, as that it bringeth to nothing and quite vndoeth the prouocations and acts of lust, which of it selfe and by his owne nature it might otherwise marvellouslie prouoke. And hereupon

hereupon it is that *Aristotle* saith, that the seede of drunkards becometh dead and fruitlesse, and their children blockheaded groutnolles: Wherefore euen as wine (when as by his feruent vapour, it alleieth the head and filleth the braine) prouoketh drunkennes and foolishnes: so when the saide vapours are thickned somewhat and congealed into a ferous and waterish substance, by the coldnes of the head, if they be not discuffed and spent by the power and force of nature, the excrement which shall be thereby ingendred (although that the drunken fit being passed ouer, the party come againe to the enioying of his former estate and seeme to be well) if it remaine long time in the braine, and being fast fetled therein, grow further and gather more vnto it, doth in the ende stirre vp many diseases of the head, as hardnes of hearing, deafnes, noyses in the eares, blindenes, the falling sicknes, conuulsions, palsies, Apoplexies, and many other such like, of all which it is not otherwise to be accounted the cause and originall, then by way of accident, as also of that sudden strangling disease, which it causeth not but verie seldome. On the other side, if this excrement gathered in the braine by the immoderate vse of wine, happen to fall downe vpon the inferiour parts, it will breede many destillations & catarrhes, hoarlenes, rheumes, coughes, gouts, difficultie of breathing, and many other symptoms, verie hard to be cured. Yea and by his vaporoulnes, how soberly, and in how moderate quantitie soeuer it be drunke, it becommeth noysome and hurtfull to such as haue a weake braine, and their sinewes and ioints infirme and feeble: for vnto such people it becommeth so egregious an aduersarie as that if one troubled with the gowte, should at the same time that this paine is vpon him, talte but some fewe drops thereof washing his mouth onely therewithall, he shall presently feele his paines increased, and falling into a far greater rage. Yea which is more, such excrement ingendred in the head, getteth there such a kinde of enimitie and aduerse qualitie, and that so at iarre and maliciously bent against the iointes, as that it rusheth it selfe in his destillations, rather vpon the iointes then vpon any other parts, and so causeth gowtes and ioint aches. Finally this excrement being of a subtile and sharpe substance, falleth and penetrateth easily into the lungs, as also corrupteth and exulcerateth them. There are also other most dangerous annoyances which wine of it selfe and by his very nature causeth. For in as much as it is of a hot and drie temperature, if it be not drunke moderately and well delaid, by the long vse thereof in hot and drie bodies, it is woont to ouer heate and drie their noble partes, to ingender great store of cholericke humours, which standing without remouue and motion, must needs breede manie maladies and diseases.

From hence spring out agues both continuall and intermittent, inflammations of the inward parts, as the liuer, spleene, and lungs, the pleurisie,

Wine fitteth
the dispositions
of the drinkers.

That drunkards
becometh dead
and fruitlesse
and their children
blockheaded
groutnolles.

pleurisie, passion of the reines, and such other inflammations of manie other parts, which haue not as yet any proper name assigned them. Hence likewise grow all itches, tetters, wilde fires, flying fires, cankers, and all sorts of vlcers. Those therefore that are prone and apt to fall into such inconueniences of diseases, or which are already through the ill ordering of their life fallen into the same, must altogether abstaine the drinking of wine, or at the least drinke but a very little, yea though it should be very weake and well delaied with water. The olde writers, and amongst others *Cicero* in his third booke of the nature of the gods, thought it good, that seeing wine doth seldome profit, and hurt very often, that it were better not to permit it at all to be vsed of those which are sicke, rather then vnder a conceited hope of some doubtful health, to expose and lay them open to manifest danger by the vse thereof. Norwithstanding we daily finde, that the vse of wine is very commodious and profitable for cold and moist complexion being such as are troubled with colde and moist diseases. Wherefore the wife and well aduised Physitian may tolerate the vse thereof, when he knoweth that there is neede for the concocting of some cold diseases, and shall deeme it altogether in hot diseases: yea and oftentimes also in cold diseases, as in such whose conioyned and next cause he findeth to be nourished and maintained by some primitive and antecedent cause that is hot.

That it is not good for such as are in health to vse pure and vnmixt wine.

That vndelaied wine is not wholesome for such as be in health.

The learned of ancient time haue alwaies permitted the moderate vse of wine being delayed with water, when it should be vsed of them which were whole, but haue alwaies reiected and disallowed pure and vndelaied wine, as also sursetting, and that in their feasts and bankets. For *Hesiodus* commandeth that there should be three thirds of water mixed with one fourth part of wine, and this not to be vsed commonly, but at some solemne feasts and bankets. *Athenaeus* writeth that the Grecians vsed to drinke two glasses of wine, delaied with five glaifes of water, or one glaife of wine delaied with three glaifes of water. And in very truth our ancient predecessors did put and mingle wine amongst water, and not water amongst wine: for they put but a very little quantitie of wine into their water as *Theophrastus* reporteth. Which custome and vse of sobrietie must be followed and imitated by the decrees and appointment of Physitions. And as for the quantitie of wine to be drunken, the poet *Ebulus* bringeth in *Dionysius* speaking to that end in this sort.

Tres tantum pateras, quibus est mens sana propino:
Quarum quae fuerit prima, salubris erit.
Proxima delicias futura est, tertia somnum:
Luxus erit possum transilisse modum.

This

This decree and ordinance hath bene approued by them which haue forbidden by their lawes, that the Romane priestes should not drinke any more then three glasses at a meale.

And as concerning age, wine is hurtfull vnto yong children, as also to them which are growne vp to greater yeeres: because that wine by his very much drines destroyeth and ouerthroweth their hot and moist constitution, which *Hippocrates* commandeth to be maintained by things that are moist. And that it is so, we see that such children as vse to drinke wine howsoeuer it be delaied (their liuer being dried and ouer heated, by the continuall vse of the said wine) doe fall for the most part into a long and lasting fluxe of the bellie, and in the end into an irreconerable hecticke feauer, which the common people call a withering and pining away, and out of which there is not one of a hundred that escapeth. For this cause *Galen* was altogether against the giuing of children any taste of wine, as also any others, who like children are of a hot and moist temperature & constitution, because that by his vaporoufnes it filleth the braine, and doth infinite hurt and mischief. *Plato* in his precepts of ordering a common wealth, commandeth children to be kept from wine till they be fifteene yeeres olde, and his reason is, for that fire must not be added vnto fire: from fifteene vnto fortie he permitteth the moderate vse thereof: and after this age he aduiseeth to drinke much and that very good, for the mitigating and qualifying of the discommodious, troublesome and noysome occurrences which may happen in the life of man: and this his opinion is not altogether to be reiected. For as wine is altogether enemie vnto children: so it maketh recompence in the good it doth vnto olde persons. *Plato* saith that wine hindreth those which prepare themselves, to doe, speake or enterprise any good thing: and this was the cause why *Plato* forbade the vse of wine to sage and learned men, except it were in their feastes or sacrifices. The Romanes for sundrie reasons did likewise forbid the vse of wine to women and seruants. We reade in histories that the vertues of many famous and great perionages haue bin obscured & eclipsed by the vse of wine. Of this we haue *Lysander* captaine of the Lacedemonians for a witnes, who was a prudent, wise and good disposer of all his matters and affaires, saue that of the vse of wine; *Antiochus* the great, *Demetrius* lying for a pledge and hostage at Rome, *Alexander* of Macedonie, *Dionysius*, the younger, the tyrant, *Zenocrates* the philosopher, *Anacreon* and *Alcaeus* the Lyricke poets, and *Aristophanes* the Comedian, *Ennius*, *Marcus Antonius* Triumuir, *Caesar*, *Vencesius*, and such others. For this cause the *Locri* inhabiting the promontorie *Zepherium* in Greece (as *Athenaeus* recordeth) thought it to be an offence woorthie death for to drinke wine. Of the same opinion at this day are the Sarazins, moued thereto as well by *Alabamers* law, as also by the imitating of the ancient custome of the Gentils and

For what age wine is in.

and Arabians. Let vs then conclude that wine not onely in excessive quantitie and by reason of his vaporosities, doth cause all the annoyances already set downe, but that also in respect of his heate and drynes, it is most pernicious vnto hot and drie natures, as also vnto hot and moist ones, if it be not well delayed; especially if it be continually vied, though it be taken in neuer so moderate a quantitie. And yet notwithstanding more or lesse, according to age, custome and manner of liuing, the season of the yeere and constitution of the aire: because that in olde folke and all such as in whom crude flegme and melancholike iuice doth abound, his heat and drines is in such sort rebated, that for the most part it is vsed of them very safely and securely both as a well nourishing, and likewise as a good physcally helpe, especially in winter and cold countries. You must therefore in all sorts of natures, so temper all his noisome qualities by the mingling of water, as that it may be taken with the least hurt, that possibly may be. When as therefore the wine is mixt with the water, the partes both of the one and the other are broken and parted as it were into small inuisible portions, whereupon there ariseth betwixt them both a mutuall doing and suffering, and their qualities so confounded and becomming one (notwithstanding their former contrarietie) as that into how much the lesse partes the diuision is made, by so much the more apt and easie they prooue to be mingled and made one. Whosoever therefore shall mingle wine with water, or water with wine, must first stirre them a long time, and then before he drinke them, let them settle and rest a while. Because for certaintie the contrarie qualities of the wine and water will be so much the more repressed, corrected, rebated and vnited, by how much they are the longer time and the more exactly mingled together. Although that (if we will examine the things a little neere) we shall finde that euen wine delayed, ceaseth not to offend and doe harme, if it be taken in ouer great quantitie, or at vnseasonable times, especially of such as are of a hot and dry disposition, as we shall declare hereafter. But this is inough which hath bene said of wine in generall: now let vs examine all the particular differences of the same.

The differences of wine.

The differences of wine.

In wine we are to consider the colour, relish, smell, facultie and confidence, for from these are taken and gathered the principall differences of wine. As concerning the colour, some is white, some of a light, some of a sad yellow, some betwixt red and white, like to the colour of home: other some of a deepe red, and others of a pleasant red, blacke, or darke shadowed.

White wine generally is of a thinner substance than the red, it is easily concocted & digested, it pierceth speedily through the whole body,

worketh

worketh more vpon the veines, but nourisheth lesse. That sort of white wine which is thinne, hot and full of wine, is concocted and distributed more speedily then any of the rest, purging the blood by vrine: but it offendeth the head most of all, especially French white wine. Water by reason of his coldnes, and red or darke shadowed wine by reason of his thicknes doe slowly passe away by vrine. The contrarie is found in white wine, especially such as is of a thinne substance and which is hot. That which is of a deepe yellow, or somewhat inclining to a yellow hath his vertues, approaching very neere to those of the white wine.

Red wine is wont to be more flow of concoction then all the rest, as also to be distributed throughout the whole bodie, or carried away by vrine, because it is of a grosser substance then any of the rest, but yet to recompence these discommodities withall, it nourisheth more, and offendeth the head lesse. The lighter red wine holdeth the meane and middle catch of all the rest. White wine which is of a thin and waterie substance without any verdure or sharpnes of taste, such as we haue great store of here in our countrey, is likewise of an easie digestion, and quickly passing and distributed through the bodie, and yet notwithstanding hurteth not the head, neither increaseth any great store of heate, in so much as that this kinde of white wine is more wholesome and safe both for the found and sicke, then the white wine which is thinne and full of wine in taste, especially in persons that are fat and full bodied, because it nourisheth the least of all the rest. *Galen* is of iudgment, that red and thicke wines are turned without any great paine into blood, and so next vnto them the blacke or deepe red and grosse wines, if to be they be accompanied with some small smatch of sweetnes: and next vnto these which are of a light red, those which are of a deepe red, thicke substance and astringent facultie, not for that they can be digested more easily, or distributed more speedily, then white or yellow wines, but because that being once concocted in the stomacke, and sent vnto the liuer, they are easily changed and turned into blood, notwithstanding they seeme not the least remoued and differing from the nature of the same. For white and yellow wines of all other are wont to be the speediest concocted in the stomacke, and to be conueied vnto the liuer: but they yeeld lesse store of blood then those which are thicke and red, and so do far lesse. Wherefore yellow wine or the redlike wine being of a thin and pearling substance, by how much it approacheth the neerer vnto the faculties of thin white wine, by so much it begetteth the thinner and more fluent blood, and therewithall hot if it be hot, or temperate if it be waterish and weake, such as the Grecians vse to call *Oligophorum*, which signifeth a wine admitting but small quantitie of water to be mixed therewith: yea a reasonable colde blood, if it bee yet somewhat Greene and vnripe. But the deepe red wine which is harsh and rough,

Red wine, or darke colour.

rough, whereas for his thicknes it is profitable to comfort the loose and wearish stomacke, but nourisheth not much: so in like manner it increaseth and redoubleth the obstructions of the liuer, spleene, and reines, as also it maketh a thicke, feculent and melancholicke blood, and so withall begetteth manie melancholicke diseases. The red wine that is somewhat cleere and thin, seemeth to hold of both, and to standeth as a meane betwixt them both. Wherefore *Dioscorides* following the opinion of *Hippocrates* hath rightly saide, that deepe redde wines were thicke, and of hard concoction and digestion: For all thicke wines, whether they be of a deepe or light red, do nourish (to speake the truth) abundantly, and fat the body, but they put the stomacke to more paine in concocting of them, then those which are somewhat cleare and of a thinne substance. Furthermore, they being of hard digestion and distribution, and not easily passing away by vrine, through the long and continuall vse of them, they ingender flatulous swelling and windines in the bellic and bowels. Wherefore yellow and white wines, that are of a subtile substance and very ripe, are to be better accounted of, and esteemed as more wholefome for all such as haue neede, or desire to be heated, as old folkes, Hegmatike and melancholicke persons that be colde of nature, as also for them that leade their liues in idleness, in colde countries, and cold seasons, as in winter, heaping vp great store of superfluities and rawe humors in the veines. For they are likewise more profitable for the furtherance of concoction to be made in the stomacke, liuer, and veines, then those which are waterish or sweete: but very many times they offende and hurt the head and sinewes, and make a full braine: for this cause they are enemies and contrarie to such as are hot by nature, or haue a moist braine, or their sinewes and ioynts weake and subiect to deffillations: for vnto such bodies the wines that are a little red and somewhat astringent are farre more meete and conuenient, because they be not so fuming, and therefore doe not charge the head so heauily. But as for deepe red wines, they are most fit and conuenient for diggers and delauers, husbandmen, dressers of vines and others which liue a toilsome and painefull liue. Wherefore white wines, yellow, red, or claret, and of those onely such as are of a subtile substance, delicate and watry, (called of the Greekes *εμπροσθε*, which is to say, admitting but small store of water to be mingled with them) are harmelesse to all and to be vsed with all safetie and securitie.

The white and yellow, or redlike wines which are of a thinne and subtile substance, together with the claret, weake, waterie, rawe, and greenish, being of a cold and moist temperature, (such as are very vsuall and common in the grounds about Paris) do nourish the body very little, and are harder to be digested, then those which will beare but a little water, but they coole and moisten more then the rest, and where

where as they nourish but a little, they are saide on the other side to make the body leane. They bring not any detriment or harme vnto the head, liuer, reines, or bladder, but being long vsed, they hurt the stomacke, bowels, matrix, and spleene very much: and which is more, are professed enemies to all such as are colde and moist by nature, and especially vnto old folkes. Contrariwise they are somewhat profitable for hot and drie natures, & if naturall heate be strong, they passe away, and are euacuated easily by vrine, and this is a thing that is common to all greene wines which are of a subtile substance. The like iudgement is to be had of diseases, for as they are tolerated with all securitie in hot natures, so in like manner they prolong and increase colde diseases. And thus sufficiently as it seemeth vnto me, concerning the nature, qualitie, and vse of wine, gathered from the colour thereof.

As concerning the relish. Some wines are sweete: some sharpe: some bitter: some rough and harsh: some sower and tarte, and both of them astringent: others of a mixt nature, betwixt sweete and rough: others greene or greenish, and these are very common and vsuall in the grounds about and belonging to Paris.

In generall, all sweete wines, whether they be white or red, doe nourish more then other, heate indifferently, prouoke thirst, swell and stop through the much vse thereof the principall parts, but the liuer and the spleene more then all the rest, especially if they be grosse and thicke, for looke how much the thicker they be, so much the more vnholefome they are. Sweete wine (saith *Hippocrates*) doth lesse burthen and charge the head, then that which is strong and full of wine, it lesse offendeth the vnderstanding also, yea it looeth the belly, but it is not good for such as abound with cholericke humours, for that it prouoketh thirst and windinesse: true it is that it is good for such as are much troubled with the cough, because it raiseth vp flegme the more easily in all such, except they be subiect to thirst and drinke *℞*.

Sweete white wine is of a thinner substance, then sweete red wine. It helpeth spetting more then any other, so that it bee not too grosse and thicke: for it concocteth rawe flegme in the brest, it smootheth and maketh plaine the roughnes of the inward parts, and in that respect is profitable for the lungs, reines, or bladder being rugged or rough: but in the meane time it hurteth the liuer, because that as I haue heere while saide it swelleth and puffeth it vp, and causeth obstructions therein. It canserth thirst likewise in hot and drie natures, because it maketh obstructions, and is easily turned into cholericke matter, as all other things are which are sweete. Notwithstanding, it procureth drunkennes lesse then any other, in as much as it offendeth the head but a little. *Dioscorides* hath spoken very rightly thereof, saying, that such sweete wine is of thicke substance, that it pallieth not

so easily through the body, and that therefore it nourisheth more then that which is of a thinne consistence and febitance. Hee saith further, that it swellth vp the stomacke, and like the liquor of grapes before it haue wrought, it looseth and troubleth the belly and inward parts. And this must be vnderstood of sweete wine, which is not come yet to his full ripenesse: and not of that which is thinne, cleare, ripe, and alreadie thoroughly concocted. Which kind of sweet white wines are sent hither in great abundance from the countrie of *Anion*, and they hold their sweetenes two or three yceres.

Such sweete white wines are not so hurtfull as those which are not ripe, or which are thicke: they prouoke vrine sufficiently, loosen the belly, and moisten. Wherefore you must diligently and wisely discern and distinguish the sweete wine which is crude and vnconcocted, from that which is alreadie ripe and fit for to be vsed.

All sweete white wines doe nourish abundantly, but yet more or lesse, according to the proportion of their thicknes & grossenesse, and for this cause such as haue neede of restoratiues must vse sweete wines, especially if their reines, liuer, and spleene stande sound and free from all infirmities. For when the principall parts bee obstructed, and the veins full of grosse blood, then wine that is of a subtile substance is most needefull and profitable: when the veins are replete with colde and grosse blood, then sharpe, strong, and mightie wines are more conuenient: If the veins be full of hot and thicke blood, the wine that is sharpe and olde is not good, but rather a claret or white wine that is very watery, yea, and somewhat greenish if the stomacke will beare it, and the soile of the countrie permit it.

Galen affirmeth that no white wine heateth greatly, and that such as heateth much, cannot be sweet. And yet notwithstanding there are brought vnto vs out of hot countries many white wines that are very hot. And we haue likewise sweete wines partly growing in our owne countrie of France, as at *Longumeau*, and *Tonnervois*, called white beaten wines: partly brought from the countrie of *Anion*, excellent good, and very hot, which in taste resemble the saueur and relish of a *Hippocras* made of white wine, and will holde and continue sound and perfect good, three, fower, yea sixe yceres. In Greece their white wines are not founde to be very pleasant & sweet, as in this our countrie there are not to be founde any red wines very pleasant, except vpon their new pressing out. Notwithstanding the countrey of *Burdellois* doth furnish vs with sufficient quantitie of red wines, that are very sweete, but they are all of them of a thicke substance, and their iuice or liquor breedeth very many obstructions.

Harsh and course wines do procure vrine more then the sweete, but lesse then such as are of a middle kinde betwixt both, and yet againe, those which are tart and fower, do also prouoke vrine more weakly

Galen indige-
ment of white
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weakly then those which are of a middle temper. The rough and course wine doth corroborate the stomacke and principall parts by his astringent facultie, provided that the stomacke be furnished with sufficient strength and force of heate, for otherwise in a colde and weake stomacke it prouoketh for the most part to be hardly concocted and digested. Of all other wines it least hurrieth the head, but therewithal it prouoketh to be the slowest in distributing it selfe abroad into the veins and substance of the bodie: for which reasons it falleth out to bee vnfit to be vsed in swoonings, sodaine faintings, and all other feeblenesse, loosenesse, and languishing of the strength; as also where there are any notorious obstructions in the principall partes. But which more is, it bindeth the belly, or else looseth it not sufficiently.

We haue spoken of greenish white wines, whereunto the reddish Greene wine hath like qualities, especiallie if it bee of a thinne substance and waterie, and yet more if it be thinne, waterie, and pale. *Greene wines.*

Generally the Greene or raspe wine, in as much as it containeth more water then wine, nourisheth the body but a little, is of hard digestion, & so it moueth windinesse and wringings in the belly, because it is of a colde temperature. Hence it cometh that old folkes, colde and moist natures, and such as haue weake stomackes receiue damage by it: and next vnto these, such women as haue not their termes aight, and are subiect to pale and swarth colours. Notwithstanding it passeth away speedily by vrine, because it is thinne and annoieth not the head: and for this reason it is very profitable for all hot and moist natures, as for yong folkes, which haue a boiling and burning bloode in them if their stomacke be in good state, especially in sommer time: for which respect, being delaid with a sufficient quantitie of water, it will serue very fitly, (in like manner as the wine called of the Greekes *Olgotherrum*) in all such agues as wherein wine may be permitted, specially that it is somewhat hard of digestion, and causeth many obstructions. Such Greene wines, as together with their greenesse are astringent or sowre, are without comparison more hurtfull then any other enery waie, and in all respects, because they hardly ripen, and concoct, in gender obstructions, and passe very slowly either by vrine or stool. Notwithstanding, they become ripe in time, if they be let alone in cellars till the rawe and crude parts thereof be overcome by their owne proper and naturall heate. But it shall not seeme to exceede the boundes of reason, if we discourse somewhat more freely of the verdure of our wines, to the end we may be able to discern and finde out that which is in wines by way of purchase, from that which is naturally in them. *Galen* writeth that the astringent qualitie in wines is separated and remaining apart from their verdure, as their goodness is from their badnesse; besides, it is very likely, that in hot and drie countries,

Ecce 2

countries, there are not any greene wines growing naturally, but in this our countries of France, there are many greenish wines pressed out from grapes that are not yet ripe: but especially in cold and moist yeeres, some which are very thinne and waterie: others more thicke and grosse, and by that meanes either astringent, or else rough and harsh: strong and mightie wines if they bee neuer so little tainted with greenenesse, presently they become sowre, & altogether vnmeet to be drunke. But such as being pressed out from grapes, scarce halfe ripe, differ not much from the greenenesse or sharpnesse of common veruice, if they be not concocted by little and little through a strong and forcible heate, contained in their crude and rawe matter, and so in the ende become ripe, their greenenesse being by little and little diminished: and such are not passing of a yeeres continuance, serving rather for the rude and homely people, then for daintie and delicate personages. For certaine all greenenesse in wine is a fault in those wines wherein it is: but yet that is the worst of all the rest which hapneth vnto wines sometimes good and commendable, either by being kept too long, or else by hauing beene ill kept, or otherwile by some other occasion: lesse dispraisable and hurtfull without comparison is that which hapneth in our French wines, which by the weakenesse of the heate of the sunne, comming short of their sufficient concoction, become greene from their first originall and growth, as they which are greene, by reason of the greene and vnripe grapes, from whence they are pressed. For such greenenesse as hapneth vnto wines once good and commendable, is hurtfull vnto all men, and cannot be redressed, thereby making such wines vnfit to be employed about any other vie then either for medicine or sauces: whereas that which is borne and ingrafted into such greene wines, if it be not suppressed and digested by naturall heate, becometh onely hurtfull to colde and moist constitutions and old folkes: but not vnto strong, lustie, and hot natures, neither vnto them which are accustomed to trauaile, and to auoide idleness. You shall find many harsh, rough, and sower wines which are also greene: and in like manner you shall finde somethat are greene and yet not rough and course. Such as are rough and greene, through their vehement astringencie, do close, shut vp, drie and dul the throat, tooong, and other partes of the mouth: whereas such as are simply greene, doe not the like, but coole them onely. The rough and harsh wines in as much as they are raw and crude, and cannot be concocted and digested of their naturall heate that is but weake; yet they close and binde the stomacke, and by such occasion, stay the fluxe of the bellie. Wines that are simply greene, doe not the like, if they be not harsh, rough and astringent withall: and they doe rather annoy the stomacke, and all the membranous and neruous partes, by reason of their cooling propertie and qualitie, which being situate in a ^{thinne} ^{and}

and subtile matter, and therefore apt to pearse deeply into the parts, and by their qualities prouoking and disquieting the substance of the said parts, doth corrupt and dissolue the laudable temperature, force, and constitution of the said stomacke, and of the said membranous and sinewie parts. Whereupon it ensueth that such greene wines doe for the most part cause crudities, wringings, and the fluxe of the bellie, manifolde obstructions of the liuer & spleen, besides the disease called the Hypochondriacke melancholie. *Galen* denieth that wines which are hard and greene doe heate at all, and that the sower, rough and harsh relish doth actually consist in a meane matter, participating both of the waterie and earthie elements: but that the hard, greene and sower relish doth consist in an earthie & drie substance, which doth not manifestly participate of the water or any moisture. Whereby it may manifestly appeere, that neither the one nor the other relish hath any heat ruling in it, but colde, and that in the tart, harsh and rough relish accompanied with moisture, but in the sower with drines. But for as much as wines are seldom consisting of one only simple & pure relish; & that all wines (of what taste or relish so euer they be) are in temperature hot and drie, you must vnderstand that sower and harsh wines are accounted cold or else not hot, not simply but by comparison, because in deede, they heate lesse then other wines, and that not quickly and so soone as they be drunke, but in the end and after some continuance of time: for otherwise the opinion of *Galen* were not to be received, seeing that we obserue and see euery day, that all forces of wines of what taste or relish soeuer they be, be they hard or harsh, doe heate manifestly and make men drunke sooner or later, if they be received into a hot and strong stomacke, for their heate as a thing buried in crude and raw matter, although it be a long time first and with great difficultie, breaketh forth at the last, manifestting it selfe in the end, and bringing forth the fruits of his maturitie: and this we may finde in our French wines, which nourish, maintaine, recreate, yea and make drunke the husbandmen, vine dressers and other persons of poore handicrafts vsing to drinke the same. But let this suffice which hath beene said of the naturall taste and relish of wines: and now let vs search out the causes of the sownenes or tartnes, incident to good and commendable wines. Some thinke that wines grow sower through heate, because that daintie, weake and feeble wines are changed and turne sower in the spring time and sommer, and in winter retaine their naturall qualities intire and sound. This opinion is confirmed because that weake wines being stirred and tumbled in forcible sort, or carried far, or laid in cellars that are open vpon the south or easterne quarter doe quickly become sower. And contrarily such as are not tossed to & fro, or remooued, but kept in cellars lying vpon the north, do not sowe at all: as if it were by the cold that their vertues and good qualities

*The cause of
sownenes in
wines.*

lities were preserved: and by the heate; that they were changed and corrupted. So as the like in all points doth befall wines which are weake and waterish, to that which happeneth vnto a burning candle and to small and weake sparkes of fire, which if you lay open in the hot sunne, or before any great and vehement flame, you shall see them languish, yea waxe darke, and altogether to fade away and goe out. It is then through heate, that all the weakest wines turne sower, and that by hauing their weake heate spent and ouercome, by an outward and accidentall heate which is more strong, causing the same to fade and for the most part vanish quite away. For a weake nature cannot indure, either any strong heate or vehement motion: but fainting vnder them, it becometh waited and spent, and in fine perissheth. But contrariwise wines which haue their heate strong, and consist of such matter as is not easie or apt to be wasted and spent, being removed, rolled, transported, or els laid open to the south sunne, or kept in any hot place, doe not onely not sower quickly and in a short time, but rather become a great deale the more ripe, and are made more readie and better to be drunke. For that which befalleth through long continuance of time to strong, mightie, and noble wines, which are shut vp and laide in colde caues vnder the earth, by the means, power, vertue and efficacie of their owne and naturall heate, which concocteth, digesteth and ripeneth by little and little their crude and rawe matter: the same is effected and wrought in a short time in wines which are heated by arte, that is to say, by stirring and rowling, and by the heat of the sunne or of some fine subtil fire, which doth concoct and digest the most crude and rawe matter that they can bee founde to haue. For as the induring of the heate of the sunne, and the vndergoing of vehement exercises maketh stronger and more able the bodies of men that are hot and lustie; but on the contrary doth ouerthrow, weaken, dissolve and coole weake bodies: euen so hot wines are sooner ripe, concocted and digested, by heate or moouing either of the sunne, or of some hot fire made neere vnto them: but those which are more weake and waterie, if you heate them ouermuch, doe take great dammage and harme, and are weakened more by the working of such vehement heat, either of the sunne, stirring, or fire which corrupteth and spendeth at once and in a moment, some part & portion of their weake and feeble heat, which afterward in like manner by little & little will be ouercome and waited, and therupon such wines weakened and made vntauoric. It is the meane and middle heat therefore that all things receive profit by: seeing the immoderate and extreame is no lesse harmefull then colde. Wherefore after that the weake heate of wine shall for the most part become waited and spent, by the outwarde heate of the aire compassing it round about, it groweth sower, and so likewise it is wont to fall out, by the maliciousnes

of strong and piercing colde breaking the hart of the weake heate in the wine, and thereby killing the same. For when the saide heate is quite ouercome and banished, so as that the wine loseth his fragrant odor and pleasant sent of wine, it is not saide to sower, and therefore not called vineger, but indeede is called by the name not of wine, but of decayed and spent wine, which the Latines call *Vappa*. Furthermore, whereas amongst waterie, weake, and feeble wines, there are some rawe and greenish ones, which we haue declared already to be enemies vnto colde and moist natures: and other which are neither raw nor greenish but delicate ones and thoroughly ripe, but therewithall of a thinne and subtile substance, and which for their easines to be concocted and speedines in being distributed become very good and profitable both for founde and sicke, and are called of the Greekes *Oisophora*, because they will not admit the mingling of any great quantitie of water with them: the first may without any injury offered vnto their strength abide to be stored and carried to and fro, especially if with this naturall greenness, there be ioined some hartnes and roughnes. But the second cannot indure to be removed or carried to and fro: the reason is, the heat of the first is hid and lieth in a crude and rawe matter, whereof it standeth it vpon as much as lieth in it, to acquite and rid it selfe, a readie helpe whereunto is the moouing and stirring of the same, because heereby it is enabled the sooner to shew forth his selfe, and to manifest his force in a more powerfull and cheerefull manner then before, because the crude and raw matter wherein it lay, as it were couered and hid, is become refined and concocted in proceffe of time. Contrariwise, the weake heate of the second sort, which consisteth in a thinne matter or substance, and that already concocted, is spent and ouerthrowne with the least motion and heat, and therefore doth very easily evaporate and breath out all his force and strength. It seemeth that the opinion of *Galen* and other ancient writers, affirming that no Greene wine doth heate, must be vnderstoode of this second sort of wine called of the Greekes *Oisophora*, for that it is possible that the olde writers neuer knewe, neither euer heard tell that any greenish wines were naturally growing in places and countries that are hot and scorching. Certainly there is great difference betwixt that tartnesse or sowernesse which is an accidentall vice or fault in wines, and that greenenes or sharpnes which is a naturall taste and relish in them, pressed out either from grapes naturally Greene, or else from grapes which haue not as yet growne to their full maturitie and ripenesse. For the tartnesse of wines besides the great sharpnes and acrimonie therein, being such as is in vineger, whereby it dissolueteth and offendeth the stomacke, membranes, and all the sinewes is likewise of that nature, as that it cannot by any skill or cunning bee subdued and corrected in such manner as that the wine once tainted therewith,

therewith, can at any time be restored vnto his former goodnes, and made such as may bee drunke without the preiudice and hazarde of mans health. But on the contrarie, the greenenes which continueth in wines as bred in them, besides that it is alwaies free from the foresaide sharpnesse and acrimonie, is founde not to continue anie long time, in as much as the raw and colde matter, wherein the heate of greene wine consisteth, is concocted by little and little, and thereupon this heate (thus as it were buried in this crude matter) doth by little and little growe strong, and sheweth forth his force more effectually, so that the saide greenenes is by degrees diminished and wrought out, and the wine made a convenient and profitable drinke for the vie of men: yea, and that also euen where this greenenes through the weakenes and imbecillitie of heate cannot any white be wrought out and taken away, for so wee finde it, seeing that greene wines are not refrained, but ordinarily drunke and vsed.

Diocorides was of iudgement, that sower and rough wines caused headach and drunkennes, whereas our harsh and rough wines, the rougher they are, do offend & annoie the head so much the lesse. And for a certaintie, all manner of drinke by how much it is the more odoriferous, and of a thinne and subtile substance, so much the more it disquieteth and disturbeth the braine with his vapours, and ministereth larger matter for the nourishment of rheumes and distillations. Notwithstanding, if sower and rough wines do happen once to cause drunkennes, then such drunkennes falleth out to bee of the worst sort, & most rebellious and hard to be ouercome. So then all our sowerish, harsh, and rough wines, such as are those of *Burgundie*, as they are nothing so odoriferous, so neither doe they cause any whit like so manie exhalations and vapours, and therefore also do they lesse offende the heade, and procure drunkennes then any others: And so as that *Galen* hath therefore testified of them, that they ought to be well accounted of and esteemed profitable and fit to be vsed of such as haue the goutte, as also of all others which are subiect to the distillations of the braine.

Such wines are called mungrell or bastard wines, (which betwixt the sweete and astringent ones) haue neither manifest sweetness, nor manifest astringtion, but indeede participate and contein in them both the qualities.

Of the consistence of wine.

The consistence of wine.

As concerning the consistence of wine, some is of a thinne, subtile, and cleere substance, and other some of a thicke and grosse: and some of a meane and middle consistence betwixt both. Of those which are of a thinne and subtile substance, some are weake and waterish (which the *Græcians* call *ἀραιαί*, that is to say, not admixing the

the mixture of any quantitie of water, of which wee will speake more ample hereafter, being (as it were) like vnto water in thinnes and colour, and hauing little or no sent in them, neither yet any manifest heate. They nourish but a very little, for there is but a very little of their substance turned into bloud. But they cause great store of vine and agree better then any other wines, with all sorts of natures if we may beleue *Galen*. There are other weake, waterish, and greenish wines, verie ordinarie in this countrey, which are hurtfull vnto olde men and all other colde constitutions, as hauing in them verie small store of heate: and yet sometime profitable vnto hot constitutions, as in sommer, according to our former aduertisement. There are others that are very good, but hot and strong, of an easie concoction, and speedilie distributed, but nothing lesse vaporous then white wines, whereupon they trouble the braine, and make men drunken, and so prooue hurtfull to such as are rheumatike and subiect to distillations: Such wines are brought hither out of *Gascoigne*. very well pleasing princes, and men of great estate, all of them being of a yellow colour, either deeper or lighter. The wines of *Ay*, as they are inferiour to them of *Gascoigne* in strength: so they are better, and without comparision more wholesome.

The grosse and thicke wines, some of them are simple such, and consist in a mediocritie, and other some are very grosse and thicke. We haue heeretofore declared that grosse wines are of a more hard concoction, and slow digestion then other wines are; but being once concocted and digested, they yeeld a more firme and solide nourishment vnto the bodie. And of them more then the rest, such as are very grosse and thicke, which for certaine are hardest to be concocted and digested of all others. These sorts of wine, for that they ingender manie rebellious and obstinate obstructions, are not fit to be vsed but of dressers of vineyards, and such other as leade a toilsome life, as wee haue declared before. Such wines as are indifferent thinne, and indifferent thicke, are profitable for many purposes, and the rather in that they charge not the head as the strong wines doe, and those which are of subtile substance: neither yet ingender obstructions, as those which are thicke and grosse doe. The wine called of the *Græcians* *Oligophorum*, is the holeiomest of all others.

Wine smelleth well, or els nothing at all: the odoriferous wines are verie apt and commodious for the begetting of good humours, and to recreate and fetch againe the powers of the body, but they asfaile and charge the head, especially if it be of a subtile substance, and of a reddish or yellowish colour, or of a deepe yellow: they are also more hot then the other sortes of wines. For that which is such doth helpe very much for the making of concoction easie, and for the begetting of fine and subtile blood, but it filleth the head full of vapours and

The fine wine or smell of wine.

and heate, and greatly offendeth the sinewes and vnderstanding. Whereupon it proueth very apt to cause headache, and a world of rheume. The wine that hath small or no smell, no not any more then water, is called watrish. Such vtrer depriuation and want of smell in wine, is a mightie note, and most certaine marke that the same is but a weake and cold wine: as the strong and mightie smell of the same, is a very notable signe of his force and strength. Such wine as is neither of an ill smell, neither yet without smell, but hath a certaine stinging and vnpleasant sent, which it hath gotten either of the soile, or of the vessell, or by some other occasion; is not good for any body. For as nothing (as *Columella* testifieth) draweth to it strange and vnnatural sents more speedily then wine: in like sort nothing imparteth or communicateth his hurtfull qualities sooner to the heart and noble parts then wine when it is drunke.

The vertues of
wine.

Weake wines.

Amongst wines some are generous and noble wines, and therefore said to be full of wine, contrarie to those which are watrish, and admitting the mixture of much water: these heate much, hurt the sinewes, make a full braine, stirre vp frensies, mightily increase the heate of agues, and to be breefe, they are not delaied with a great quantitie of water, and doe good but to a few. There are other which are weake and for this cause called *Oligophora* and waterie: these wines are of two sorts, some greenish which haue a sensible cooling facultie, sitting choleicke stomackes and hot countries, if so be that a strong stomacke can beare them, and of these we haue spoken before: others which are waterie and of a thin substance, not retaining any smell, but agreeing with all natures, be the stomacke neuer so weake, and especially with those which are often tormented with the megrim or long continued headach: they comfort concoction, prouoke vrine and sweate, and offend the head nothing at all: more harmelesse then any other sort of wine, they may be permitted to such as are sicke of agues, for that they cannot be said to be of any manifest qualitie, as other wines may. For they are neither sower, nor astringent, neither yet sweete or sharpe, nor yeelding any kinde of smell. Of these kindes of wine, some (as *Galen* saith) grow in euerie countrie and coast, but much more in this of France then in any other, the greatest part whereof doe participate a certaine greenesse, especially when the yeeres fall out colde and moist. Such wines are called of the Grecians *Ολγίφορα*. They are not any way noisome or hurtfull to the head, but very profitable, because (as *Galen* saith) they allwaie and take away headach, rising of the cruditie of the stomacke: that is to say, when the stomacke being weakened, and as it were relaxed by the eating of some hurtfull viuals, or by the drinking of some such like water, is made the receptacle of some offending humour, flowing thither from the whole bodie. Which offensive humour so contained in the stomacke becometh

meth corrupt, and from that corruption sendeth vp burnt and adust fumes vnto the braine, which cause like paine in the head, to that which cometh of fasting: and from these annoyances the head is deliuered by the vse of this wine, which by and by tempereth these putrified fumes, especially if the wine haue any astringencie in it, whereby the stomacke may be fortified and strengthened. For such wines doe by and by driue downward that which is hurtfull in the stomacke, carrying it along with it selfe and casting it forth: and therefore very available for such as liue a loitering and sitting life, and apply themselves wholly vnto the reading and studying of good authors.

The differences of wines, according to the properties
of the countreies.

It remaineth now that we briefly discourse of the wines which we vse in *Paris*, and those such as are either growne there, or brought thither out of other countreies & regions. The French wines offer themselves in the first ranke, which growing in the groundes and borders neere about *Paris*, and the whole Ile of France, and other places adioyning thereunto, are amongst all others, and about all others best agreeing with students, citizens of townes: and to be briefe with all such as liue a quiet, idle, and restfull life, especially those which are made in well seasoned yeeres, or such as shewe forth their seuerall qualities euerie one in his proper and due season. For such wines doe not heate, burne, and dry the inward parts of the bodie, as the wines doe which are brought vs from *Gascoigne*, *Spaine*, and other countreies more hot, which by reason of excessive heate and too great drinelle, doe burne the liuer and spleene in such as drinke them. Such wines doe not make a replete, heauie, or offended head with multitude of vapours as other wines of *Orleanse* doe. In like manner such wines doe not load the body with superfluities of terous excrements as doe the crude and greenish wines, which grow in these groundes in cold and moist yeeres, or which are brought vs hither from other cold regions and countreies. Such wines likewise ingender no obstructions, neither doe they gather any quantitie of melancholicke humour, as doe the thick and red wines, which are sent vs by sea from *Burdennax*. These wines when they be through ripe, they are of a very pleasant tast, especially such as are yellow, claret and white, which are of a hot and drie temperature as other wines, but not about the first degree or the beginning of the second: one the contrarie the wines of *Spaine*, *Gascoigne*, and others such like are hot and drie in the end of the third degree. Wherefore these our French and native wines ought to be preferred before all strange and forraine ones, seeing they burne and heate the bowels and inward parts ouermuch, and that as well for the vse of such as are in health, as of those that being sicke are yet permitted

ted their wine. Amongst these our French wines some are white, other some are of a deepe yellowe commonlie called clarets or red-dish wines, which are the most wholesome of all, so that they be not accompanied with any fowernes and harshnes, for rough and harsh wines, and others which are greene, if they become not ripe and mellow in time, by the concocting of their cruditie and greenes, they stand for things not fit to be vsed of any but rude & rusticall fellows, which liue by toiling their bodies with great labour and trauell. The rest are all red more or lesse. But of all other French wines, there is very small store of sad and light red coloured ones.

White claret wines being bright, cleere, and through ripe or mellow, in as much as they are of a subtile substance are easily concocted, digested and distributed, they prouoke vrine, nourish the bodie but a little, but they reioice the spirite, and are for the same cause taken, longed after and desired of all. Some of them are readie to be drunke the second or third moneth: other some not before the seventh or eight moneth. All of them begin to fade and loose their goodnes in the beginning of the second yeere. The red, although they be bright and cleere, are not of so subtile a substance as the former, and therefore they nourish more, and are more fit for such as liue hardly, then for such as liue delicately and nicely: and what although they cannot be so easily concocted and digested, nor so speedily distributed, neither yet cause such abundance of vrine, as those which are yellow, claret or white: yet trauell, often exercises and labour doth overcome all these inconueniences, yea and whatsoeuer greater that such red wines may ingender and breede. Amongst them, those which participate and haue any fowernes or astringion, become not mellow before the sommer heate, whereupon it followeth, that the second yeere, their crude and raw parts being concocted and digested, they growe to be more excellent then they were in the first.

The deepe red and vermillion coloured are for the most part harsh and rough, and so the most vnpleasant and vnwholesome of all other: for that they are wont to be ill concocted and digested, and slowly distributed, as also to ingender many obstructions, and beget a grosse and melancholicke blood. And for these causes are not conuenient but for such as labour & leade a very toilsome life, in whose bodies they being once concocted and digested, doe nourish very much, and make them more strong and lustie to goe about and finish their worke, and therewithall corroborate their stomacke.

Of white French wines, those are most accounted of, which are cleere and bright as rocke water, of a subtile substance, neither sweet nor greene; such doe nourish the bodie a great deale lesse then the yellow and claret wines, but in recompence thereof they are more easily concocted, digested, distributed and carried more speedily and

readily through all the veins: True it is that they are accompanied with this inconuenience, namely that they doe more aill the head, (and therefore are to be accounted greater enemies vnto goutie persons, such as haue weake braines, and are subiect to rheumes and diseases of the ioints, and such likewise as haue weake ioints) then the red which are not yet come to their liuely hood and maturitie, which strengthen & corroborate the mouth of the stomack by reason of some easie astringencie that is in them. Such as in the first moneths become somewhat sweete, if they be kept any time, in the end grow so concocted and ripe, that hauing left their sweetenes, they prouoc strong, mightie and most excellent wines.

Greene wines whether they be white or red, (such as we often times see in these countries, especially in cold and moist yeeres) if they containe any strong heate as it were buried in their crude and rawe parts, if they be kept any time, are wont to concoct themselves, and attaine to such a degree of ripenes, as that they are found good, well contenting the taste and pleasant vpon the tooing; such as those are which are not simply greene, but together with their greenesse doe taste somewhat rough and sower: the other become spent, faded, and decayed in the beginning of sommer, by reason of the euaporating and waste of their weake and feeble heate. Wherefore you must drinke such wines as are greenish and waterie, not hauing any sharpenesse or fowernes in them, in the beginning of sommer, that so you may be sure that the great sommer heate shall not cause them to fade vtterly and quite fall away, by the spending of their feeble heate caused through the vehemencie of the sommer heate: but those which are greene, rough and harsh, hauing a strong heate couched and lying in grosse and thicke matter, may be kept very securely vnto autumn or harvest time. Such as are onely and simply greene, are good and fit for seruants drinke, and other such folke as liue hardly and in great labour, as also for all such as feele a fire and extreame heate in the liuer, and other inward parts: for such wines in idle and delicate persons, as also all such as are of a colde temperature, or are growne into old age, doe not onely not become well concocted and digested: but withall ingender a masse of many crudities, and much flatulencies, become slowly distributed, procure many obstructions, offende the stomacke, entrails, and matrix: notwithstanding they sometimes appease the paines of the reins, and become soveraigne for the weake heade. And thus much in generall and summarily of the nature, temperature, qualities, and differences of French wines. For the diuersitie which is found in them by reason of severall soiles, townes, villages, and great or small boroughs, where they grow, doth in such sort alter and change yeerely through the variable pelt of the constitutions of the yeeres, as that it would be harde, yea impossible to lay them downe in a cer-
taine

taine and assured description: Notwithstanding the most excellent of and ouer all the rest, are the French wines of *Couffy*, appointed and ordinarily taken for the kings vse. Then those of *Senre*, both of them being red or claret, noble, strong, and mightie wines, most proper and fit for such as are altogether cast downe, and in whome nature is (as it were) wholie spent, falling thereby into many faintings and swoones, whether they bee fallen heereinto by excessive and insatiable vse of women, or through any other notable and immoderate euacuation. The wines of *Vannes*, *Argenteile*, and *Montmaire*, and all other wines which grow in grauelly or sandie groundes about *Paris*, are the more healthfull. For all these wines in as much as they are of a thinne and subtil substance, without all Greene or manifest harsh taste, (especially in hot and well tempered yeeres) keeping their proper and naturall temperature, are easily concocted and digested, speedily and quickly distributed through the veines: and which yet notwithstanding do not much pester the head, and that because they are not very strong, and therefore do not heate much.

The wines of *Burgundie*, which are sent vs from *Sens*, *Auxerre*, *Tonnerre*, *Joigny*, and *Chablie*, are generally all of them red: manie of them, yea the greatest part of them are in their first monethes altirgent and somewhat rough, and thereby do make more solide, binde, confort and corroborate a lanke and loose stomacke, and to they nothing annoy the braine by any great store of vapours or fumes carried vp from them: by which reason they prouue the most wholesome and conuenient of all other for such as haue the goute, and are subiect to haue the distillations of the head falling vpon the inferiour parts. Notwithstanding if you drinke them before they become to their full and perfect ripenesse, you shall well perceiue them somewhat the harder to be digested, and to be more slowly distributed then the French claret wines are.

Wherefore I would aduise men, not to vse them in the beginning of the yeere, but rather in the latter ende, if so bee they bee subiect to the obstructions of the liuer, spleene, and *Mesenterium*, or such as liue idlie, or yet such as are delicately giuen, and haue but little naturall heate within them, as forsooth being the time wherein they abound with most hartnesse and astingencie: which yet may even then be very well vsed of them which are accustomed to trauaile and haue a strong and good stomacke. Likewise if you let them ripen and loose by little and little their astingencie and hartnesse, you shall find them as good and pleasant as the French wines: This is the cause why good householders do lay them in cellars, and reserue them diligently to the end of the first yeere, or to the beginning of the second to sende them into forraigne countries by sea: which being so transported prouue better and more excellent then they did in France, or whiles they lie

couched

couched vpon their cantling, as men call it, because the carrying and transporting of them, increaseth their naturall heate, as we haue before declared, and causeth it by such motion to growe more ripe and concocted. Notwithstanding, many of those *Burgundian* wines in hot and drie yeeres, are in some countries founde good the first yeere.

Amongst the *Burgundian* wines those of *Beaune* are most highly commended, for they are so good as that I dare bee bolde to preterre them before the wines of *Orleanse* and *Ay*, which are so much esteemed of in *Paris*, because they are of a subtil substance, of the colour of a partridges eie, not giuen to fume or fill the head full of vapours, and thereby leile assailing the head, and hurting the braine, then those of *Orleanse*. Likewise the commoti verse made of the wines of *Beaune* hath bene alwaies received for true and currant.

Vinum Beluense super omnia vinarecense.

Such as take a very good taste of those wines, do compare and match them with the wines of the kings yarde at *Couffy*, whole plants when they were yooing, were otherwise brought from Greece, in such sort as that the wines of *Couffy* and *Beaune* come very neere vnto the goodnes and perfection of the Greekish wines. Some also doe compare the wines of *Beaune* to the wines that grow in the yard of the king of *Naburre*, which is some five leagues from *Vendosme* called *Prepason*, and this name was giuen it because the plants therein were cholen and taken out of the best in all places. The wine is a claret, of the colour of a partridges eie, of a thinne substance, not fuming or being vaporious, of a pleasant taste, and delicat to drinke, if there be any wine in the worlde so qualified. All these three sorts of wine, of *Couffy*, *Beaune*, and *Prepason*, are the most excellent that are to bee founde in all France, and that because both in good and euill yeeres they are founde and tried to bee better then any other, and readier to bee drunke vpon. Amongst the wines of *Beaune*, the wines of *Dijon* must be reckoned, and they are those which grow in the kings vineyard at *Chenone*, *Fontaine*, *Plumetiere*, and *Tolent*. True it is, that before a man iudge of the goodnes and qualities of wines, hee must euery yeere consider the estate and constitution of the seasons of euery yeere, as also take a diligent taste of the wines, thereby to giue the more assured iudgement: because it falleth out that sometimes the French wines, sometimes the *Burgundie* wines, and other some yeeres the wines of *Orleanse* doe prouue most excellent, and sometimes the wines of *Anion* prouue better then all the rest. Yea, and as of the number, and to be reckned vp amongst the rest, are the wines of *Ay* and *Isancy*, and doe for the most part hold the first and principall place for their goodnes and perfection, wherein they excell all other wines, and are in all good or euill yeeres founde better then any other, whether they bee French, *Bourgonzie*,

Wines of
Couffy.

Wines of Pre-
pason.

Wines of
Dijon.

Bourgeoisie or *Anion* wines. The wines of *Ay* are claret and yellowish, subtille, fine, and in taste very pleasing vnto the palate, and therefore eagerly sought after, for the vse of kings, Princes, and great lordes, being yet therewithall such wines as the Greekes call *Oligophora*, and will not admit the mixture of much water. The wines of *Isancy* are of a middle consistence, and red of colour: when they are come to their ripenes they prooue strong and noble wines, in so much as that you may iustly compare them in goodnes with the wines of *Nerac*, notwithstanding they bee so highly esteemed of, and had in request for great personages.

The wines of *Orleanse* are set in the first ranke and chiefe place for goodnes and perfection, amongst all the wines of France: Such are red, for the most part, of a middle consistence betwixt thicke and thinne, of a good taste, strong, and profitable for the stomacke and inward parts. They heate more without comparision, and do more nourish the bodie then any French wines, a few excepted, as the wines of *Couffy*, and *Seurre*. But in the meane time they fill the head and hurt the braine, more then any other, if you continue the vse of them any long time, especially in such as haue a weake braine, and are subiect to cause manifold distillations, as also in those which are subiect to inflammations of the lungs, and disposed by their bodily constitution to fall into pleurifies: yea these wines are worse then any other for goutic folke, as also for such as are troubled with agues, and others which haue their principall and inward parts of a hot and drie constitution, and to them that are troubled with the diseases of the skinne, as the itch, leprosie, benumbednes, tetter, wilde fire, scabs, and others such like. But on the contrarie, they are most apt for, and best agreeing with natures and diseases that are colde, and inooued of colde causes, in swoones and faintnes coming of abundant & excessive euacuation, by too much vse of women, watching, or other such like causes, and in like manner of them which languish vpon colde and long diseases. And thus much of that which we can iudge to bee in the wines of *Orleanse*.

The diuersities
of the wines of
Orleanse.

Wines of
Saintes,
Saint Hilary,
Charente,
Messin,
and *Saint E.*

For as in other countries and soiles, so likewise in the groundes about *Orleanse*, the earth doth naturally ingender diuers qualities and faculties in wine. For amongst others such as are yellowish, claret, and bright cleare, are accounted the excellentest and best of all: such are they which grow and are gathered neere vnto *Orleanse*, in the borowghes of *Saintes*, *S. Hilarys* chapple, *S. Messin* the long, of the *Loyre*, or at *Checy*. Those which grow at the village of *S. de Bone*, are in good sooth all of them right noble and excellent wines, but somewhat of a more grosse and reddish consistence, which is the cause that they come not to their best till about Easter. The weakest and feeblest are those of *Linet*, *S. Gy* and *Nigny*; which yet are more healthfull

healthfull for such as liue idlie and follow their studie; then the wines which are stronger. At *Paris* wee account for very precious those which are brought vs from *Messay*, which although they bee farre behinde in goodnesse and perfection to the best wines of *Orleanse*, because they are of a thicke consistence, and cost not much: notwithstanding seeing that by transportation and cariage, they become thinner and more ripe, they are the better accounted of, of the marchants.

Such as grow neere the abbay of Neighbours, are cosen Germans and much alike to the wines of *Messay*.

The white wines of *Orleanse* do surrender and partly giue ouer the praise vnto French white wines, which is the cause that they are transported but as little as may be out of the countie.

The wines of *Lourye* which do taste somewhat sweete, are accounted the chiefe of all the rest in that place, as likewise those of *Rebechi*. The wines of *Anion*, such of them as are good, are (in a manner) all of them white and sweete, and for the most part temperate, or hot and drie, when the temperature of the yeere falleth out hot and drie, strong, noble, and mightie; in such sort as that amongst all French wines they keepe the first place for goodnesse. All the while they are sweete, thicke, and vnconcocted, they swell the stomacke & the flanks, stop the veines, swell the noble parts, and prouoke thirst, especially in cholericke natures, and sometimes also they loosen the belly. But when as through their working and boiling vp, they haue cast out all their drosse and dregs, and that they are become sufficiently ripe, concocted, and digested, that is to say, in their middle age, which they attaine vnto the second yeere: as then they become faire, bright, and cleere, as also very pleasant, so hauing lost their ill qualities mentioned before, they get such qualities, power, and vertues, as are altogether contrarie vnto those which they had at such time as they were sweete, and of a grosse consistence. For they become easily concocted, quickly piercing, sufficiently prouoking vrine, and causing to spit abundantly. When the yeere fallth colde and raine, the most part of the wines of *Anion* become rawe and greenish, as by experience we plainly sawe in the yeeres 1575. and 1577.

When the yeere is hot and drie, the wines growing in *Anion* are strong and mightie, and keepe their vertues and qualities intire and whole till they be fixe or seuen yeeres old. But when the yeere falleth out colde and moist, they prooue to be of cleane contrarie qualities.

The wines of high *Normandie*, (I meane not those which are gathered and beaten downe with poles) do somewhat resemble the French wines, when the yeeres fall seasonable and keepe their naturall temperature: such for the most part are of a yellowe colour, but not continuing

Eff

tinuing

tinuing so any long time, they by and by loose their force; which is the cause that they are easilie digested and quickly distributed and carried along all the veines, without annoying the braine any whit, in as much as they be not strong or mightie, but oligophorous. But when the yeeres fall out colde and moist, the greatest part of them will not keepe well because they be Greene, and that in such sort as that their greenesse cannot be concocted and digested by reason of the weakness of their heat, & therefore it behooveth to drinke them in the beginning of the first yeere. The wines which growe in *Compiègne* and other parts of *Picardie*, are of the same consistance, qualitie, and vertue that those of *Normandie* are, and therefore deserve not to be much set by or desired, but when others are wanting.

Wines of Compiègne.

Wines of Normandy.

The countries of *Guyenne* sende vs varietie of wines. The best of the are those which grow about *Nérac*, which come very neere to the goodnesse of the French wines of *Couffy*, which by reason of their russet colour, are called in the countrie russet wines. In the number whereof are contained the red wines, or sad, and light red: they nourish sufficient abundantly, but in that they make obstructions and increase great masses of melancholike humours, (especially those which are sweete) they must not be vsed but of them which live in toile and trouble. Those which are of a thinne and subtile substance, whether they be white, claret, or of a light yellowe, for as much as they haue a very pleasant taste, and are easily concocted, and quickly distributed, they are desired, and much required at the tables of great men.

Let vs conclude then, that amongst all the wines which we vse at *Paris*: as concerning the red, the best are those of *Couffy*, *Sennet*, *Kannet*, and *Meudon*: and as concerning the white, those of *Argenteuil*, and then those of *Ay*, *Isancy*, and *Beaune* in *Bourgongnie*, being well ripened. Next those of *Orléance*. As concerning white, the wines of *Longumeau*, *Palesiau*, *Massy*, *Pont d'Anthony*, then those of *Barfurabe*, *Aniou*, and others which are brought vs from *Arbois*, *Gascogne*, and *Languedoc*. The wines of the grounds neere vnto *Paris*, as of *Vitainville*, *Vitry*, and *Iury*, which are white: of *Fontenay* and *Montrenil*, which are reddish: are not to be much set by, because they are greenish, and of an vnpleasant taste. The wines of *Gascogne* are without comparison more hot and drie then the wines of *Orléance*, and yet they be not so vaporous, neither yet assaile the head so mightily, as I haue proued that the wines of *Orléance* do.

The wines which *Greece*, *Languedoc*, and *Spaine* doe sende vs, or rather which the delicacie and voluptuousnesse of our French throates cause to be fetched from beyond the sea, such as are sackes, muscades of *Frontignan*, malmesies, baltards (which seeme to me to be so called because they are oftentimes adulterated and falsified with honey as we see wine hydromell to be prepared) and Corricke wines so much used

of the Romaines, are very pernicious vnto vs, if we vse them as our common drinke. Notwithstanding we prouue them very singular good in cold diseases caused of cold humours, without the hot distemperature of the liuer, or of any other noble part, but chiefly and principally malmesie, which we daily note and obserue to be very souveraigne in the crudities of the stomacke and colicks; by reason of the singular force and vertue it hath in concocting of crude and rawe matter, and in dissolving of winde and flatulencies. But howsoeuer forraine wines, which are fetched from far countries may seeme pleasant vnto our taste, yet indeede the truth is that we are not to vie them except it be with as great aduise and iudgement as may bee, because that besides their manifest outward qualities, they haue also close and hidden ones, which indeed may become familiar and well agreeing through some sympathie, with the inhabitants of those countries, where the said wines grow: but vnto vs they are enemies, by an antipathie or contrarietie which is betwixt them and vs, which are of a toile and countrie far vnlike. Which point if we regarde not, we cannot but for the most part offend against the rules of arte, and commit infinite faults in prescribing and laying downe such diet, and order of gouernment, as shall be for the direction of other mens liues.

Some doe make and compound spiced wines which somewhat resemble the foresaid forraine wines, and that not so much for the necessitie of life or health, as for pleasure and the delighting of the swallow: of which sort are the claret, the preparing whereof we haue set downe before, and hippocras, so called, not that *Hippocrates* did euer inuent it or vse it, but (of the mixture and temperaure according whereunto the said wine is compounded and made) it is so called of the Greeke verbe *κρασις*, which signifieth to temper. Men ought seldome to vie these wines, because that by their vnswayed heat and great vaporosnesse they procure many troublesome diseases, as the squinancie, strangurie, apoplexie, palseie and other such like: notwithstanding such as feele a certaine coldnes & weakenes in their stomacke, may vse them, not as their common drinke, but sometimes onely as a remedie or medicine.

And thus in briefe you haue what I thought good to deliver concerning the qualities and vertues as well of such wines as grow in *France*, as also of them which are brought vs from strange countries: by the reading of this sleight discourse the reader which is carefull of his health, may learne to make choise of such wine as is fittest for his owne drinke, as he shall perceiue to be agreeable and profitable, not onely for his nature and disposition, but also for his health. As for example, he that hath a very hot and drie liuer, his lungs subiect to inflammation, and readie to receiue sharpe distillations from the braine, and his braine very moist, shall not vse hot and drie wines, such as are those of

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Languedoc,

Languedoc, Gascoigne and Orleance: but he shall content himselfe with some small French wine, somewhat greenish, and which beareth but small store of water. He likewise which hath a cold stomacke, and is subiect to cold and windie diseases, shall vse the wine that is good and haue nothing to doe with the small and greene wines, and for this purpose shall make his aduantage of this our discourse, which will instruct and teach him the diuersitie and qualities of wines.

The end of the sixth booke.

THE SEVENTH BOOKE OF THE COUNTRIE FARME.

The Warren.

The first Chapter.

Of the situation of the warren.



hitherto we haue as briefly as possibly we could run through whatsoeuer thing belonging to the tilling and dressing of the earth, as gardens, meadows, arable grounds and vines: now it is requisite, that folowing the order before propounded, we speake of the warren, of wood, timber trees, parks for wild beasts, breeding of herons and of hunting.

We will begin therefore to describe the warren, the profit whereof is not inferioriour to that of the pullaine, pigeons, & other small cattell, which are bred & fed about our countrie farm, but chiefly in respect of the selling of conies, which the good householder may doe yeerely, and that some yeeres betwixt fourescore and a hundred dosen, beside all those which the Lord of the farme shall stand in neede daily to vse, either for eating in his house, or for to giue away and gratifie his friends withall.

Again the indeuour, care and paine about a warren is nothing so great, as that which is required in the ordering of other small cattell: for conies stand not in neede to haue any speciall and set gouernour, to take care continually to house, handle, make cleane, heale them when they are sicke, or to dresse them their meate, because that of themselves they builde earthes and little holes to hide and repose themselves in: and feeding they looke not for any thing but that which

*The profit of
the warren.*

which the earth of his owne accord, without any tilling doth beare and bring forth for them.

Wherefore for the most profit of your countrie farme, you must prouide and prepare a warren in such place, as hath before bene spoken of, that is to say, betwixt your corne fields, vineyards and grounds bearing timber trees, if peraduenture you haue not the benefite of some vnder wood neere vnto your house, where the conies may settle themselves and make their abode. Notwithstanding in as much as the hunting and taking of conies, which haue their couerts and borowes in such vnder woodes, is somewhat more harde and difficult then that of the warren: and because also that conies living in small woods multiplie nothing so much as those in the warren, and that especially by reason of foxes, woolues, and other fildie beastes, whereunto they are oftentimes made a pray by being deuoured of them: it will bee better, and for your further both ease and profit, to make a warren apart by it selfe.

You must then for the making thereof, reserue some five or sixe acres of fine dustie, or sandie ground, such as is not fat, strong or close, in a high place lying open vpon the sunne, and not in a marish or watry ground: for together with that, the conie hateth about all things moisture and colde, yet for the conueniencie of her making of other earthes, it is requisite that she be in a place, where she may dig with ease for the making of her bed & couert. If his peece of ground shall be compassed & be set about after the manner of a parke, with reasonable high wals to keepe out foxes, woolues, & other wilde beasts, that they may not iniury or make war vpon this little beast. Within this conigne you must plant great store of brambles, mulberrie trees and sloe trees, strawberrie plants, wilde pine trees, hurtle berrie bushes, goose berrie bushes, mirtle trees and great store of iuniper, for the conie loueth the iuniper berrie aboue all other things: and as concerning herbes, you must sowe (if so be the earth bring not forth some of it selfe) great store of sowthistle, groundswell, succorie, colewoorts, lettuses, clary, taragon, thistles, turneps, cich pease, and other such like for the feeding of these little beastes. As for the drawing of some small brooke, or bestowing of any water conduit vpon them, you neede not trouble your selfe, seeing the conie hateth moisture more then any thing else. Neither yet doe you trouble your selfe to prepare them any other lodging, then the holes which they shall dig and worke out for themselves.

The second Chapter.

That there must a clapper be made for the better storing and planting of your warren.

AND yet it is not inough to haue made and finished the things that are to be done rounde about the warren, as to haue fenced

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it, with whatsoeuer is necessarie for the preserving and nourishing of conies; but you must also store and plant it: for no more then arable ground beareth fruit, except there be seede cast into it; nor the vine any grapes, except it be diligently planted and dressed: so neither thinke you that your warren, be it neuer so neatly and necessarily appointed and trimmed vp, can breede and feede conies, except you first put them there. Wherefore for your storing of your warren, it is requisite that you should cast vp a clapper, wherein you may put your males and females to kindle euerie moneth: for to buie so manie as should be needefull would be too costly and chargeable for the farmer or housholder: seeing also that it commeth to passe oftentimes, that after he hath solde many vnto the vittailers, or for that the foxes haue eaten vp some great number, the warren remaineth quite spoiled, and destitute of conies, in so much as that hee must be compelled to store it againe. It is better therefore, in respect of the greater commoditie and lesse charges, to make a clapper in some corner of your court or kitchin garden, which may be foure square, narrow, & fenced in with boards, or plaistered wals: indeed it were better to be provided in the warren, for so the yoong ones might more commodioully out of the clapper passe into the warren at some one side of the clapper, which should be crosse wrought with lattise worke, and shoulde haue the holes thereof left so wide, as that the yoong ones might passe out and in vnto their dams.

Whether therefore the clapper bee provided in the warren, or else where, you must build certaine small lodgings paved with boards, and these must haue holes in them like to those which the conies make themselues in the earth, and euery one seuerall from another, for the conies to berake themselues into: and it will be enough for to allowe in such places one male to eight or tenne females: and yet therewithall to keepe the bucke close shut vp in his lodging, for feare he should hurt & wrong the yoong ones, for the male conie (contrarie to the nature of all other manner of bucks) deuoureth the yoong ones. It is very true, that so soone as it is espied, that the Doe hath kindled, she must incontinently bee put into some other hole with the male, that so he may bucke her: for this is a most certaine thing, that so soone as the Doe is emptie and deliuered of her yoong ones, euens so soone she is full againe of yoong, in such sorte, as that she bringeth forth yoong euery moneth in the yere: yea and being great with yoong, she letteth not to take the bucke, and to continue a seconde burden, which she bringeth forth afterward in due time. So as that this fruitfulness in conies hath become so admirable vnto many, as that some haue vpon too slender grounds thought and beleueed that the bucke shoulde conceiue and become great with yoong as well as the Doe: which is very false and altogether contrarie to all naturall course

course in the action of generation, seeing that by natures course it is ordained that the female onely amongst beasts should conceiue and ingender, and not the male.

After that the yoong ones are growne somewhat great, and become able to leaue their dams: you shall carrie them into the warren for to store it therewith, and so let them grow wilde: otherwise if you keepe them shut vp, and fast inclosed in the clapper with their dams, they will become tame, and alwaies continue as it were slumbring and heauy, like vnto those which are continually shut vp in clappers made for the purpose: and so will haue a grosser and more vnpleasant flesh.

And yet notwithstanding, you must beware not to put abroad into your warren, the olde clapper conies, either males or females: for seeing they haue not had their free swing to runne abroad as those of the warren, and haue not learned to saue themselues from dangers and violences offered them by foxes and other such wilde beasts, they woulde bee by and by deuoured, so that thereupon it seemes better to containe and continue them still in their accustomed clapper.

Conies in the clapper are to bee fedde with colewoorts, lettuses, groundsell, clarie, succorie, fowthistle, terragon, thistles, cich pease, oates, barlie and bran mingled together, and other such like things, as we haue spoken of heeretofore. In some countries they feede them with mans blood, such as is to bee come by when sicke persons are let blood: but such maner of feeding of them is starke naught, and maketh their flesh vnsauorie in eating, and very preiudiciall vnto health.

The third Chapter.

How the conies in a warren ought to be handled and ordered.

ALthough the hauing of a clapper be very necessarie for the storing of a warren againe and againe, (as we haue saide before) notwithstanding for neede, one may leaue off all vse of the clapper, and so without any further charge or expences, content himselfe with putting a certaine number of conies both males and females into his warren, of them to haue sufficient store by increase of yoong ones. True it is that they are not so fruitfull, nor of such plentifull increase, and therefore the warren will not bee so soone stored by them, for they being accustomed to the warren, become more sauage and strange, but lesse giuen to ingender: & thereupon it commeth that the Does of the warren bring forth yoong ones, onely thrise or fower times a yere, and those that are kept in house clappers, once euerie moneth: but howsoeuer it be, if you finde it more for your profite to furnish your warren with store after this latter manner, it will be suffi-

cient for fixe dosen of Does to put in nine buckes, hauing more regard and consideration still vnto the Does then to the bucks, to spare them, if at any time you would take any.

Their feeding shall be no otherwise then hath already been mentioned: and yet notwithstanding besides that manner of feeding, if you would haue great store of conies in your warren, and that they should be so sufficiently fed, as that they should become fat, it will be good to sowe an acre of ground or two with barlie or oates, not for to make any further haruest of them, then that which they shall leaue vncaren. You must haue a speciall care that they feede vpon good nourishment: because their flesh (in like manner as the flesh of partridges) doth retaine the smell and sauour of that whereupon they feede: as for example, of iuniper, if their warren be full of iuniper, and so semblable of other things.

If you see any conie hole stopt with haie, or straw, or such other like thing, do not vnstop it, but content your selfe onely to obserue it and to gesse that there are yoong ones within, which the dam nourisheth: for this is the manner of the Doe, that from the time that she hath kindled, whether it bee in a house, clapper, or in a warren, she shutteth and stoppeth vp her hole with haie, strawe, or some other grasse, such as she can gather together, & to no other end but that the bucke may not finde her yoong ones, or go into her hole, where if he should once come, he would eate vp all her yoong ones this thing being assuredly & vndoubtedly conceived of the Doe, whether she be in her hole, or else go forth to feed, she stoppeth her earth; & if so be that at her returne she finde the mouth of her hole neuer so little vnstoppt, she her selfe will by and by kill her yoong ones, hauing taken opinion, that the bucke is gone in thither. And this is the cause why good hunters will neuer put their ferret into any earth, whose mouth they see stopt, for feare of disquieting the dam, and causing of her to kill her yoong ones: true it is that she doth not keepe her hole euermore shut, for at such time as she knoweth her yoong ones to be growne great, and become strong inough to seeke their meare, & to rust with others, she beginneth to make a little hole for the to issue & goe out at.

Furthermore, you must not thinke that conies either males or females, doe at any time forget their earth, bee it neuer so farre off: for howsoeuer some say that conies haue no memorie, notwithstanding they are alwaies mindfull of their hole, be they strayed or wandered neuer so far from the same. And this is the reason likewise why some say that a good conie will neuer die out of her earth. You must likewise coniecture that the conie is taught by nature to be afraid of the foxe, as the sheepe of the wolfe, which is another case besides his wilde and strange nature, why, when he goeth out of his hole, his minde runneth vpon nothing but running, thereby forgetting to thinke vpon other

*A good conie
dieth alwaies
in her earth.*

other conies holes, and so of the Does, and of the eating of her yoong ones: for although he be mindefull of his owne earth, yet he taketh no care, neither calteth any whit about, howe he may finde out or fall vpon that which belongeth to another: likewise the Doe to take from him all occasion of any whit regarding hers; is wont to stop the mouth the: eof as hath beene saide.

The fourth Chapter.

Of the difference betwixt the warren and clapper conie.

THE warren conie hath a redder and thinner haire, a swifter and slenderer bodie, she is also more watchfull and wilde, hauing a pleasanter flesh, and lesse ingendring melancholie then the clapper conie: for the clapper conie lacking libertie, cannot runne nor exercise her body, & so becommeth more familiar and tame, more grosse, fuller of haire, more heauy and drowie, and therefore lesse pleasant: againe, if it happen by chance that she come into the warren amongst wilde ones, she is by & by deuoured of foxes or other beasts, enemy vnto her, hauing neuer bene acquainted with the assaults & enimities of the saide beasts before. As concerning other matters both of the are better to be eaten yoong & small, then when they are great. Their braine is good to dwage the paine that yoong children doe endure in the breeding of their teeth: notwithstanding such as would preferue their memorie must beware and eate as little thereof as they can possibly, because it furthereth forgetfulnesse. The fat of conies is much more commended then any other part, because it is better then any other helpe to make liniments of: for the reines which are greued with the grauell or the stone.

*The vertues
and speciall
properties of
conies.*

Of Wood.

The fifth Chapter.

What is to be considered before a man goe about to plant a wood.

TO order and cause a new wood to be planted, you must knowe the ground wherein you would plant any thing, as whether it be fat or leane, whether it be of a reasonable depth of earth or no: and likewise if it be subiect to waters: because that some trees by nature loue the water, as the aller and others of the same nature: and according to the nature and propertie of the ground you must applie your selfe to fit it with such, as it may nourish most, both for your profit and pleasure.

You

The aller.

*The oake.
The chesnut-
tree.*

You must see and set downe first and before all other things that the ground be of such goodnes as is requisite : and you must likewise vnderstand that two of the noblest trees and esteemed woorth most siluer, are the oake and the chesnut tree, and that for two principall reasons : the one because they beare such fruites as whereof mixed with a little barlie or oates, one may make bread in the time of famine : the other because it is not in the nature of any tree to afford so good timber as the said two, the oke and chesnut tree do, being either of them considered in his proper qualitie.

*The elme.
Elmes are bar-
ren and beare
no fruit.*

Chestnut trees.

*Locusts euerie
three yeeres.*

The third excellent sort of trees is the elme : and notwithstanding it be the inferiour to the other, because it beareth no fruit, and for that the lease thereof is nothing so pleasant in respect as the leaves of the oke and the chesnut tree : yet the tree is woorth the hauing, euen for that it may be headed after the manner of willowes, and cut euery fower yeeres to make props and fagots : but the chesnut tree is a great deale better, more neate and fine, and bearing more fruit then other trees which are of his nature : neither doth it stand in need of so good and fat a ground as doth the oke, and againe the caterpillers and such other vermine do not haunt and fall vpon it, as they doe vpon the oke and elme. And further when the locusts come, which is euerie three yeere, as I my selfe haue seene, they eate not the leaves of the chesnut tree, because they finde leaves vpon the okes : for the yeere of the locusts doth hinder some wood more then of a yeeres growth, whereas besides that priuilege the chesnut tree doth ordinarily grow more in one yeere then the oke doth in two.

It is very true that the elme groweth easily and plentifully, after that it hath taken with the ground. And who so would for varietie sake mingle diuers sorts of trees of diuers natures, as maple, beech, alpe, and such other kindes of wood, may do it, but the moe okes and chesnut trees a man groweth, the better he doth.

The sixth Chapter.

*Of the seating and disposing of a wood for growing of
high and great timber trees.*

HE that hath a faire plot of eight or tenne acres of ground, and would make it shew faire and beautifull the first yeere, and that by bringing the wood into some shape and commendable forme, with hope of further delight and pleasure from the same in time to come, must for the first yeere wall it about or else ditch it so well, and plant it with hedges of quickset, as that no catell may possibly be able to enter therein. And if the said plot should come to be ditched, then I am freely contented to vtter my opinion at some other time, concerning the fashion that they are to be made after, as also how

how when they are made they must be planted or set with quickset.

But presuppose that the said square plot is inclosed with a wall, and that the said square hath fower sides, that is to say, two of length and two of bredth, mine aduise is that all the sides of the said wall shoulde be couered and cloathed with greenenesse, and with fower sorts of trees, and sixe foote thicke and large, seeing that nature reioyceth in varietie, that so both the walles may be kept from being seene, and there may be a walke betwixt two greens.

The said couerts shall be made according to the good liking of the Lord, as for example, one of the sides if it should so seeme good vnto him, euen the fourth side with hawthorne and white hawthorne, because these are the first leaves that doe first put forth in the spring time, as those also wherein the nightingale doth make her nest : another of the sides with barbery trees, which are beautifull and serue for many vses, spreading themselves in comely sort, when they meete with a good ground. The third side being that whereupon the sunne beateh at his rising, with tame osiers, which may serue in husbandry, and therewithall also make a faire shewe. And the fourth side with yong pearre tree plants, with some white thorne plants amongst, as at the end of euery fower foote square, which are more Greene then any other sorts of trees, and they wil be of vse for to graft many faire grafts vpon, and good store of great medlars.

The alleys about the saide wood must be twelue foot broad, and vpon the edges of all the said alleyes, as well on those that are toward the wall, as on the other there must be planted elmes euerie one foure sadome from another, hauing their heads cut off, and their bodies remaining a seuen foote high or thereabout, to giue some grace and comelinesse vnto the said alleyes : because that if a man should walke in the fairest place in the world, if there be no sweetnesse to be found in it, it prooueth tedious and irksome. For this cause if it please the Lord of the farme to plant along the said alleyes certaine fruit trees, as also wallnut trees, and those such as may sute euery season of the yeere he may doe it.

Further it may seeme that all the saide trees should be set from foure feete to foure feete, and that by the leuell of a line euery waie, as well to please the sight of the eye, as also for that sometimes men are desirous to make alleyes within the wood, and then if the draughts be straight, it is more easie for to make them.

The seventh Chapter.

*Of the manner of planting trees in woods of
high and tall growth.*

AND for to plant the saide trees well, you must presently make ditches in manner of furrowes, as you are wont to doe in the planting.

planting of vines, wherein they must be planted, to the end the earth may feede it selfe in the aere; and that it may battle and grow fat, with the raine and snow which shall fall during winter vpon them vnto the end of December, or vnto the beginning of Ianuarie.

These trenches are not to be made about two foote deepe: but they must be well handled in the bottome, and that by laying the good earth vpon one side of the furrow, and that which is leese woorth vpon the other, and not to cast it abroad, to the end that if the bottome should proue bad ground, or otherwise to be ouer deepe, then there might be cast into the said furrow or trench some of that good earth which shall be on the side, to the end that the rootes of the tree may not busie themselves in searching a bad bottome, in steede of stretching forth themselves in largesse, and you must so leaue the trenches and furrowes all winter long, for the receiuing of the raine water when it cometh; and they must be so wide, as that one may turne a yard euery way round within.

*The time to
plant trees.*

The said trees must be planted in December, if it be possible, and that the times be fauourable, as when it freezeth not; for great frosts are great enemies to the good proceeding of this worke.

You should rather call to plant trees that are already growne vp, then to deale with the sowing of acornes or chesnuts, because it requirereth great care and indutrie to make the said seede to grow; and as concerning the seede it selfe, that of the chesnut groweth sooner then that of the acorne. And when as you goe about to sow them, it must be done with leauing a foote distance betwixt one and another with the largest, and in the end of great frosts: because that during the said frosts, the mowles doe eate the chesnuts in the ground.

As concerning the planting of trees already growne, they must be taken vp with as many rootes as they can possibly, and after they be taken vp, if there be any of their rootes broken, to cut the same: & those which are not broke, to cut their ends for to refresh them, the length of three or foure fingers, more or lesse, as the rootes may beare it. You must make choise of a young plant, that hath a liuely and cleane bark, not rough and ouergrown with mosse, a good and handiome roote, a straight thanke, and long without scars or frets: & before you plant it, it will be good to cast into the furrow some good earth, taken from the side of the said trench, to the thicknes of a finger or two, and vpon that to set the tree which you are about to plant, then couering the rootes with earth, to swaie vpon them gently with your hands, that so there may not anie aere stae about them; and in filling vp the said furrowes, you must prouide that they haue some sloping of earth, both on the one side and on the other, in manner of a gutter, to the end that if it raine, the raine and moisture may runne away the more easily.

And to the end that the planted trees may grow the better, you must

must lay their longest rootes all along the trench, on the one side, and on the other: and if by hap it fall out that there be long ones on euery side, so as that they cannot easily be laid along in the furrow, you must enlarge the furrowe a little in the place, where such rootes require it to be enlarged, to the end that the said roots may not touch the firme and fast earth, but may be buried and wrapt in soft earth that hath beene mooued and stirred.

You must likewise cut off by the toppe of the shanke all the trees you plant: that is to say, such as you plant to make high and tall timber trees, or which you minde to set along by the sides of the alleys till you haue not left about the length of foure or fixe foote to stand out of the earth, to the end they may the sooner beare a great shewe of woode: but the trees which you are purposed to plant for lowe and small wood, must be cut, that there be not left about a foote and a halfe, for it will be sufficient if they haue the length of fower inches out of the ground; neither is there any danger in mingling chesnut trees with oakes, except a man be purposed to plant one woode with oakes onely, and another with chesnut trees: and as concerning the thicknesse of the said trees it needeth no deepe aduise, for they may be either of the thicknesse of a chesnut, tennise ball, or some other such like, but rather the care is that they be well and newly taken vp, and planted the same day they be taken vp, or at the farthest the day following.

The woode thus planted must be twice laboured and tilled, once in the end of Aprill, and the second time at the end of Iulie, after the fall of some great raine vpon thander: and if the caterpillar shall fall vpon it within the yeere, it must be clenfed and freed from them.

The eighth Chapter.

*Of the time when woode is to be tilled
and husbanded.*

IT is heere to be noted that the chiefe and principall furtherance *That dressing* and comfort that can be giuen to trees, either reclaimed or wilde, *of the earth* is the labour bestowed vpon them in due and conuenient time, for *is necessary* the more they are husbanded and tilled, so much the more doe they *young plants* growe and prosper in greatnesse: wherefore dressing and labour is *very* necessarie for all young plants of all sorts of trees, as well small as great, and especially the foure first yeeres, they must be husbanded thoroughly and plied with two severall dressings euery yeere as vines are, that is to say towards the midst of Aprill, when they begin to put forth their buds, and towards the end of Iune, and this must be done in moist and rainie weather, and not when drying winde or heate doth raigne, because the ground then stirred would doe nothing but turne to dust, which would destroye the young springs, and cause them

*Such dressing
of the earth in
dry weather is
not good.*

them die : againe the said earth dressed at such time doth more easilie conueigh the drinelle of the drie earth turned downe, vnto the rootes of the trees, which is very contrarie vnto them ; seeing that moisture is the thing that is required for the nourishment of plants : and againe if the ground be moist, it ioyneth it selfe close vnto the rootes, and lendeth vnto them of his moisture. The other reason is, for that the earth being newly opened, by his lying open, giueth passage for the water, raine, or dew, to enter more easilie vnto the said rootes.

*To pull vp
weedes by the
roote.*

The principall labour to be made about all trees, is to roote out all weedes, seeing they are giuen to growe euery where in all groundes, and which, if they bee suffered to growe vp, sucke, purloine, and carrie away the sappe and substance of the earth in such sort, as that there is not left sufficient vertue and power to nourish the rootes of the late planted trees well and in good order, and this is perceined by the labour made in dressing of vine and gardens, the which the more they are husbanded and tilled, so much the more fruite, and yoong springs they put forth, and become so much the more beautifull and faire. So it will be the chiefe worke after you haue planted trees, to cause them to be so dressed in seasons that are moist, & that twise at the least: and that will cause them to grow greater of wood, greater of boughes, and to yeeld double profite.

*The third
dressing of
trees.
The growth of
plants com-
meth by heate
and moisture.*

And if extraordinarily the sommer prooue rainie, so as that your plants become ouergrowne with much weedes, it shall bee left to the discretion of the husbandmā, if he see that his plants be not cleane, to bestowe a third dressing vpon them, to the ende that the weedes may not smother the bud, and deuoure the substance of the earth : for all plants come of heate and moisture : and if they be suffered to be intangled with weeds they will be smothered and in danger to be lost.

The ninth Chapter.

*That wood diligent ly dressed and husbanded, doth
profite more then that which is not so
dressed and husbanded.*

I Know that there are many trees which are daily seene to growe without such great paines taking and industrie, freely receiuing their naturall nourishment without aide or assistance, and that by reason of the fruitfulnessse either of the ground, or of the countrie: and yet if some one doe so escape, a hundred die for it : and this I saie for their sakes, who hauing once planted, woulde bee loth to loose their paines, and doe conceiue that all or the greatest part, doe thrive and prosper : which conceite is notwithstanding like to deceive them, if they proccede not to dresse and husband them in conuenient sort, after they haue bene well planted, as is aboue declared.

Wherefore

*The experience
of dressing trees
and of letting
of them growe vn-
dressed.*

Wherefore I haue applied my selfe to trie the issue of tilling of them according to arte and knowledge, as also of leauing them vntilled : and I finde that although the tree which groweth in the desert do grow vp sometimes vnto a perfect growth, notwithstanding it groweth not in so short time, and the greatest part of it dieth : and that that which is well tilled and planted, doth growe twise so much, and that not one of ten of them is lost, but that all prosper, of what sort of wilde trees soeuer they be.

But some may replie, that labour is chargeable and costeth much, but in as much as it lasteth not alwaies, being to continue not past foure or fise yeeres at the most, much like vnto the yoong plant of a vine, it will be founde that the cost will not be great, seeing especialy that after such cost, it is freed from any more for euer. For after that woode is once growne vp to such height as that weedes cannot ouergrowe nor ouercrowe it, (which will bee in foure or fise yeeres if it bee husbanded) then it smothereth the weedes that growe vnder it, and keepeth away from them both the sunne and the aire with his shadow, in such sort as that they die, and are not able to overshadow or doe anie hurt vnto the wood.

The tenth Chapter.

*Of remoouing, lopping, pruning, and making
cleane of woode.*

THAT your plant may growe the better, it is likewise requisite to remoue trees from a high, drie and bad soile, into an other ground that is more moist and fat, if it maie be : by this meanes in finding a better soile, the tree will take more easilie : and there is no doubt, but the better the ground is and the better that the plant is ordered, the sooner it will grow, become bigger, beare greater boughs and leaues rather then lesse, as may be seene in old forrests which are situate in fertile and fat countries ; or in those which grow in sandie, wood of Se- and bad grounds, as in Solonge where woods continue verie small and longue. vntimelic.

Woods planted and ordered (as is aboue said) the first, second, and third yeere, must not be touched with any edge toole : and yet notwithstanding towards the third and fourth yeeres, and those that follow, if you perceiue your wood so thicke set and spread, as that it riseth not neither groweth high as it ought, you may cull out and cut away the small sprigs and little boughes as you shall find them, seeing they are good for nothing, and leaue behind you some three or foure of the principall branches so stripped of their small twigs as your owne discretion shall best direct you. This pruning of them would be towards the moneth of March after that the colde is passed and gone, that

that so the frost may not hurt the boughes that are cut and newly lopped, and you may continue thus to prune them vnto the middest of Aprill, at what time they begin to bud and put forth, but then it must be done gently, holding the shanke of the tree fast and firme without moouing or shaking of the roots. And this pruning may be done euery yeere, if you will, and by this meanes you may cause a newe spring of small woods to growe, and to put forth eight or ten branches, fit for to be plantes for high and tall trees, by cutting awaie the side ones, and leauing three or foure of the fairest branches growing from the foote of the faide small woode, to cut downe, according as you shall thinke good, so that you make choise of such as growe vp high and straight: and if they be not altogether strong inough to hold vp themselves, you may helpe them with some prettie small props or stickes, the better to holde them vp.

The eleuenth Chapter.

Of the manner of sowing acornes for the growing of oakes.

whereof wild trees do grow.

ALl sorts of wilde trees growe of remooued plants, hauing good rootes, or of branthes, or of the seedes and fruites which they beare, and whereby they renue themselves. Of the remooued plant there hath alreadie inough beene saide, as that it is more profitable, and of a more speedie and certaine growth: and therefore the sooner able to bestowe pastime vpon his matter.

The second way to growe trees, is to growe them of branches written and buried in the earth, gathered in such sort as that they may put forth rootes, and take againe, as *Columella* hath very well set downe at large: notwithstanding this way is long in taking roote, and putting forth; and not to be practised but where there are no plants to be come by. Wherefore I will not meddle with it in this place, because it is not done without difficultie and vncertaintie, and for that the pleasure thereof is long before it be reaped: as also for that in this our countrie of France there are many vnderwoodes and strong hedges, where are to be gathered very easily, and that in great quantitie, plants of all sorts of wilde trees.

The thirde way is to sowe them of seede, as of acornes, beech masto, and of the seede that is in the leaues of elmes, for they bring forth such trees as those whereupon they themselves did growe: and such seedes may bee sown in little furrowes made with a hacke or grubbing axe, and those not about foure or fife fingers deepe, and therein to couer them againe very lightly with broken mould: or else they may be sowne with the plough, as beanes and all other kindes of graine are: or with a debbeck, by which name they call a little stick of halfe

halfe a foote long, and a finger or inch thicke. And of the three waies, the best is to plant or sowe the acorne or other seede with the dibble, euery one halfe a foote from an other, or a foote euery one from an other, by a straight line, or after the manner vsed in grounds broken vp with the hacke, making a small open place in the earth, and therein putting the acorne in the like distance of halfe a foote all along the furrowe: notwithstanding it is not needefull to plant them so neere euery manner of way: for the earth woulde not bee able to beare so much fruit as woulde growe, and so it must either be transplanted, or else it would prooue out of course like a misborne thing. Wherefore you may leaue betwixt euery two furrowes and plants, fowre fute, or fixe foote distance sidewaies: and againe, if all prosper not, the worst and most ill fauouredly growne may be pulled vp.

And euen as small and great woode is to be dressed and husbanded, so also must their seede be ordered, but not after the like sort: for the mattocke woulde pul vp the seede, and therefore they must bee vnderdigid very deefly, & the weeds weeded out all along the furrows where the seedes are set, to the ende that the weeds do not smother them, and that they do not blinde them, taking away their aire, sun, and substance of the earth, whereof euery yong seede and plant standeth greatly in neede, as to bee holpen thereby to gather roote and life, which is as yet in them verie yong and tender. By which meanes you see that paines and labour taken about acornes and other seedes of trees, caueth them to growe and prosper so, as that they get the better of other plants, which in continuance might ouergrow them: but if they remaine as forsaken thinges without husbanding, they will bee choked vp of weeds, and the greatest part of them die: and those which shall escape, will be but of lowe growth, and appeere like an vntimely birth, lacking helpe and dressing; except through long continuance of time they preuaile, and then they which planted or sowed them, shall not reape any pleasure by them, but their heires onely.

And in all such sortes of planting and sowing of wilde seedes, it is necessarie to fence a place sowed or planted, so well and sufficiently with ditches, hedges, or walles, as that no beast, horse, or other may enter or get in: as also that thereby the woode may be kept from being handled or cut downe by passengers: for if the sprig bee broused or broken, the tree remaineth all parched and readie for to die.

According to this maner of planting of acornes, or chesnuts they may very well and conveniently bee set and planted amongst the plants of trees, and rootes that are planted farre inough off one from an other, for so they may haue roome betwixt two plantes, being distant the quantitie of nine or tenne foote, or thereabout, seeing it is meete and conuenient to nourish trees, and to destroe weeds.

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By this meanes the acornes and chefnuts, or any other thing planted with the dibble, or sown in furrowes, is dressed amongst the rest, and made to inioy sufficient scope betwixt two plants, there to take their full growth, vntill they become like high, or very neere with the trees planted or cut, neither doe they coste any thing extraordinarily for their dressing, because the whole ground is to bee dressed, because of the other plants that are in it. And in as much as it is oftentimes found in countreies that there are neither vnderwoodes, woodes, bushes, nor hedges whereout one may get a plant growing from rootes, I haue thought good to intreate a little of the meanes of making it growe of seede. Like as is wont to bee done with fruite trees, and those which are taken from their nurceries, to be transplanted into gardens: so may you do with wilde trees, which after that they are growne to a sufficient thicknes, & come to beare seede, may be otherwhere either grafted or planted, as you shall wish or desire. For which cause heere shall bee put downe a treatise and chapter thereof, seeing the former intreateth of the intermingling of seede with plants, for to helpe out the storing of woodes which are alwaies to continue.

The twelfth Chapter.

Of the waie to make wilde trees growe of seede, to bee removed afterwarde into some other place.

IT is certaine (as hath beene said before) that euery tree groweth either of a plant, or of some great fruit, or of a writhen branch: & for that there are many places where one cannot come by plants easily, it is to be attempted to make the saide plant to growe of seede, as is practised in the nurceries of tame and garden trees, by dressing and dunging some halfe acre of good ground, and then to sow it with such seede as that the trees beare, whereof you would haue plants.

That is to say, with acornes, if you woulde store you selfe with oakes: or with chefnuts if you desire chefnuts trees: or with the graine and seede which groweth in elme leaues, if you woulde haue elme plants. The saide graines and seedes must be sown in a fat, fertile, well dunged, and somewhat moist ground, and that reasonably thicke, therein couering the saide seedes two fingers thicke, and causing them to be well watered afterwarde, and couered with bright strawe, to the end that this fruit of yong trees sprouting out of the seede, be not eaten and broken by birdes: but when they begin to growe, the strawe must be taken away, and the weedes growing amongst them weeded out with the hande.

For which cause the quarrers wherin the said seedes are to be sown, must be made long and narrow, that so the weedes may easily be pulled

vp

vp out of euerie place, without treading vpon the quarters, and that the said weedes may be gathered gently, to auoide the doing of hurt vnto the rootes of the yong trees: and oftentimes they must be watered at night after sunne set, and in the morning before sunne rise.

And after they bee growne three foote high, you must remooue them into some other ground before they take any stronger rootes, and set them good two foote distant one from an other till they haue got a competent thicknesse, such as is before described, and dresse and cense them from all weedes, and water them in the time of drought. Thus you shall reare plants of all sorts, and of all manner of wilde trees, to remooue afterwarde into such places as you will, and such trees will growe very well being transplanted, as are of like age and sort: for to the one of them cannot hurt or iniurie another.

This is to be practised in places where no plants of trees can bee founde in sufficient store: for otherwise in countreies furnished with vnderwoodes, and woods, there are inough to be founde without taking this plant, and tedious protract of time: wherefore this article will be of vse, where there is neither vnderwoode, woode, nor plant to become by in hedges or bushes, and not in this countreie, where there are many to be gotten, and those verie good.

The thirteenth Chapter.

Of the pleasure that commeth of the planting of wilde woodes, as also of the profit coming of the same.

AMongst the things required for the making of a place of perfect beauty, *Cato* in his booke of husbandrie saith, that it is needefull to haue nine principall things. The first is a vine, yeelding great quantitie of wine: the second a garden, full of little riuers: the third a willow groue and ozier plot: the fourth a great riuer: the fifth a meadow: the sixth a great champion ground: the seventh coppies of vnderwood: the eighth plentie of bushes and a warren: and the ninth a forrest of great trees or okes to beare acornes. Now amongst all these feuerall points of perfect beautie we may see that the principall is water and wood: because that hauing water one may easily make meadowes, garden plots, ozier yarges, and willow plots all along the waters and riuers: and hauing woods, one may make vnderwoods, warrens, bushes, and high great trees also, if it be loppt and pruned vnderneath, to make it shoote vp and grow on high. And he must not leaue about three or foure branches at the most, and then they will become tall and high by and by, because that the roote is disburdened of all the rest of his boughes by hauing them cut downe: in like sort the ground sendeth all such nourishment vnto these three or foure branches,

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Nine things requisite for the making of a beautiful place.

ches, as it had imployed in the nourishment of many branches of small wood, and offoordeth growth vnto the straightest and fairest branches, which are left behinde to come to perfection: thus in a small time they become tall and great trees and beare acornes. So in like manner there is not that wood of high and great growth cut downe in good and seasonable time, which putteth forth small wood and bushes, if cattell and beasts be carefully kept out.

*Woods haue in
them three
commodities.*

Whereupon I will conclude that in planting of woods, there are three things principally requisite to the making of a beautifull place, that is to say, little wood, great wood, bushes and a warren. For it is the like reason to plant the one and the other: for of the one the other is made, as is aforesaid: wherefore in respect of the pleasure, profit, and beautie of the place, it is meete and conuenient to plant woods.

*The pleasures
and pastimes
that the wilde
woods afford.*

But the chiefe pleasure and pastime which commeth by wilde woods, is, that being ioyned to your house and champion habitation, (which is the place, where it must be seated or planted) it is pleasant to the sight: for by his diuersity of greenenesse, it maruellously delighteth, and with great contentment recreateth the sight.

The second pleasure or pastime is, that the woods (being neere vnto your lodging) are alwaies full of all sorts of pretie birds, which sing sommer and winter all the day long, and the most part of the night, as nightingales and such other like, whereby their songs become ioyfull and delightome to the care, and so there is a pleasure and great contentment to the care euen to them in the house if it be neere vnto.

Another pleasure is, that in the said woods there are alwaies great store of wood coits, poppingiaies, itares, cranes & other sorts of birds, which make you pastime to see them flie: and there may also pleasure be reaped in taking of them with little engines, as, with a call, nets, the tonnell, or other such like.

The fourth is, that in the woods are to be had conies, hares, squirrels, and other sorts of small beasts pleasant to behold, and of great seruice for prouision of vittaille.

The fifth is, that in hot seasons you may purchase a coole aire within the said woods, as those which will couer and defend you from the iniurie and vexation of the sunne, and contrariwise cooling you whether the heate will or no: and therein you haue also to behold a comfortable greenenesse, both vpon the boughes and ground, which keepeth his grasse greene through the coolenesse and shadow of the trees.

The sixth is, that in winter being in the said woods, you are out of the iniurie and force of the winds and great cold, because they breake them off: and further in these woods you are solitarie, and may vse your leasure, in reading, writing or meditating vpon your affaires, without being disquieted or distracted, or drawne to cast your sight abroad

abroad ouer any far distant place or countrie, in as much as the sight cannot pearse through the boughes or bushes.

Besides the said pleasures, there commeth much profit thereof, as well for the feeding of cattell, and that in the shadow, and with store of grasse at commandement at all times: as also in respect of the oke mast, beech mast, chestnuts, and other fruites which the trees beare, which serue for the fating of hogs, and are very necessarie for other beasts: and for that also you may vpon certaine yeeres make fall of your woods, to make sagots, fire wood, stakes to hedge in garden plots, and other inclosures, as also rods for vincts to run vpon: and if there bee cut downe any chestnut trees, or haels, you may (besides the things already named) make your profit of hopes and boordes for wine vessels, in such sort as that these your woods shall not onely doe you pleasure but profit also, if so be you be so disposed to make your vie of it.

By this meanes you may coniecture that the ground which is imployed in bearing of wood, is not any thing inferior in profit vnto others which are imployed in bearing of corne and vines.

It is very true that the commaundment or vse and profit of it, are longer time in purchasing, and more hardly come by, then that of corne and vines, but it recompenseth it with the double in the end: for the first charges once defraied, nature bringeth forth both the greater and the smaller wood without the helpe of man, and without any labour, which happeneth not in corne grounds and vineyardes, seeing they beare not except they be continually husbanded and tilled. Wherefore the ground imployed in beech mast, and wood yeeldeth as much profit as any other, and will stand the house in as great stead, seeing it cannot be any way held or inhabited without wood.

I haue here beene the more willing to declare and lay downe in breete the pleasure and profit that commeth of woods, to the ende that they which take paines in those courses, may not thinke that they haue lost their time and cost bestowed thereupon, and that they may not be alhamed at the first blow of their trauell and long attendance, seeing that afterward both the pleasure and the profit doth abide and continue without any further cost, and that to them & their posterity.

Wherefore my counsell and aduise vnto the good husband and master of the family is, that hee applie himselfe to such planting of woods betimes, that so he may the sooner enioy the pleasures thereof, and that in so doing hee cast them so, as that they may growe as neere vnto his lodging and house where he meaneth to dwell, as possibly may bee, for his further both profit and pleasure: for if no good else should come thereof, yet they would serue to breake the raging and blustering windes annoying the house, if they bee well placed, and so conueniently as a man may be able to dispose them.

The fourteenth Chapter.

A treatise of the nature, properties, and differences of wilde trees, and what ground they delight most in.

Seeing it hath bene deliuered and laid downe heere about what time and manner is to be obserued in the planting of all wilde trees, and in giuing them such tillage, as may easily and in short time procure their growth: it hath seemed good vnto me, to write some little thing of the nature and sorts of trees which are planted and found ordinarily in the woods and Forrests of France: and to declare briefly what manner of ground they delight in, and in what soile they prooue greatest and most profitable, to the end that the planters of them be not frustrated of their paines and purpose, and that that which requireth a drie and hot soile, be not planted in a moist and low soile: as also that the trees which delight in a moist and low cuntry, be not planted in mountaines and drie countries, for this falleth out oftentimes to be the cause that such as beltove their cost in planting doe misse of their intent, and that the plant being in a ground cleane contrarie vnto it, doth not come to any profit. For which cause I will heere in a word expresse my minde concerning that point, not with any purpose to describe or comprise all the natures, vertues, and properties of trees, neither yet to speake of all kindes of trees: but onely to describe and declare the places and grounds wherein they prosper and grow most; as also to make knowne the diuersitie that is amongst trees of one and the same sort, and of one and the same name, as which are most fit to be planted, and best for to make shadowes to walke or sit in.

I know that there are diuers sorts of trees that growe both in the Easterne, Northerne, and Southerne parts of the worlde, whereof wee are almost altogether ignorant, and which in respect of the diuersitie of the regions doe not growe at all in this climate, and of these I minde not to speake at all, because my purpose is onely in brieft to lay downe that which is necessarie to be knowne about the planting of common trees, such as are ordinarily to be found in our owne Forrests, & not of strange and forreine ones, the trouble about which would be more then the pleasure. And as for such as are desirous to attaine the perfect knowledge of all manner of trees growing in any part of the worlde, and their vertues, properties, natures, and seedes, may see the same at large in *Theophrastus*, in his fourth booke of the historie of plants, and in the thirde booke where hee particularly intreateth of the kindes of wilde and sauagetrees. For hee particularly runneth through the nature, force, vertue, seede, and manner of planting of

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enerie wilde tree, as well those of the east, north, and south, as those of the west: but it shall bee sufficient for vs at this time to declare the nature of five or sixe sorts of trees which commonly growe in the countries heereby, and of their kinds, and what ground euery one delighteth in. Now therefore to begin.

There are two sortes of trees in generall: the one is called water trees, or trees delighting to grow in or neere vnto the brinckes of waters, in meadowes, and in lowe and watterie places: the other land trees, or trees delighting to growe vpon the firme and solide lande, and where the waters by inundations or ouerflowings vse not to come. But first we will speake of the trees living in or about water. *Trees living so close vnto the water.*

The fifteenth Chapter.

Of the aller, poplar, birch, willow, and other trees haunting the water.

There are fowre or five sorts of trees, which of their owne nature grow neere vnto waters: & which except they haue great store of moisture, do hardly prosper or grow at all: of which amongst the rest, the aller is one that most couereth the water: for the aller is of that nature as that it would bee halfe conered in water, and at the least the most part of this roote must of necessitie bee within and stande lower then the water, for otherwise they would not take, in so much, as that trees of such nature, ought to bee planted in moist meadowes, and neere vnto the brookes running along by the said meadowes, or in marshes, for in such groundes they take and growe exceeding well. This tree is apt to take in moist places, because it is a white woode, containing much pith, and putting forth great store of boughes in a short time, by reason of the moistnes of the waters wherewith it is nourished and fed.

The saide aller trees may bee planted two manner of waies, as namely either of branches gathered from great allers, or of liue roots digged vp in moist places, together with the earth, and set againe in the like grounde, and that in such sort, as that the halfe of the saide rootes bee lower then the water, and the vpper part covered with earth the depth of one finger, and in the meane time before they bee planted, they must haue all their branches cut off too, within a fingers length of the roote, and it will put forth againe many yong shoots, after the manner of hawthorn trees. You may reade more of the aller tree in the fourth booke.

There is another sort of water woode, which hercabout is commonly called white woode, of this kinde are the poplar, birch, and other sorts of woode which growe close by the water side, and vpon the bankes of ditchies, springes, and little brookes, and it is a common

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practise

practise in Italie to lay their conuincances and pipes to carrie their water from rivers throughout their grounds of those woodes. And these kindes of trees may be easily planted of yooong roots along by the water and riuier side, both most conueniently and profitable: especially the white poplar, otherwise called the alpe tree, whose leaues are apt to shake with euerie small winde. Where rootes cannot be got, there may in their steede be taken faire and strong plantes, such as are vsed in the planting of willowes: the birch doth somewhat resemble the white poplar in his barke, and the beech tree in his leafe, but it craveth a colder and moister soile then the poplar. And this is the cause why it groweth so plentifully in colde countries.

The other sort of water woode is the willow, which as we finde by prooffe, groweth nothing well except it be in a moist and watry countrie, and neere ioyning to waters. The manner of planting of willowes is commonly by setting of willowe plantes, and those such as are of a good thicknes and strength, as namely as great as one may gripe: for looke how much the stronger and thicker they bee, so much the more shootes will they put forth, and so much the stronger. This tree differeth much from the aller: for the aller will haue his roots all within water, but the willow woulde stand higher, and spread his roots along into the grounde that is wet and moist, and neere vnto water, without hauing his rootes altogether in the water, according whereunto it is continually seene that willowes planted vpon causeies and bankes hauing some ditch of water ioyning thereunto, and that in such sort as that their rootes may reach but to the brinckes and edges of the water, proue fairer, taller, and more plentifull, then those which grow in waterish medowes, because that for the most part their rootes stand moist in water. You may reade of the Holme tree in the fourth booke.

I saie not that willowes, allers, poplars, and such white wood will not growe in high places: notwithstanding that it is their nature to growe neere to water, and do prosper best in such places, and if they be planted in high places, and farre from water, they are hardly nourished, and put forth verie little in growth, in so much as that a hundred such trees as are planted in watery countries, will yeelde more woode then a thousand planted in a drie countrie, notwithstanding all the indeuour and husbandrie that can be vsed, yea, and they will perish and die a great deale sooner.

This I saie because it is easie to make them grow, and to husband them in a high or hilly place, by watering and drelling of them in conuenient sort, which labours, as they are not performed without great cost, so if they happen to bee neglected, it proueth to be the losse and spoile of the trees, whereas if they be planted in some place that is fit for them, and neere vnto water, according as their nature

requirith,

requirith, they will prosper without the toile or industrie of man vsed therein. Notwithstanding, for as much as the first yeeres after they be planted, they haue much to doe to shooe and nourish their roots and such branchts as are already put forth, it will be best to seeke them, of all such twigs as they shall put forth the first yeere, to the ende they may more easilie feede their rootes, as also that thereby the force of windes, which woulde take such holde of offall, may not shake and loosen those which are already fast, for vpon such causes trees do manie times die, be they neuer so well planted.

I know that it is not alwayes required that such pointes should be taken (especially about those which are orderly and conueniently planted) in planting or pruning of them. Norwithstanding I lay thus much for them, which go about the making of close alleies, for walkes and shades, that they may cause them to grow much in a short time, for this they shall effect by planting of them in furrowes, and not one of them perish. And as for their paine and labour, they shall haue the pleasure thereof in shorter time, and larger manner.

Heerewithall it must be noted, that whensoever you set or plant any such trees, you must so do it, as that it neede not a second looking: for if any of them shoulde die, it woulde be this harder to set others in their places, so as that they would thrice, because the shadowe of the other which liue, would cause the same to die, seeing it is usually seene that the elder and stronger ones doe oppresse the weaker, keeping them vnder, and causing them to miscarrie. Wherefore the greater care is to be vsed in the first planting of them, and the more paine so be taken with them, seeing the sequelle is a thing that is so hard to be redressed.

The time to plant willowes, allers, poplars, and other such woods, is alwayes founde best in the beginning of Februarie, or at the latter ende of Ianuarie, when the great colde is past, being otherwise apt to hurt such plants as are new set, as hath already bene said.

As concerning the properties of these trees thus delighting in watry grounds: the leaues & flowers of the white poplar, although they be a little hot, do notwithstanding make a very cooling ointment called *Populeum*, good to take away the heate of inflammations, as also the milke out of womens breits that are newly deliuered.

Birch tree yeeldeth twigs which serue to make rods for the punishing of theeues withall, as also to make baskets, little maunds, besomes, and coverings for earthen bottles. Of the stocke is made charcole seruing for the melting of mettall. And of the rinde are made links to giue light in the night season, for to such end doe countrey people vse them. The iuice of the leaues mixt amongst the runnet of a calke, doth keepe cheefe from wormes and rottennes: if you pearce the stocke of the birch tree, there will come forth a water, which being drunke

Trees must be well and surely planted at the first.

The time to plant willowes, allers, &c.

drunke a long time, is of power to breake the stone of the reins and bladder, being taken in a gargarisme, it drieth the vicers of the mouth: and being vsed in lotions, it clenseth and taketh away the filthines and infections of the skin.

The sixteenth Chapter.

Of ashes, elmes, and maple trees.

Ash trees.

THe ash doth naturally craue a lowe and waterish countrie, and therefore do growe more plentifully in such places, then in high groundes: and therefore for the most part they must be planted in such lowe and watric grounds, though not altogether so lowe & watric as the willowe, poplar, and aller doe craue: howbeit notwithstanding they may be planted in indifferent groundes, & elmes will growe wel therein. Their proper nature is to delight in moist valleies, for therein they prosper wel and growe vp to a great height, with streightnes, and beautifullnes of timber. Notwithstanding this is a common woode which may be planted in all sorts of groundes, howsoeuer that it like better in fat and moist groundes, then in those, which are but indifferent: but they much dislike the drie, rough, stiffe, and grauellie groundes, if they be not mingled with moisture.

Elmes of three sortes.

There are three sortes of elmes, the one is of those which haue a small little leafe and a blacke stalke: the second hath a large leafe, and a reasonable white stalke: the third of them hath a very large leafe, and the stalk as it were all white: those which are to be chosen for planting are those two latter, for they are of greater growth, and are wont to prosper better: besides that, they are fairer, and put forth more boughes, making thereby a greater shadow.

Male and female elmes.

Of these three sortes there are both males and females: wee call those females, which beare most fruite, and the thicker seede: and the males wee call those which are lesser, and beare their fruite of seede, in the midst of the leaues, and that in such sort, as that they seeme to beare neither fruite nor seede. And for this cause there are many that write of husbandrie, affirming the saide tree to beare no fruit or seede, and that it groweth either of a plant or shoote. And of this opinion was *Tremellius*. Notwithstanding, it is certaine, euerie leafe beareth his fruite contained in the midst thereof, and thereof will elmes grow, being sown in due time. And of this opinion is *Columella*, and experience it selfe doth shew it: he maketh two differing sorts of elmes, calling the one sort the fairest & tallest elmes of France; & the other sort Italian elmes. And as concerning those fairest elmes, if they be to be found, they must be placed, because they grow vp the sooner that way, and put forth much larger boughes: *Theophrastus* and some other writers doe make them little differing, according to the countrie wherein they

Columella.

Theophrastus.

they growe. I haue bene the more willing to describe them according to their kinde of leafe and woode, that you may the more easilie knowe them. I woulde haue you to looke backe into the fourth booke.

Amongst these sorts of trees we may place the maple trees: (called of the Latines *Aceres*,) because in their nature they somewhat resemble the elme: they craue the like groundes, namely a fat and moist groundes, they growe (as the elmes doe) in all arable groundes, they put forth in a short time great branches, and but little greenenesse. This tree hath a very white body, beareth small leaues like the leaues of three leaved graile, and doth not breede or gather any great store of vermine.

The ash is contrarily inclined, for thereon breedeth oftentimes such abundance of vermine, as that thereby all their leaues are eaten and bored full of little holes. Of this sort of trees as well elmes as ashes and maples, the best are those which grow soonest, and spread out the largest boughes in a short time.

As concerning the properties of these three kinde of trees, we haue spoken in the thirde booke, in the chapter of balmes, howe there is made a singular balme of the little fruite that is founde inclosed in the leaues of one of the sorts of elmes: furthermore, the water which is founde inclosed in this little fruite, maketh the face neate and shining if it bee washed therewith: againe double linnen clothes being wet in this iuice or water, and applied to children which are bursten, becommeth a singular remedie for them. The same iuice put into a glasse bottle, and buried in the earth or dung, for the space of five and twentie daies, being well stoppt, and hauing the bottome set vpon a heape of salt, prooueth singular good to cure greene wounds, if they be dressed with tents steeped in the said iuice.

The maple tree in this countrey amongst other things is had in request, because of the boughes thereof there are made bowes, and that because they are stiffe and hard to bend.

The ash tree hath a singular vertue against the venome of serpents, for it is such an enimie, and so contrarie vnto them, as that they dare not drawe neere, or approach vnto the shadowe thereof: and againe as hath bene proued of many, if you make as it were a circle of the leaues or boughes of the ash tree, and put within the same a serpent by the one side thereof, and a burning fire on the other side, the adder will rather aduenture to passe through the fire, then ouer the ash tree leaues: for this cause nature, as one carefull of the good of mankind, hath prouided that the ash shoulde flourish before that adders and vipers doe vse to come out of their holes in the spring time: as also that it should not fall his leaues in autumn, till they haue taken vp their winter resting place. Wherefore if it happen that any horse,

cow,

cow, or other beasts of the farmers should be bitten by some serpent or other venomous beasts: there cannot be found a more soveraigne remedie, then to stampe the tenderest leaues that are to be found vpon the ash, and straining out the iuice to giue it the beast to drinke: and afterward to lay vpon the greaved part the drosse of the stamped leaues: this is likewise a good remedie for men that are bitten of any adder or viper. The decoction of the rinde of the ash tree taken, is singular good to open the obstructions of the spleene, and to drawe out great store of water from such as haue the drop sicke, as also to make fat folks leane.

The seauenteenth Chapter.

Of chesnut trees.

THE chesnut tree is a strong and mightie tree, much like vnto the oke. It is a fast wood & good to build withall, as also to vnderprop vines, & make other works, which are made of oke. It groweth of the seed of the chesnut, which is sown after the manner of the acorne, & so it groweth and putteth forth his shoots both sooner and more effectually; and taketh commonly in all grounds, yea even in the sandie or grauelly grounds, but yet it shunneth the groundes that lie open to the pearching heate of the sunne, affecting altogether the little hills and mountaines that are colde and lie vpon the North. The feede or fruit thereof (called the chesnut) is sometimes spoiled and that after the same manner that the acorne is as by too much drinnesse, which maketh it that it cannot bud or blossome; or by to great store of water, putrifying both the chesnut and acorne, before it can spring out of the earth, or else by cattell, moulles, field mice, and such sorts of vermine which eate or wound the chesnut and acorne within the ground. The nature of the young plants of chesnut trees, and okes are much alike, and the manner of dressing them also: and if you would haue them to put forth store of boughes, you must cut them after they haue beene planted three or fower yeeres, and not before; and that in the beginning of the spring time, for so you shall make them put forth twise as much. And yet it is not without danger to vse any edgetoole in cutting them, for thereby they oftentimes die. So then if there put forth any branches or sprigs along the stem, in the first, second, or third yeere, you may at the beginning of such their putting forth crop them off, and breake them away with your hande whiles they are young and tender, and not to take any knife vnto them, and then you shall doe best.

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The eighteenth Chapter.

Of the oke and the differences thereof, borne beames, hatches, linden tree and others.

THE oke is a tree bearing most fruit, and affording the most commoditie of any tree growing in France. And for this cause it hath beene accustomed to preserve and keepe store of these Kindes of trees in olde woodes and forrests, as being most necessary and profitable. Some doe make three sorts of this kinde of tree, and of euery sort a male and a female: for notwithstanding that the common people call them all by the common name of oke, yet the Latins attribute to euery sort his seuerall and proper name, calling one sort thereof *Robur*; another *Quercus*, and the third *Ilex*.

The first of these sorts is a kinde of oke which is very thicke and strong, hauing a body that is very thicke below, & full of knots, & very mightie, hauing great roots and spreading far and wide in the ground: and at the top of the body or bole which is but short, it beareth many and great quantitie of boughes that are also thicke, spread abroad and long, taking great roome: and for that cause are planted the one from another a great distance, that so they may haue roome for their boughes to spread. The wood growing vpon this sort of okes is fitter to make fire wood of, then timber to build withall, because it hath but a short bole, and riseth not vp to any great height or squarenesse, hauing his boughes therewithall very crooked and writhen. There are many forrests to be seene, wherein this kinde of okes doth growe, as namely those whose okes are thicke and short, standing far asunder, and yet spreading on a great bredth aboue.

The other sort of okes hath both a reasonable thicke & long body, as namely of the height of foure or five good fadomes: as also foure or five reasonable tall & straight boughes growing thereupon, but not spread forth into any great breadth, as neither the bodie is so well couered and shadowed therewith as the former. And this sort of okes is good for beames of howses, and great peeces of timber, to be put in buildings, as also for to saw and cleaue, because it is not knottie and hard as the former. And of this sort there are to be seene many forrests planted in France, and they are more thicke and closer growne with timber, then the others which I am about to speake of, because the boughes of these doe rise more straight vp, and take not vp so much roome.

The third sort of okes hath a small bodie but very straight, and growing to the height of seuen or eight fadomes without any boughes, and at the top of their said bodies, bearing but small store of boughes and wood, in such sort, as that all the wood is in the bole, seeming to be only a nose gay at the top. And this kinde of wood standeth very

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neere the foote one of another, rising vp equally and alike vnto a great height & straightnesse, and the forrests furnished with this kinde, are very profitable to make all sorts of buildings, whether it be to make the ioyces thereof, or any of the other sorts of long and middle timber, as those required for wals or roofes. And of this kind of woode there are many forrests in this countrie.

All these three sorts of ypod doe beare a great leafe, and that every one like vnto another, saue that they are some of them large and great, some but indifferent, and the thirde sort small and little. A gaine, they beare some of them acornes that are more long and thicke, other some acornes that are more thicke and short: and againe other some of them acornes that are smaller and longer.

The male and female of oakes.
Theophrastus.

The barren is called the male and the fruit full the female.

Furthermore, there is not any of these three sorts which consisteth not of male and female. The female is commonly called that (as *Theophrastus* saith) which beareth the most and strongest fruite: whereupon it followeth, that if those are to be called the females which beare most store of fruite; wee must needs call those males, which beare least fruite. When they beare fruite, or when they beare none, the barren are called the males, and the fruitfull the females. *Theophrastus* putteth an other difference betwixt those which are fruitlesse, but I meane not to write any thing thereof at this present, purposing to bee briefe, and to referre such as are desirous to see the same to *Theophrastus* his thirde booke of the historie of plants, vnder the title of the oake, as also in like manner for all other sorts of trees, which I spare to speake of, that so I may not exceede my former purpose and intent.

That the life of an oake continueth a 100 yeeres of growth, a 100 yeeres of standing in a stay, and a 100 so perish and die in.

The horse at his full growth at five, and a man at five and twentie.

All these sorts of oakes are of great continuance and length of life, in so much as that some allot vnto them, to liue three hundred yeeres: that is to say, one hundred to growe, one hundred to stande at a staie, and one hundred to decline and fall away: which may easily be seene in the olde and ancient forrests. And whereas the oke is long in comming to his growth and long in dying, it is no maruell, if the elme, the ash, the maple, and other woods set in the like and no better ground, doe put forth their boughes and branches more speedily and mightily then the oake: for the nature of those trees is to grow vp soone to their perfection, & so to die and fade soone; and the nature of the oake is to grow by leasure, to flourish a long time, and to be long before it die: now nature will not be ouer chaled, as may be seene in a horse, which commeth to his growth in five yeeres, and man not before he be five and twentie: and so the whole continuance of the one, is more durable then that of the other. This I speake in respect of such, as by and by looke to haue wood to become growne according as they can wish: giuing them to knowe, that to answere their hastie desire it will bee best for them to plant

plant ashes, elmes and maple onely, seeing they are giuen to spring mightily & in a short time, putting forth more boughes in six yeeres then the oke in ten. Whereas they which desire to haue a more pleasant, profitable and durable wood, though it be longer in comming to perfection, must plant oakes, the hnut trees, hornebeames, and beech trees, for they are reasonably long in growing: and of like durableness, and put forth but small store of shootes, like as the oke, in such sort as that they become trees of one and the same sort and growth, and to be planted after one manner and at one time, as hath bene said before. It is very true that the oke delighteth in a fat, good and drie ground; euen as the hornebeame, and beech tree doe: notwithstanding the hornebeame and beech will growe more easily in a stonie grounde or countrie, although that euery sort of trees whatsoever, bee giuen to grow the better, by how much the ground is better, wherein they are planted. But some doe naturally delight in and craue a good ground, as for example the oke, if you would haue it to prosper well: for and if you plant it in an indifferent ground, it will prosper but indifferently; and if it be set in a hard and barren soile, it hardly prospereth, and doth nothing but burne away with the heate of the sunne, and yet hornebeames and beeches doe grow in grounds that are but indifferent: yea, they may be seene to prosper well in hard and stonie grounds.

The pits are in good season opened, and all the said trees more conueniently planted in the moneth of Februarie, when the strength of winter is well broken, as alwayes hath bene said.

The hornebeame tree (called of the Latines *Carpinus*) groweth in the same ground and after the same fashion that the maple doth. The wood of this tree hath in times past bene vsed to helpe husbandment tooles, and to make yokes for oxen: but now it is made matter for the fire, being a wood that hath least moisture, but more drines, and which maketh the best coale.

The beech (called of the Latines *Fagus*) as it resembleth the hornebeame: very neere; so it craueth the like soile and dressing for the making of it to thrive and grow well: it is true that therefore it is worthie to be had in request, because it bringeth forth his fruit which is called beech mast, and that of no lesse profit then the acorne, at the least the squirrels, turtle doves, cranes and such other birds doe fat themselves thereupon. The men of ancient time did make their wine vessels, fatts, and drinking vessel of the rinde of this tree.

The linden tree groweth very well in hillie and high mounted places, so that they be notwithstanding moist and somewhat waterish. The wood thereof is fit to make coffers and boxes: and the rinde to make cradles or baskets to lay yoong children in.

The corke tree craueth the like soile with the ash and the oke, it is no where to be found in all the forrests of France, but in great store

in the countrey of *Beare* and *Forin* this is a thing woorth the noting in this tree, namely, that it may haue his parke filled off without doing of any iniurie vnto the same, and this is ordinarily imployed about the making of hives for bees, and for the soles of slippers and pantofles, usually worne during the colde time of winter. The yew tree (which the Latines call *Taxus*) is very common in our forrests: it groweth well upon mountaines and rockes. The wood thereof is good to make coffers, footestooles, bowes, arrowes, darts, and other such like stately ioyner's workes of, because it hath diuers yuines, and is not subiect to bee eaten of wormes. Some there are which report that it is deadly to eate or sleepe vnder the shadowe of it, and that if a man eate of the fruite thereof, it causeth him to an ague and bloudie fluxe.

And seeing I haue resolved to be brieue, and not to passe beyond my bounds, it shall bee sufficient to haue made this short treatise, commending such as are desirous to see further into this skill and knowledge, to such bookes of husbandrie as throughlie intreate of all the parts of the same, seeing they are to be had euery where, and seeing that in them such things are to be attained to the full, as I for breuitie sake haue omitted and left vntoucht.

As concerning the vertues and properties of the foresaide trees, the oke hath many things, and those of great commendation. The leaues, his nuts (which are called gals) his mistletoe (as being called the mistletoe of the oke.) The tender leaues thereof which are but as yet budding and putting forth may be distilled, and the water thereof is singular against the fluxes of the liuer, to breake the stone, and to staie the whites of women. The greater sort of gals or apples, haue this propertie in them, namely to prelage and foretell three things, as is to say, war, dearth, pestilence: for if you open them which are whole you shall finde therein either a little flie, or a little spider, or a little worme: if the flie flie away, it betokeneth that there will be warre: if the little worme doe creepe, it is a signe of dearth that yeere: and if the spider doe runne to and fro, it prognosticateth an infinite number of pestilent diseases. The oke apples dried and made into powder, doe speedily staie all manner of fluxe of the belly. The mistletoe of the oke taken inwardly, doth greatly asswage the torments of such as are taken with the falling sicknes.

The beech tree is much vsed to make baskets and maundes off for to gather grapes in. And heereof likewise men in olden time were wont to make vessels to sacrifice in vnto their gods: The leaues of the beech tree chawd, do heale the chaps of the lips, & the frettings of the gums. The fruite of the beech tree, which is called beech mast, dried and made into ashes, being mixt with liniments, is of great force & power against the stone and grauell.

of

of the parke for the keeping of wilde beasts.

The nineteenth Chapter.

Of the situation of the parkes, and of the manner of ordering the wilde beasts therein.

TO the ende we may not leaue any thing out of this description of a countrey farme, whereof the farmer or lord of the soile may make any profit, or else take any pleasure, my aduise and counsaile is, that according as the places and groundes may conveniently afforde, there be parkes made neere vnto the farme, therein to breede and keepe hares, wilde goates, or fallowe deere, wilde swine, and such other like wilde beasts, to the ende that the lord and master of the place may now and then recreate himselfe therewith, and take his sport in seeing the saide wilde beasts hunted; as also that if hee bee disposed to make any great feast or banquet, he may therein bee sure to finde as in his kitchen or larder house for to make readie meate of, besides the benefite which the good husband may make yeerely thereof by selling of them.

The parke would be seated (if it bee possible) within a woode of high and tall timber trees, in a place compassed about, and well fenced with wals made of rough stone and lyme, or else of bricke and earth-lome, or else with pales made of oke planks. You must foresee that there bee some little brooke or spring water running along by the place, or for want of spring water and naturall streames, you must prepare dirches and pools walled and daubed in such sort as that they may receiue and keepe the raine water.

It is meete also that there shoulde be great store of grasse ground in the place, and trees bearing fruite: amongst all other trees there is speciall account made of acornes, wilde apples, wilde pearces, strawberrie trees, and other such like, for the feeding of these wilde beasts. Notwithstanding the good farmer must not content himselfe with the prouision which the ground bringeth forth of it selfe: but at such times as the earth is barren, and when there is nothing to feede vpon in the forrests: they must haue giuen vnto them of the haruest fruits: and be fedde with barley, pure wheate, beanes, the drosse of the wine presse, and whatsoever else is good cheape.

And to the ende that these wilde cattdill may the better knowe, that there is such prouision of meate for them, there must be amongst them some tame ones, and such as haue bene trained vp in the house, for they will follow any whither, and draw the other after them, & so bring them to the place of prouision for their feeding. And this order

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must

must not onely be obserued in winter, but also when they bee great with yoong, and when they haue calued; that so they may see the better. And to that end there must regard be had to see when they haue fawned, that there may be come giuen them.

The wild bore would not be let growe elder then the age of fower yecres, for hee groweth vnto this time, but afterward paireth and becommeth leane by reason of olde age: wherefore it is meete that hee should be solde while he is in his beautie and prime.

A stag may be kept a long time, for he is yoong a great time, and liueth a great while.

But as concerning small beasts, as hares, they must not be put in a parke fenced onely with posts and pales: for seeing they are small, they will easilie passe through the gaping and open spaces, and hauing got through, runne away. Their parkes therefore must be walled about, & their feeding of fORAGE or mallin corne, succories, lettises, cich-pease, barlie steeped in raine water: for leuerets are not greatly in loue with drie corne. As for conies we haue spoken of them in the treatise of the warren.

Of the heronrie.

The twentieth Chapter.

Of the situation of the heronrie, and of the ordering of the heronshewes.

WE haue intreated in the first booke of certaine strange and wilde birdes, as peacocks, turkeies, selants, and small hens, and haue saide that it is a curious and difficult thing to breede and bring them vp: and wee may say as much or more of the herne, which is called of the Latins *Ardea*, as a man would say *Ardua*: because he is giuen to flie on high: for there is nothing but charges in this birde, without any profite. True it is that princes and great states, which loue the game may take some pleasure and delight in the sight of the hauke for to take the herne, as also some good liking in swallowing the sweete morsels in eating of the herne, but especiallie of the stomacke and brest: in like manner there are some that saye, that a herne is a princely dish, and meate for a king; but all this pleasure is not come by without double costes. Let vs then put case and admit that the lorde and master of the farme bee a prince or great lorde, and that he beareth a very good will to all manner of game, and to fare daintilie; then he may so provide as that hee may now and then haue some sport with the herne, either in taking or eating of the same: wherefore it shall not be amisse if wee speake a word or two of the heronry, to the end wee may not let slip and ouerpasse any thing in gene-
rall

rall of all that which may be necessarie for the beautifying and perfecting of our farme and country house.

To provide therefore for a heronrie or place to breed herns in, being if you meane to haue it, not onely for pleasure but also for profite fit vnto the lord thereof, you must first consider that the herne is but a guest for a time, affecting solitarines, and very fantasticall, as not giuen to staie in any place, but such as pleaseth him very well: and for that cause it is not to be taken as an indifferent thing to place or bestow their prouision for their nesting and abode in any place, but only where it is coniectured, that in passing along, they haue begun to rest and settle themselues, as in a place that is most pleasant and delightful to them.

For the heronrie must in providing bee two manner of waies considered of: as first there must consideration bee had of their foode and nourishment, that so when it shall please the lord of the farme to haue the herne, or to make any great and costly banquet, he may haue them ready at his commandement. And secondly, to allure and draw hernes as they flie along: for the herne that is shut vp and made fast in a heronrie, calleth vnto him such as flie by, for they hearing the voice of the heronshew so shut vp and made fast, doe thereupon stay and make their nests vpon the vppermost and highest part of the heronrie, whereupon it commeth, that hauing laid their egges, by and by their yoong ones are taken to be shut vp and made fast in the heronrie.

Let vs conclude then, that before there be any cost made in building a place for the heronshewes to build in, there must diligent care be had in discerning of the commodiousnesse & sitnesse of the place, and that is gathered by hauing known the herne now and then to haue contented & pleased himselve therewith: for if a man should go about to shut vp a herne in such place as he taketh no delight in, he would neuer haue yong, but die out of hand. Furthermore it is requisite that there should passe some smal streame of water through the midst of the heronrie, for the heronshew is a water bird, and taketh delight and pleasure in water, as liuing altogether vpon celes, and other such like liuing fishes. The building of the heronry must be made altogether for light, wrought with very close lattes and cloyen planks, about the height of fixe fadome from the ground, & well covered aboue, to the end that the heronshewes flying by, may make their nests vpon the heronrie in fit and commodious sort.

Their meat must be liue celes, and other such like fishes, sometimes the inner parts of beastes, as also the flesh of wolues and dogs cut into small gobbets: and they must haue giuen them to eat vntill they bee full, that so they may be fat against the time of hauking or banketting, and not for increase or store, for there are but a few hernes that will lay egges being restrained of their liberty.

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And

What place is fittest for a Heronry.

Two things requiring occasion to make choise of some certaine place for a heronry.

The food and nourishment of the heronshew.

What place is
best to lie at
the heronshew.

And yet this I will tell you by the way, that if the lord of the farme doe take any herne out of the heronrie to make him sport withall by flying him with the hauke, that then hee must beware not to doe it neere vnto the heronrie, for otherwise hee should take away the good liking both of flying and inclosed hernes from the heronrie, and so the heronshewes haunting the same in nesting time, would forsake it, and the inclosed woulde growe displeased, and fall in feare of the like danger.

The properties
of the heron-
shew.

Although the heronshew be a royall meate, notwithstanding in as much as hee is a water birde, his flesh is full of excrementous parts, hard to be digested, & that about any other fowle of the riuer. There is nothing more to be esteemed of in him for to bee eaten, then the flesh which is gathered about his stomacke or brest. Moreouer, some holde and are of opinion that his bil being steeped for sometime in wine, doth make the wine forcible and able to procure sleepe, and bring the body to rest.

To procure rest
and sleepe.

Of hunting.

The one and twentieth Chapter.

How that there are three sorts of hunting.

Following our purposed determination, we will intreat in a word or two of hunting, not that we would wish our farmer otherwise to affect the game, then by making it sometimes his recreation, and that in the time of vacation, and surcease from his other businesses, as when he should doe nothing but sleepe, or keepe holidie at home.

Now there are three sorts of hunting, the one of fishes, the other of fowles, and the third of fower footed beastes, as are the stagge, the bucke, fallowe deere, wilde bore and hare. In all these the lord of the countrie farme may finde occasion to exercise himselfe, but especially in the hunting of the fower footed beastes: for fishing is more fit for the farmers seruants, as those whom it best becometh to busie their braines on vacant and festiual daies, with catching fish with the angle or pors made of osiers, that so they may haue any extraordinary fare for their afternoon drinking or supper. The catching of birds is somewhat prettie and pleasant, but yet if wee will beleue *Pliny*, a practice more fitting a seruile estate then a gouernour or commander. The hunting of fower footed beastes, as an honest exercise hath bene received at all times, and permitted by the lawes, especially that which was not vnderaken in the night, neither yet vpon youthfulness and contempt of labour: but rather for the better obtaining of a great readines, nimblenes, cheerefulness, and strength of bodie: both for

The profit of
hunting fower
footed beastes.

soeuer it is the master of our countrie farme, especially if hee beanie great lord, may exercise himselfe sometimes, and take some sport in hunting after hee hath giuen order and direction for the dooing of all his businesses, as wel in the citie, as at his champion or countrie house.

The hunting or chasing of the stag.

The two and twentieth Chapter.

What dogs are best for the course.

THE hunting of fower footed beastes, as the stag, the wilde bore, the roe bucke, and the hare is performed principally with dogs, horses, and strength of bodies, sometimes with ropes and nets, and sometimes with toiles: but these two sorts of taking of beastes are more fit for holidie men, milke sops, and cowards, then for men of valour, which delight more in the taking of such beastes, in respect of the exercise of their bodie and pleasure, then for the filling of the bellie.

Hunting dogs which are fit for to course withall, are of fower sorts, as concerning their colour, that is to saie, white, baie coloured, graie, and blacke.

Some sort of
hunting dogs.

The white are the best, for they are of quicke sent, swift, hot, & such as neuer giue ouer for any continuance of heat, or breaking off, because of the footing of the horsemen, or the cries and noises of men, keeping the turnes and crossings better then any of the other sorts of dogs, & are more to be trusted: notwithstanding they loue to be attended with horsemen, and they do feare the water somewhat, especially in winter when the weather is colde. Those which are altogether white are the best, and likewise those which are red spotted. The other which are blacke and durie, graie spotted, drawing neere vnto a changeable colour, are but of small value, and whereof there are some subiect to haue fat and tender feete.

Change: that
is to say, the
wiles and
fleights of the
stag.

The baie coloured ones haue the seconde place for goodnes, and are of great courage, venturing farre, and of a quicke sent, finding out the bayes or fallowes well the turnes and windings, almost of the nature of the white ones, save onely that they doe not indure the heate so wel, neither yet the treadings of the horsemen, and yet notwithstanding they be more swift and hote, and feare neither colde nor water: they runne surely, and with great boldnes, commonly louing the stag more then any other beast, but they make no account of hares. It is true that they be more head strong and hard to reclaime then the white, and put men to more paine and trauel about the same. The best of the fallow sort of dogs, are those which haue a brighter haire, drawing neere vnto the colour of red, and hauing therewithall a white spot in the

The bay or
fallow co-
loured dogs.

forehead, or in the necke, in like maner those which are all fallowe: but such as incline to a light yellow colour, being graie or blacke spotted, are nothing wooth: such as are truſſed vp and haue dewclawes, are good to make bloudhounds. The white and baie dogs are not fit for any but kings, princes, and great lords, and then not for gentlemen, because they coure onely the hart, and not all sorts of game.

The graie dogs.

The graie dogs doe runne well at all sortes of game, that a man would haue them to hunt, but they are not so swift nor so lustie as the others, especially such of them as haue their legs of a bay or fallow colour, drawing somewhat vnto a white: and yet notwithstanding they are hot and stout, not fearing water or colde, running with great courage, and neuer giuing ouer the game before they haue killed: but indeede they auoide and thunne heare, the footing of horses, & the noise of men, neither doe they delight in the hunting of anie beastes that are giuen to wiles and crosse windings: but in recompense hereof it is possible that you may see them to ouerrunne the most swift and best dogs, especially after beaſts, that vse to run out right.

Blacke dogs.

The blacke dogs are strong bodied, but they haue lowe and short legs, in like manner they be nothing swift, howlouer they may bee of a quicke sent, fearing neither cold nor waters, & they delight most in coursing the rammish, and strong tented beaſtes, as wilde bores, foxes, and such like, because they neither haue minde, nor yet swiftnes to course and take the beaſts that be swift in running. But where as it is commonly giuen out and reported, that there are good dogs of euery shape, it may bee so brought to passe, as that the hare may not make much for the arguing of the goodnes of the dogge, and that there are found of all colours good and faire dogs: for this cause it is meet and requisite that a dogge (of what haire or colour soeuer he be): to the end he may be faire and good, haue these notes and markes following. His head must bee reasonably thicke, rather long then flat nosed, his nostrils wide and great, his eares large, & of a meane thicknes, his backe crooked in compasse wise, his loines great and thicke, his lips thicke & large, his thigh round truſſed, his houghes straight, and well set together, his taile thicke, neere vnto his backe, and the rest of it small and leane euen to the ende: the haire vnder his belly stiffe, his legs great, the sole of his foot dry and shaped like to the foxe his foote: his nailes thicke, his hinder parts as high as his fore parts. The male kinde must be short and crooked: but the bitch or female long.

The markes of a good hunting dog.

The signification and meaning of these signes is such: his wide nostrils doe argue his quicke sent, his vaulted backe and straight hams doe argue his swiftnes: his taile thicke above and slender downe to the ende, doth signifie that he hath a strong backe, and winde at will: the stiffness of his haire vnderneath his belly doth shew that he is willing and painfull, fearing neither water nor colde: his thicke legges, foxe

foxe foote, and thicke nailes, doth signifie that he hath no fat or gouty foote, and that he hath strong lims, to runne long without grieſe or annoiance.

But forasmuch as it is hard to get such hunting dogs when one would, as are both good hunters and faire withall, it will be requisite to provide a faire bitch of a good race, strong, and of well proportioned lims, hauing great and large sides and flanks: and to procure her to be limed with a faire dog, hauing the markes that we haue spoken of before, and that at such time only (if it be possible) as when the moone is in the signes of *Gemini* and *Aquarius*, for the dogs that are gotten at such times are not so subiect to runne madde, and besides, there will be of them more dogs than bitches. When the bitch is with whelpes, and beginneth to haue a bagging belly, she may not be set to coure least her yoong ones should be kept from euer thriving: her walke then must not be past the court or house, neuer shutting her vp in any kennell, because she is wearisome, and giuen to loath all meat. When she hath whelped (the fittest time for which is in March, Aprill, and May, rather then either in winter or in the time of great heat) and that the whelpes begin to see, they must be fed with cowes milke, sheepes milke, or goates milke, vnmixt and made warme, neither must they be taken from sucking the bitch, till they be two moneths old, and then feeding them with milke meates, bread, and all sorts of portage, till they be ten moneths old, and all this while thus to keepe them in the kennell.

Coursing dogs would be fed all together in one kennell, meete and conuenient for them, to the end they may know & heare one another: because that those which are fed together, they become the better acquainted, and agree better in hunting then those that are of diuers kennels and places.

The feeding and keeping of hunting dogs.

Their meat shall be bread made of a third part of wheate, a third part of barley, and a third part of rie, because that being so mixt it keepeth them faire and fat, and cureth them of many maladies: for and if it should be made of rie only, it would make them scoure too much: if of pure wheate, it would binde them too much in their bellies, and therefore the one must be mixt with the other. There must be giuen them some flesh meate in winter, but especially vnto those that are leane, and course the stag: but to those that hunt the hare you must neuer giue anie, least they fleshing themselves vpon the greater game, they make light account of hares, which thrust themselves commonly into the mid of tame cattell, to shifft off the dogs by that means, who vpon such occasion might leaue off the hare, and fall a coursing the tame cattell: but the dogs which hunt the Hart, would neuer doe it, because the stag is of a more full and strong sent than the hare, as also because their flesh is more dainty and delicate than any other. The

Ele. b. me. 11.

best flesh meat that can be giuen them, and which doth strengthen them most, is horsecflesh, alle flesh and mules flesh: but as for oxen, kine and other such like, their flesh vnto them is of too eager and sharp a substance. Their flesh meat must first haue the hide pluckt off, that so they may not haue any knowledge of the beast, nor of his haire: good huntmen make great account of portrage made of mutton, goats flesh, and oxe heads for their leane dogs; which hunt the hare: and you must mingle sometimes amongst these portrage, a little brimstone to heat them withall.

Portrage.

Their kennel must be made in some place standing vpon the East, through the midst whereof doth runne some little riuer or spring: the place wherein the dogs shall lie shall be builded with very white wals, and floores of boords close ioined, for feare that spiders, fleas-wallice, and such like should breed there. He that shall be appointed to keepe them must be gentle, milde and courteous, louing dogs of his natural instinct, and such a one as will make them cleane, and dresse them carefullie with wifes of straw and litle brushes: being ready to giue them some pretie dainties to eat, and to draw them alongst the green come and meadowes, as well to giue them appetite to their meat, as also to learne them to run, and to cause them to passe through the flockes of sheepe and other tame cattell, that so they may be accustomed vnto them and be made to know them.

The diseases of hunting dogs For fleas and vermin.

If the dogs be sicke, you must vse the remedies following: for lice, fleas and other vermin, wherewith dogs are loden oftentimes, especially in the times of great heat, you must bath them, or at the least wash them and rub them with a wisp, with a decoction made in large quantity, with ten good handfuls of wild cresies, wild marierome, sage, rosemary, rue, patience, and sixe handfuls of salt, all being well boiled together to the consumption of the herbes.

Wormes.

To driue out worms you must soke perrosin made into powder, aloes powdred, vnquencht lime, and liue brimstone made likewise into powder, euen all these in one oxe gall, & with this licour rub the place infected with wormes.

The biting of serpents.

If dogs be bitten of serpents, you must cause them to take downe the iuice of the leaues of ash tree incontinently: or else a glasse full of the decoction of rue, white mullein, mints & broom, wherunto must be added the weight of a French crowne of treacle, applying treacle in like manner vnto the bitten place.

The biting of mad dogs, or mad waines.

When the dogs are bitten of mad dogs, they must forthwith be cast into a vessell of sea water nine times one after another: or for lacke of sea water, into common water wherein haue beene dissolved fower bushels of salt: and this will preserue them from going mad. And if happen that you haue not provided this remedie timely enough, but that now the dog is fallen mad: to the end that you may keepe the other

other from the same mischiefe, you shall be carefull, that the mad dog run not abroad, and therefore you shall kill him by and by, for it is but all in vaine and altogether impossible to go about to cure such madnes: the signes of such madnesse are the drawing vp of his taile at the vpper end, hanging the rest straight downe, a very blacke mouth without any froth, a heauie looke and that aside in ouerthwart and crosse manner.

Signe of madnes.

Against the scabs, tetter, itch & gaules of dogs, you must take three pounds of the oile of nuts, one pound and a halfe of the oile of oile lees, two pounds of old swines grease, three pounds of common hony, a pound and a halfe of vineger, and make them all boile together, to the consumption of the half of the vineger, putting thereto afterward of perrosin and common pitch, of each two pounds and a half, of new wax halfe a pound, melt all together, casting in thereto afterward the powders that follow, a pound and a halfe of brimstone, two pounds of reboiled coperas, and twelue ounces of verdegrease, making them all vp together in an ointment: but they must be washed with water and salt, before they be annointed with this ointment.

Gaules, Tetter, Itch, Scabs.

For the wormes in dogs, you must make a drinke of the decoction wherein haue beene boiled, wormewood, southernwood, and the shavings of Harts horne: or else cause them to swallow downe pills made of Harts horne, brimstone, aloes and the iuice of wormewood.

Wormes.

When the dogs are tired, rub their feet with this restrictiue, made of the yelkes of eggs, the iuice of pomegranats and soote finely powdered, all of it being well mingled together, and left to settle one whole day.

Dogs are often hurt of wild bores in many parts of their bodies, & then according to the places where they are hurt, they must be ordered and looked to with dressing of their wounds. If the wound be in his belly, and that the guts come forth vn hurt, you must first put them in againe, and then afterward put into the belly in the place where the hole is a slice of larde, and so sowe vp the skin aboue: but the threed must be knit of a knot and made fast at euery stitch of the needle, and withall cut off the threed at euery stitch so fastned: as much is to be performed in the wounds that shall be made in other places, alwaies obseruing to put some lard into them.

Hurt given by wild bores.

For wounds which dogs shall receiue, the iuice of the leaues of red colewoorts is a very soueraine balme (being applied presently vnto the wound) healing them vp very speedily: or else take the iuice of Nicotiana, whereof we haue spoken in the second booke.

Wounds.

Against the canker breeding in the eares of dogs, take a dramme of sope, of oile of Tartar, Sal armoniacke, brimstone and verdegrease, incorporating all together with white vineger and strong water, and rub the cankered eares therewith nine mornings.

If

Taking of cold

If the dogs after they haue run in frost after raine, and such other bad weather, or twum the riuers and lakes after the game come to take cold, presently as soone as they come to their kennell they must be chafed and dried at a great fire, and after that their bellies rubbed and wiped with wipps, thereby to wipe away the dirt sticking vnto them.

The galling or rubbing off of the skin of their feet.

Ofentimes in coursing ouer the fields and rocks dogs come to haue the skin striken off of their feet: for the remedying whereof it will be good first to wash their feet with water and salt, and after to make a cataplisme of the yelkes of eggs beaten with strong vineger, and the iuice of the herbe called Pilosella.

Knocks or thrusts.

If in coursing they shall haue taken any thrushes vpon any part of their bodies, with the tip of the Harts horne, or with the bores tuske, you must applie to the place a plaister of the root of great comfrey, an emplaster of meliore and oile of roses, as much of the one as of the other: but before you applie the plaister, you must cut the haire away from the place where the gricie is.

Against the difficulty of making water

To cause dogs to pisse, make them drinke the decoction of mallows, hollihocks, the roots of fennell and brambles made with white wine.

The disease of the eares.

If dogs haue gotten any disease in their eares, drop thereinto veriuice mingled with the water of cheruile, continuing to do so three or fower mornings.

You shall finde a larger discourse of the nature, conditions, differences and diseases of dogges in the first booke, in the chapter of the kennell.

The three and twentieth Chapter.

How yoong dogs are to be trained vp, and made fit for the game.

IT is not inough to haue a number of good and faire dogs, well marked with markes, declaring both the said qualities, for they must ouer and aboue bee taught and trained vp for the game. Wherefore the huntsman must first bring them to vnderstande the sound of the horne: to swim and haunt the water, that so they may be the more ready and forward to pursue the beast, if so bee that hee should seeke to saue himselfe by any running riuer, or standing lake. He must leade them also once a weeke into the fieldes: but not before the age of sixteene or eightene monethes: for before such age they are not thoroughly growne and well knit in all their members. But especially he must well aduise to what kind of game he is purposed to vse them, as whether to course the hart, or the hinde, the wild bore, or the hare: for looke what beasts you first runne them at, those will

will they best remember alwaies, especially if there bee care had to looke any thing well vnto them.

You must not course with them in the morning, if possibly you can auoide it, for hauing beene accustomed to the coolenes of the morning and comming afterward to the height of the day and feeling therein the heat of the sun, they will not runne any more.

You must not put on yoong dogs the first time within a toile, because the beast running altogether round, & therefore alwaies in the sight of the dogs: so when afterward they should bee brought to run out of the toile, and by that meanes become cast any great distance behind the beast: it would bee the cause of their giuing ouer and forsaking of the game.

It shall be for the better (to the ende they may bee the better trained and fitted) to put all the yoong ones together with fower or fise old ones, at such time as you purpose to hunt with them.

The fower and twentieth Chapter.

How that the Hart and the place where he haunteth and useth to lie, would be knowne before yee course him.

KIngcs, Princes, and great Lordes (to whom and no others be- *Hunting is for longeth the coursing of the hart) haue not vied to course the Great Masters.* Hart, before they haue learned of their huntsman, what maner of hart he is, yoong or old, and whether hee be a faire and great one, and such a one as deserueth to bee coursed, and then afterwarde where his haunt and lodging is.

The huntsman shall know the age and fairenes of the hart in re- *The markes of spect of others, by iudgment of the forme of his foote, the largenes of his tines, his dung, gate, beatings, breakings and rubbings.* *distinction be- tweene harts and harts, as also of their age.*

The sole of the foote being great and large, the hecle also being thicke and large, the little cleft which is in the midst of the foot, being large and open, a large leg, a thicke bone, being also short, but nothing sharp, and the tips of his clawes round & thicke, are signes of an old hart. The elder harts in their gate doe neuer ouer-reache the former foote with the hinder: for they tread short of it at the least fower fingers, but it is not so in yoong harts, for they in their gate doe ouer-reach and set the hinder foote more forward then the forefoote, after the manner of the ambling mule. The hinde hath commonlie a long foote narrow and hollow, with small cutting bones. *The hinde.*

The excrement & dung of harts is not alike at all times, for some is printed, other some writen round, and other some flat and broad: and if it be large, grosse and thicke, it is a signe, that they are harts of tennae tynes, that is to say, such as haue shot tennae small hornes out of the

the stocke. In Iune and Iulie they make their dung in thicke wreaths that are verie soft, and yet there are some of them that make it flag and brode vntill mid Iune. And from mid Iulie vnto the ende of August their dung is printed, grosse, long and knottie, well hammered, anointed or gilded: and these are the marks to know harts of ten tymes from the old ones.

*The cariages
or largenes of
his tynes.*

The cariages of a hart are saide to be when a hart passing through a thicke and twiggie woode, hitteth with his head against the boughes of trees, for so it commeth to passe, that if the hart bee tall and large, the cariages will also be somewhat large. Now the iudgement which the huntman can gather of the cariages, cannot be but from after Iulie vntill March: for the other fower moneths, that is to saye, March, Aprill, May, and Iune, the harts cast their heads, that is to saye, their hornes. True it is, that they begin to put forth newe hornes by the moneth of Aprill, and as the sunne mounteth higher, and grasse groweth higher also and harder: so their hornes grow and waxe greater, so that by the midit of Iune, their heads will be fully set and garnished with all that which they are to beare all the yeere long, provided that they bee in a good thriving countrie, and come not by any hurt or annoiance. You may likewise iudge of their age by the tymes of their hornes: for as for the first yeere they haue no hornes: the seconde yeere they haue their first hornes, which are called daggers: the thirde yeere, foure, sixe, or eight tymes: the fourth yeere eight or tentytymes: the fifth yeere ten or twelue: the sixth twelue, fourteene or sixteene: and in the seuenth their hornes put forth the greatest number of tymes that euer they will beare, for after it they put forth no moe, but those grow greater which are put forth. Yet notwithstanding the old Harts will alwaies be knowne by hauing the whole root of their horns large and grosse, the bodie or stocke verie bright, and set with pearles, and straight and large heades, rather open then turned compasse wise.

*To iudge of
the age of the
hart by his
hornes.*

*The hornes of
an old hart.*

*The gate or
going of the
hart.*

*The beatings
and breathes
of the hart.*

By the going of the Hart, the huntman shall bee able to iudge whether the Hart be great and long, and so likewise if hee will stande long in course before the dogs: for the Harts which haue long paces, holde out longer in coursing, then those which haue short paces: and they are also quicker, swifter, and longer breathed.

It is knowne if the Hart be tall and long legged: and likewise of what bulke or bignes his bodie is, by marking where he entrencheth into the thicke amongst brakes and small woode, which he shall haue let passe betwixt his legges: for looke at what heighr he hath beaten them downe with his bellie, so high must you iudge him to be on his leg. The grossenesse of his body is perceiued by the two sides of the w., which he hath touched with his body: for hee will haue broken off the drie boughes and branches on both sides; so that thereby you may

may gather the grossenes and greatnes of his bodie.

As concerning the rubbings of the Hart, by how much the elder they are, by so much the rather are they giuen to rub, and that vpon great trees: wherefore when the huntman shall perceiue the branches of the tree to be broken downe, then hee shall be able to gather the height and largenes of the Harts heade, howbeit this is but a darke and obscure marke.

Thus and by these meanes it may come to passe that the Huntman may collect and gather the age and largenes of the Hart, and yet notwithstanding remaine as ignorant as euer hee was of the place where he lyeth, and from where hee may finde him in his secret haunt and priue by-walks. And therefore to be assured throughly, it behooueth him to haue some one or other very good bloudhound, hauing a verie quicke and exquisite sent, that so he may the more easilie finde out and follow the foote of the Hart, besides which meanes it must be provided that the huntman be not ignorant of the places in general, which the Hart is accustomed to resort vnto, although they be diuers according to the moneths of the yeere: for Harts doe change their walkes and feeding euerie moneth, according as the sunne mounteth and ascendeth, for which cause in Nouember you must looke to finde the Harts amongst furze, briers, or heath, the crops & flowers whereof they loue to brouze and feede vpon, thereby to restore nature after they haue bene at rut. In December they haunt the inner parts, and hart of the Forrest, to purchase thereby the shielde of the woode against cold winds, snow, & the noisomnes of frosts following raine. In Ianuarie they draw neere the corners of the Forrests, and seeke reliefe amongst the greene corne fieldes, vpon rye and such like. In Februarie and March because they then cast their hornes, they hide themselves amongst the bushes, and so they continue likewise for all Aprill and Maie: In Iune and Iuly they apply the cutwoodes and corne, at which time they are in their prime and fullest fatied: then also they seeke after water, because of the great heate which doth alter & change them, and drinke vp the dewe and moistnes of the woode, which then beginneth to waxe harde. In September and October they forsake the bushes and goe to rut, and then they keepe no other taine place nor manner of feeding, because they range after the Hindes, and followe their waies and steps, carrying their noles close by the ground to take the sent of them, nothing regarding or carefull to finde out by the winde, if there be any secretly laid to do them harme: and thus also they passe and spende both day and night, being so enraged and feruently caried away with the rut, as that they thinke that there is nor any thing that can hurt them, then also they liue with a very small, as namely of that which is within themselves (alwaies following the steps and footings of the blinde) and next principally the

*The knowledge
of the Hart his
priue haunts
and place of
resort.*

*The Hart hath
a general haunt
euerie moneth.*

*The rut of the
Hart.*

the great red mushrooms, which helpeth to bring them to the pissing of their tallowe, for which causes, they are very easily killed at such times, if the venison were good.

The meanes of finding out the particular place and lodging of the Hart.

Thus the huntsman may haue a generall notion of the haunt of the hart, and so he shall not seeke in any other places, then where hee ordinarilie maketh his abode. And now when by the meanes aforesaid he is sure of the place, it remaineth onelie that hee learne his denne or the place of his particular resort and lodging: and for the diligent finding out of the same, hee must betake himselfe earlie to the place, which he knoweth to bee the generall haunt of harts for the present time and howre, as is before declared: and he shall lead along with him his bloudhound that is not giuen to open, to foote him withal, hauing first wet his nostrils with very good vineger, that so hee may haue the better sent. Hee may also gather some perceiurance by the other markes before specified, that is to say, by the prints of his feete vpon the grasse, by the carriages of his head, his dung, gate, beatings, and rubbings which he may make vpon such things as he meeteth withall in his way: howbeit the huntsman in this case must be ruled according to the variableness of the place where hee maketh search, for it is one craft and sleight to finde the lodging of the hart amongst the vnderwood, another amongst the corne fieldes, and a third kinde of skill to finde him out amongst the high woods, and they are better learned by practise in hunting and experience, then by intructions deliuered in writing: and to the ende I may not be tedious, I will say no more of this matter.

The five and twentieth Chapter.

How the Hart must be hunted.

The report of the huntsman vnto the king.

THE huntsman after diligent search, having gotten as well the fairenes and largenes of the hart, as also his lodging, shall come and make report vnto the king, or vnto his Lord (for wee haue said before that the hunting of the hart belongeth vnto kings, princes, and great states) of his indeuour, representing vnto him the dung of the hart which hee shall haue marked, making rehearse all withall of the markes and notes of the hart which hee hath seene: and then his Lord may make choise of & appoint the day and howre, for the hunting of the hart in the place which hath bene foretold by the huntsman.

Three sorte of dogs, as bloud-bounders, coursers, and for easement.

The day appointed, the horsemen must be readie to be gone earlie in the morning, hauing with them their guide and dogs (as well their bloudhounds and coursers, as those which are to be put on in a set and certaine place for the easing of those which had him in chase before) as also whatsoever other their necessary furniture. And when they are

come to the place they shall make diligent search to finde out where the Hart is lodged, and that both by their bloudhound that will not open, as also by other meanes which they may deuise and inuent before they make choise of any standing for their dogs, either coursers or of easement.

The worse dog is he which openeth not but followeth the trace of the Hart.

The Hart being once perceiued by the horsemen, or winded by the bloudhound, they must place their dogs of easement at three or fower feuerall stands and certaine places, to the ende that they may ease the other dogs which are wearie with running, or haue lost the footing of the Hart, and so by them giue new chase vnto the beast, and such dogs of easement shall bee so set in companies, that if the first faile and giue ouer the chase, yet the latter may bee the more strong, able and fierce kinde of dog, following the chase, not coldly a far off, and behinde as the others: but leading the way before all the rest, and that with great stoutnes and courage.

Dogs of easement are such as are rested to runne when others are wearie.

The placing of the dogs of easement.

The dogs of easement being placed in standings most conuenient, the coursing dogs must be vn coupled for to run, regard being had according to the place where the Hart was seene.

The horsemen tending vpon the companie of dogs, shall second the coursing dogs, and wind their horne, the more to encourage them, casting boughes in the way of the Hart, thereby to hinder his swiftnes in running, if so bee the huntsman haue not already cast some therein in his watch, at such time as he made search to find out the lodging of the Hart, or else the horsemen themselves, before the vn coupling and letting loose of the coursing dogs: in the meane time if it fall out that the Hart in his course doe happen to passe nere vnto the dogs of easement, the horseman which keepeth the same must marke whether the Hart be epursed with any of the companie of the coursing dogs, and then presently to vn couple the companie of his dogs of easement, hallowing and whupping the dogs continually, & casting of boughes of trees in the way where the Hart shoulde passe: but if hee perceiue that there bee not any of the companie of the coursing dogs, neither yet heare any noise of the men that are hunting, he must not vn couple any of his dogs, but onely marke the way that the Hart runneth, to make report thereof to the companie, to the ende he may know whether the same be the Hart in chase or no: because that sometimes Harts are driuen through feare out the places where they vse to lie, hearing the noise of the companie of the dogs and horsemen.

In the meane time the horsemen appointed to waite vpon the companie, must alwaies second and keepe by the sides of the dogs, to cause them the better to keepe and agree together, and to help them at a default, if at any time they happen to be out of the trace, and not to follow the right way.

They must also haue a care of the wiles and sleights of the Hart, who

The craftines
of the Hart.The malitious-
nes of the Hart.

who when hee seeth himselfe neere pursued by the dogs, endeavoureth and bestirreth himselfe how to acquite and rid himselfe of them, making many windings and turnes, and that in diuers manners.

For sometimes hee busieth himselfe about the finding out of the dennes of other beasts, hiding himselfe therein, and letting the dogs by that meanes to ouerlip him, as not being able to finde the sent of him, hauing couched his lower feete vnder his belly, and drawing his breath from the coolenes and moisture of the earth: againe hee hath this subtiltie and craft by nature, as to know that the dogs do gather more sent from his breathing and feete, then from any of the rest of the parts of his bodie: But to preuent this his craftie wilnes, you must haue cast many boughes in the entrances of such thickets as the Hart is to passe by, to the end they may the better finde the last footing and breaches, which will yeeld some neere gesse of the place, wherein hee shall be hid.

Other sometimes when the Hart seeth the dogs chasing him, and that hee cannot auoid himselfe from them, he goeth from one thicket to another, seeking the haunts of hindes and other lesse Harts, and thrusteth himselfe into their companie, and moreouer sometimes draweth them away, and causeth them to run with him the space of a whole hower or more vpon his way, afterward casting them off, and making way for himselfe out of and far from any way. And if it happeth that his wiles be found out by the exquisite sent of the dogs and wisdom of the hunters, then he casteth about into his first way, to breake off by that meanes his former traces, and thereby to mocke the dogs; then after that he entrencheth into some large and wide way, which hee followeth so long as his strength will endure. To auoide these sleights the horsemen must haue an eie when the Hart shall fall into companie of other beasts & run away with them, to the end they may stir vp the olde dogs of the companie to pursue the Hart with greater carefulnes, keeping neere about them, to helpe and aide them: and if the Hart haue taken the broad way, to the end he may take away all sent from the dogs (for this is a most certaine thing, that all sorts of beasts doe passe through the broad waies whose earth turneth into powder) in such sort as that the way of the Hart and the places which the horsemen of his foote did tread vpon, become quickly filled vp againe and couered by the falling together of the dust, the horsemen must looke very carefully, and view the ground very well to see if they can perceiue any traces of the Hart, and then they shall cast the boughes out of their waie lustily, and encourage their dogs, calling vnto them in cheerefull and cherishing manner.

Again it sometime falleth out that Harts doe run ouerthwart the burned grounds where the dogs can haue no sent, because the smel of the fire is greater then the sent of the Hart, yea and sometimes the

the dogs doe giue ouer coursing, hauing drawne into their nostrils this euill smell, whereupon the horsemen must goe aside a little out of their way with the dogs, vntill such time as they be got past the same, and then bringing their dogs into order againe, let them encourage and cheere them forward to follow the game.

Sometime the Hart runneth a contrarie course, to that by which he is winded, to the end that his breath may be scattered and dispersed, and that it may not come to the sent of the dogs: as also that he may heare the noise of the dogs which chase him: and then the charge lieth vpon the horsemen to marke his steps and traces.

Again there be some Harts, which in going from the rest doe make breaches, casting themselves vpon their bellies before the horsemen and shew themselves to be put forth by the dogs, as if they were wearie, and had bene long chased: these wiles doe shewe them to be verie subtile, and long winded, able to stande a long time before the dogs, trusting in their strength: and this the horsemen must beware of, to the end they may be able to iudge of the deceitfulness of the Harts: for sometimes they faile themselves ouer chased, when indeed they are not.

The signes and tokens shewing that the Hart hath bene long chased are these: if in running before the dogs hee neither heare nor see any man, if he hang downe his head, holding his nose vnto the ground, if he stumble and stagger, reeling with his legs: afterward if he see a man vpon the sodaine he listeth vp his head and giueth a great leape, as who say he were yet strong and lustie: furthermore if he haue in his mouth blacke and dry without any froth, and his tongue drawne vp into the same: if in his gate he shut his hoofs as though he went steddie, and yet afterward on the suddaine straineth himselfe and openeth it making great slidings, suffering his bones to kisse the ground verie often, following commonly the trodden path and broad waies; likewise if he meete with a hedge he holdeth along by the side or it to see if he can find any outgate, seeing his strength faileth him to leape ouer.

Now after his long running, and manifold shifts when he cometh weary and spent and that he cannot longer stand out, being past all hope of himselfe, he leaueth the low woods and forests, and flieth to the champion fields or vnto the corne fields & villages bordering next thereto, or else hee betaketh himselfe to some riuer or lake: whereby it falleth out oftentimes that he auoideth and freeth himselfe of the coursing dogs, for in champion places and void fieldes, the sent of the footing of the Hart is very small: and as for riuers and lakes he hath the craft, rather to take downward with the stream, then to swim vpward against the streame, to bereaue the dogges by that meanes of coming by the sent of him.

The horsemen shal be so such his escapes, and therefore if he haue taken his way into any champion ground, they shall finde out his tracks by the sight of the eie, and with the blast of the horne they shall cheere vp and incourage their dogs to a new courie. If the Hart haue taken the water, whether it be for the cooling of himselfe, or as the verie most refuge he hath for the sauing of his life, the hunter shall louke at what place the Hart shall haue taken the same and there cast in good store of boughes, attending his passage: and if they see that he commeth not out of the water, they shall cause their dogs to take the water: or else (if they be afraide of causing them to take cold) they shall sende to seeke a boate: or else if they can swim, they shall put off all their clothes, and with a dagger in one hand swim vnto him to kill him: and yet they must louke that they let not vpon him but in some deepe place, bicause that if the Hart finde ground for his feete, he would be able to hurt one of them with his hornes: whereas in a deepe place he hath no strength.

To be come to stand to the abbay.

The beere for the Hart, and the barber for the bore.

Furthermore, there must great wisdom be vsed in the hunting of the Hart, when hee can no longer holde out, but being out of all hope of his life, standeth still, and suffereth the dogs to bark at him, for then hee groweth dangerous, as being giuen to strike with his hornes, the first of the hunters that he can meet withall. And this is the cause why it is growne to a prouerbe. A beere for a Hart, and a barber for a wilde bore. Wherefore it standeth euene man vpon to louke well to himselfe, in comming neere vnto the Hart when he endureth the abbaie, and not to aduenture too farre, and hazard himselfe too boldly.

When the Hart is taken, he that shall haue giuen the blowe, shall forthwith thereupon sound the reitrait, to the end he may call togither his fellow hunters and the dogs: and after he hath presented the right foot of the Hart vnto the king, or vnto his lord, then to curthim vp as he shall know it meete to be done. In the meane time he must not forget to take care of the dogs, and to giue them some reliefe and sustenance of the prae they haue gotten in hunting: vnto the bloudhound, that is, vnto the dog which by his sent hath led the way to the Hart his lodging. he shall cast the head and the heart, as his right and due: vnto the rest he shall giue the necke and braine of the Hart, or which is better, he shall take bread and cut it into little lunces into a pan with cheefe, and temper the same both togither with the bloud of the Hart in his greatest heate, and afterward put all this propision forthwith vpon the skin, stretched forth vpon the grasse, and in the meane space euerie man shall put his horne to his mouth, and therewithall comfort and cheere vp the dogs.

Some men vse now and then (and yet after this first propision) to make a seconde with the entrails of the Hart all whole, which the master

master huntsman doth cast vnto the dogs, after they haue added theid feast, holding them vp on high: and whiles the dogs are eating the entrails, they must be cheered vp with the noise of the hornes, shoutings and hallowings.

The sixe and twentieth Chapter.

Of the profit that may be reaped by the killing of the Hart.

Notwithstanding that the hunting as well of the Hart, as of other wilde beasts be vnderaken and performed by great states, rather for the exercise of the body and recreation of the spirits, then for any other desire and hope, notwithstanding the killing of the Hart is not without great profit: and that in two respects. The first being for the making of meate thereof: and the second for the medicinall helps which may be made of his parts and members.

As concerning the meate made of the Hart, his flesh is not very pleasant, if it bee not of that part of him which is commonly called the pizell: for to speake generally according to the truth, Harts flesh is verie hard, of an euilliuice, melancholike, hard to digest in the stomacke, and very apt and easie to procure many great diseases. It is true that many great ladies (hauing an opinion that the flesh of Harts being eaten often, doth free and deliuer men from all danger of agues, because the beast himselfe is not subiect at all thereunto) at their rising euerie morning haue accustomed to taste of Harts flesh: notwithstanding, who so is carefull of his health, should not touch any such flesh, except it be of some tender sawne or yoong hinde, which are made seruices for the most part at the tables of princes and great lordes.

The medicinall helpes, which may be prepared and made of the Hart, are infinite.

Some finde a bone in the heart of the Hart (howsoeuer there be some that thinke it to be false) which is singular good against faintnes, or swooning, trembling, and beating of the heart, and other affects of the same, as also against the venomes, poisons and dangers of the plague, and likewise against the hard trauell of women.

The bloud of the Hart fised in a frying pan, and put in clysters, doth heale the bloudie fluxe, and staereth the fluxe of the belly: being drunke with wine, it is a soueraigne remedie against poisons.

The priuie member of the Hart washed diligently in water, and the water wherein it hath bene so washed drunken, appeaseth forthwith the paine of the colicke, and retention of the vrine: if it be steeped in vineger the space of fower and twentie houres, and afterward dried and made in powder, the waight of a French crowne of this powder being

Flaxe of
blood.

being drunke with water of plantaine, staie the fluxe of blood and all manner of fluxe of the belly. Likewise dried and powdred, it may be mingled with remedies which haue power to prouoke carnall copulation. It may also be made seruiceable and of good vse in the pleurisie and against the bitings of serpents, if it be taken either alone or mingled with things which are good for such diseases.

The harts
horne.

The horne of the Hart burned, made in powder and drunke with hony, killeth the wormes; which is a signe that the Hart's horne hath great vertue against venome, and that not much lesse then the horne of the vnicorne.

The colicke.

The tender hornes of a yoong Hart cut in small gobbets, and put in an earthen pot well leaded, and close stopped with claie, and afterward put in a hot fornace vntill such time as they be dried (they may also be beate to powder, putting thereto pepper and myrrhe) doe yeelde a powder which is singular good against the colicke taken in excellent wine.

The marrow
and sewet of
the hart.

The marrow and sewet of the Hart, are good to make liniments & cataplasmes for cold goutts, and tumours that are hard, and not easlie softned.

The hunting of the wilde Bore.

The seuen and twentieth Chapter.

*The best time to hunt the wilde Bore, and the marks
of a good wilde Bore.*

The hunting
of the wilde
bore danger-
ous.
Wounds made
by the wilde
bore are dan-
gerous.

The hunting of the wilde Bore is a great deale more difficult & dangerous then that of the Hart, inasmuch as the wilde Bore doth not feare the dogs, but tarieth and staie their coming, and which is more doth sometimes set vpon them so far as till he be amongst them, and all to the end he may teare and rent them with his teeth, whose woundes (especially those that are given into the chest of the body) are (as it were) incurable. Wherefore the good huntsman that maketh any accompt of his dogs, for to hunt the Hart, the Roe-bucke and hare, must neuer giue chafe to the wilde bore with his coursing dogs, but rather with some companie of mastiues, whose proper pray the wilde bore is: or else which is better to find the means to take him in toiles, or to kill him with a wile and a speare as we shall further declare.

To hunt wilde
bores.

The best time
to hunt the
wilde bore.

But howloeuver the matter goe, yet this is to be knowne, that all Bores are not fit to be hunted, but such onely as are not past fowre yeeres old, howloeuver they may be otherwise both faire, great and fat: for after fowre yeeres the wilde bore groweth leane through oldnes of age, and forthwith loofeth all his goodnes. Again all times are not fit to hunt them in, but onely when they are in season and in the best

plight,

plight, as namelie from mid September vnto December, at which time they begin to go to rut: and yet in Aprill and Maie they are more easie to be taken in toiles, then at any other time, because they sleepe more in this season then at anie other time, and the cause is for that they feed vpon strong herbes, which stirreth their blood and sendeth vapoures vp vnto their braine, whereby sleepe is brought vpon them: againe the spring time doth then restore & renew their store of blood, whereby they are brought to take great ease and rest.

The huntsman therefore shall know the fairenes of the bore, and that he is worth the hunting by these marks, that is to saie, by his traces, rooting, foile, and dung.

The marks to
know a wilde
bore worth the
hunting.
His traces.

The prints of his traces great and large: the taking of the trace before, round and grosse: the cutting of the sides of the traces vsed, but not shewing themselves cutting, the heele large, his gardes grosse and open, wherewith hee must treade vpon the ground, in the hard whereloever hee goeth; all these things declare him to be a faire and great bore. In like manner the traces behinde being larger then those before, doe shew the thicknes of his haunches: the wreaches and wrinkles which are betwixt his gardes and the heele, if they make their prints vpon the ground, doe shewe that his steps are great and long. The marks of his traces deepe and wide, doe shewe also his heauines and corpulencie. The rootings of the bore being deepe and large, do note the thicknes and length of his head.

The foile of the wilde bore being long, large, and great, doth note and argue the bore to be great: or else in going from the foile, his greatnes may be known by the entrances of the thickets, by the leaues and herbes which the foile hath touched, because that at such times as he commeth out of it, he beareth dirt and mire vpon him, and therewith the leaues are bemired, as he goeth amongst them: and hence is gathered his height and breadth: or else it falleth out oftentimes that the wilde bore after hee hath bene at foile, goeth to rubbe himselfe against some one tree or other, and there hee leaueth the marke of his height.

The dung of the wilde bore being thicke and long, doth shewe the greatnes of the wilde bore, howbeit the huntsman is not to present it vnto the companie, but onely giue them the viewe of it in place as it lieth.

The eight and twentieth Chapter.

*Of the wilde bore, tame swine, wilde bore and wilde
sowe, and of their haunt.*

THE difference betwixt wilde bores and tame swine is this. The wilde bore in his game doth alwayes set his hinder feet in the steps of

The difference
betwixt the
wilde bores and
the tame swine.
of

of his forefeet, or very neere, and doth pitch his steps rather vpon the forepart of the foote, then vpon the heele, resting notwithstanding his gardes vpon the grounde, spreading the same abroad thereupon vnto the vtter sides, the tame swine in their gate doe open the cleft of their hoofe before, pitching rather vpon the heele then vpon the forepart of their foote, and their hinder foot doth not ouer reach their forefoot: the sole of their foote is full of flesh, so that the prints of their steps can not but bee vneuen, contrarie to that of the wilde bore. In like manner the wilde bore maketh deeper rootings, because he hath a longer head, and when he commeth in fieldes that are sown, hee willingly followeth one furrowe, nulling al along the ridge vntill he come to the end of it: which the tame hog vlieth not doe, for he neither turneth vp the earth in so deepe manner, nor yet followeth on along with it as the wilde bore is accustomed to doe, but hee casteth vp one peece of ground in one place, and an other in an other further off, crossing the ridges, the one of them not reaching vnto the other. Furthermore, when the wilde bores goe vnto the corne, they beare downe the same all in a round: but so do not tame swine. The wilde bore also hath this peculiar propertie, namely, that he is neuer meazelled as the tame swine will be.

The difference
betwixt the
wilde bore and
the wild sow.

The difference betwixt the wilde bore and the sow is this: The bore goeth wider with his hinder legs then the sow, and commonly setteth his hinder step vpon the edges of his foresteps on the outside, because of the thicknes of his hanches and stones, which cause them to go wider behinde: which the sowes doe not: for they are emptie betwixt the hanches: for which cause they tread narrower. The sow maketh not so good a heele as the bore, and hath her hoofe longer and sharper before, and more open, her steps and soles of her feet behind, more narrowe then the bores. The bore with much adoe, and hardly, will bee brought to crie when hee is killed, but the sow will not letto make you heare her aloud.

The bores
hanches.

The wilde bore hath no certaine abode, and as some say, he is but a traueller, because hee doth nothing but runne from one Forrest and woode to an other: and yet he taketh great delight to remaine in the countrie and place where hee was bred: in so much as that if hee bee hunted by dogs from any bush or Forrest, he is still readie to run without any stay, vntill he come in the countrie from whence he first came, and where hee was bred, for there he setteth vp the rest of his safegard, and maketh it the the onelie refuge of all his force and strength: hee is also oftentimes founde in the countries where small nuts and beech malte may be come by, for hee more delighteth to feede of them then of acornes.

The

The nine and twentieth Chapter.

Of the taking of the wild bore.

AS concerning the hunting of the bore, it craweth rather many men than dogs, for there is no greater cut-throat to dogs then the wild bore: & yet there may dogs be vsed, but with such discretion, as that the horfmen be alwaies mingled with them, & pressing vpon the bore more valiantly and forcibly then they can: for when he seeth himselfe set vpon with horfmen and dogs both at once, euen vpon the first push they besetting him hard, do astonish him, & cause him to loose whatsoeuer his courage, and in steed of wrecking his furious moode vpon the dogs he is constrained to run away and flic the countrie. Then also you must let slip some of your fresh dogs, or dogs of easement, but let them not be yong nouices, but rather old ones, and such as haue been well trained and taught, that they may succour the first, and force the bore to a more speedy flight. And you need not feare that he should betake himselfe to any turnings, windings, or other deceitfull tricks, because he is heauy, and that the dogs are able to follow him close and hard by. But when after long chase the horfmen see that the wild bore doth indure the abbaie (which he will neuer do vntill he be mightily vrged) they must forthwith, but as quickly as they can compasse him about, and set forward all on one side directly towards him, hauing in their hands euery one his sword, and not failing to kill him: and yet notwithstanding they must not hold their hand low, for so they should light vpon his head, but they must rather beare their hands on high, and strike at him with their swords, to giue him deepe blowes, but taking heed that they strike not the bore on that side next their horse, but rather on the side further off: for looke on what side hee feeleth himselfe hurt, that way he turneth his head presently, and so he might either kill or wound the horfman. This is a most certaine truth, that if there be dog collers hung with bells put about the dogs neckes which are called couriers, when they hunt the bore, that he will not kil them so soone, but runne away before them, neuer comming to the abbaie.

The wild bore
is not giuen to
turnings and
wiles.

The thirtieth Chapter.

The profit that commeth of the killing of the wild bore.

THE profit comming of the killing of the wild bore is twofold, as is that of the Hart: the one concerning food, and the other concerning medicine, for which it may be employed and vsed. As concerning nourishment, the flesh of the bore is better with-

out all comparison than that of the Hart, for the prooffe whereof I referre me to the statoly banquetts of the ancient Romanes, who so greatly esteemed of bores flesh, as that they did serue them all whole vpon the table. The princes and great lords of this our age do prize it highly, but especially and aboue al the rest the head of the bore, as being iudged a delicate and dainty fine morrell: yong and tender wilde bores are likewise very well accounted of in winter feastes and banquetts. And to say the truth, the flesh of the wild bore doth nourish very much, and beggetteth great quantity of good blood: which are the causes why Phytitions make such reckoning thereof, especially when the bore is taken by hunting.

The vrine of
the wild bore.

Wormes in yong
children.

The stone.
The grauell.

As for the Physicall helpes the vrine of the wild bore hath many vertues: you must take the bladder of the wilde bore wherein there is yet some quantity of vrine, and with this vrine mingle a litle quantity of oile, hanging vp the same bladder in the smoke of the chimney, and let it abide there vntill the vrine therein become somewhat thicke and of the consistence of hony: which done, it must be carefully kept in the bladder, to vse to annoint the nauell, temples, and nostrils of yong infants withall which are tormented and pained with wormes, which thing I haue often experimented with good successe. This vrine likewise thus prepared, doth breake the stone of the bladder, especially if there be some small quantity of it taken inwardly in drinke: his gal likewise is good against grauell and the stone.

The hunting of the hare.

The one and thirtieth Chapter.

Of the pleasure of the hunting of the hare, and of the dogs that are fit for the same.

He hunting of the hare is more pleasant, more liuely, and lesse costly (not onely for gentlemen, but also for all men of citie) than of any other beaft, because it is accompanied with a thousand pretty pleasures and recreations euery howre, & of small charge, besides the security thereof, and the auoiding of the dangers and inconueniences which are many, & happen oft to such as hunt the hart and the wild bore: whereunto you may adde the great contentment, and no small pleasure which may be taken in seeing as it were the spirit of this little beaft, as it were admirable in nature, and the sleights which she vseth to shift and rid her selfe from the dogs that chase her. Such game we will allow our farmer, yea, and so as that I could wish him to vse it as oft as he can, for it can not but afford him both pleasure and profit.

And whereas this game consisteth principally vpon multitude of dogs,

dogs, the gentleman that wil not do the deed, and hath a yong company of dogs to teach, must obserue two things principally, to traine and instruct them well. The first is, that from the beginning he accustometh them to go vncoupled, and to runne in all sorts of grounds and countries, that is to say, vpon plaines, vnderwoods and thickets, for otherwise if you accustometh them from the beginning to run in one place only, as in woods or grounds that are fallen, and haue the wood cut downe, they will not make any reckoning of the plaines and fields, but they will go and range the grounds where they haue been accustomed to finde sport and take their pleasure in finding the hare. The second is that he neuer teach his dogs to hunt in the mornings, because of the dew and coolenesse of the earth, but rather in the height of the day: for if you vse them to the coole seasons, & then afterward bring them to hunt at the height of the day, they feeling any heat or small winde will not afterward hunt any more.

Wherefore the fittest time to traine yong dogs vp in, and to make them fit for the hunting of the hare, is after September vnto December, because that then the time is temperate, as also because that the yong hares are foolish, and but weake bodied, neither skilfull nor able to worke their wiles: and besides, because they themselues do start of themselues many times before the dogs which take pleasure therein, and become better entered and enured thereby, then they would bee if they should be hares that would run away & be packing apace from them.

The two and thirtieth Chapter.

The markes of a good hare, of the male and of the female, and of their formes.

Now although in hunting of the hare, the hunter taketh what he can haue, and not what he can finde; because of the swiftnesse & wiliness of this little beaft which oftentimes disappointeth him of his purpose: notwithstanding if at any time it be granted the hunter by the good hap of hunting to chuse the best hare amongst many, or else that some Lord not willing to loose his labour hath sent his huntsman to finde the hare before he hunt her: the markes of a good and faire hare, and such a one as deserueth to be hunted, are these: Those which keepe in woods or plaines, or which feede vpon little hills vpon the herbe called Penniroyal, or wilde tyme, are much better than they which keepe neere the waters, as also better then the little red hares, which are of the kind of conies: for such as keepe neere vnto water are commonly leprous: further, the male is farre better then the female.

The markes of
a good and faire
hare.

Hares keeping
neere vnto wa-
ter are leprous.

The markes to know the one and the other are these: The male hath

hath commonly his dung smaller, drier and sharper at the point, the female hath them greater, rounder, and not so drie as the males: the female hath a grosser body, but the male a more slender: the male in coming out of his forme, hath his hinder parts whitish, as though he had bene plumed: the male hath also red shoulders, with some long haire mixt amongst, a shorter and more bushie head than the female, the haire and beard of his iawes long, his eares short, wide & whitish: the female hath a long & narrow head, great eares: the haire growing along the ridge of the backe of a darke gray. When the dogs coule the female she doth nothing but coast round about her feat and country, passing seven or eight times by one place before she ever squat: the male doth the contrary: for being couled with dogs, he runneth sometimes seven or eight leagues distance from his forme.

To know the forme of a hare, you must take the benefit of the night: for in the night she withdraweth her selfe into her forme, and not in the morning because of the dew: neither yet vpon the height of the day, because of the heat: there is more regard to be taken vnto her traces: for the printe of the hares foot is sharpe, and fashioned like vnto the point of a knife, having her small nailes all pricked right down into the ground, and they do leaue their print round about drawing alwaies narrower and narrower, having the sole of her foot alway close, after the manner of the point of a knife.

The three and thirtieth Chapter.

The killing of the hare.

AS for the hunting of the hare, the very best time to kil her with coursing dogs beginneth at mid September and endeth at mid Aprill, because of the flowers and great heate which then begin to raigne, for both these are apt to depriue the dogs of their necessarie sent: besides that, at these times the hares are but yong and feeble.

Places in which the dogs have no sent.

Notwithstanding there be certaine countries and seasons where and when the dogs have not any sent of hares, as in winter in the plaine countries where the ground is fat & strong: because the hare hath her foot vnderneath full of haire, so that when she runneth, a fat ground will take hold vpon it, and so she carrieth it away with her foot, and so all the sent that the dogs might otherwise take, is withheld: and vpon plaines there are neither branch nor herbe for her to hit her body vpon, no more then there is in broad and troden waies. In like manner it is an vsfit time to draw our dogs to hunt in frostie weather: for they would both loose their nailes and spoile their feet: on the contrarie, the hares run better at that time, than at any other, because they haue their feet furred.

The

The first point making way for the killing of the hare, consisteth in finding out her forme, which the better to finde, you must haue respect vnto the season wherein you goe about it, and the time how it shapeth. For if it bee in the spring or sommer, the hares lodge not amongst the thicke places of woodes, because of the ants, serpents, and lizards, which driue them thence, and so at such times they are constrained to lodge amongst the corne, fallowes, and other weake places. In winter they doe the contrarie: for they take vp their lodging in some thicke bushes, or thicke places of the wood, especially when the northren windes, and other high and low windes doe blowe, for of such they are much afraid. Wherefore according to the time & place, where you shall see the hares to take vp their lodging, you must prepare your dogs to goe and set vpon the hare within her forme, & when she shall be started, the horsemen (which shall not bee about three in number) must incourage the dogs to followe the chase, without making of much crying or greatly whupping of them, for feare of setting of them in too great a heate, which might also cause them to ouerslip the traces and not to hold on aright.

But withall in the meane time, they must take good heede to the wiles and sleights of the hare, which are many and diuers, as in the time of raine the hare doth rather followe troden pathes and broad then at any other time, and if she light vpon any vnderwood, shee will not goe in but to refresh her selfe by the sides thereof, and letteth the dogs passe by: after when they are gone past, shee returneth and runneth back in the same steps by which she came thither, vnto the place from whence she was dislodged, rather then shee would run vp into the forrestes, by reason of the moistnes, which is amongst the woodes. When such practises are in hand, the horseman must stay some hundred paces from the wood by which the hare is come, for he shall not faile to see her returne by her former way right vpon him, whereby hee shall bee able at such time to call in the dogs. The horseman likewise shall obserue and marke whether it be a male or a female, and whether she be one that keepeth continually in the countrey, or but a guest for a night: for if she bee a wandeter and not of constant abode, shee will haue her forme in couert, and suffer the dogs to put her vp three or fower times neere vnto her forme: for this is infallible that the hare bred and fed where she is put vp, and especially the female if the horseman obserue and marke the first place and compasse that shee taketh the first time after shee is departed and gone from her lodging being before the dogs, all the rest of the courses that she shall make that day will be by the same places, waies, and mufes, if it bee not a male hare come from far, or else the dogs haue hunted her so hard, and wearied her so much as that shee be driuen to forsake her wonted haunt: and this commonly they doe voluntarily berake themselves vnto, if they be

That the finding of the forme of the hare, is the first and chiefest step to kill her.

The sleight of the hare.

be at any time coursed two whole howers without default.

At the first when the dogs begin to course the hare, she doth nothing but winde and turne tracing ouer one place five or sixe times, and that all in the same trace. And this you must learne, that if the coursing dogs misse of taking the hare one day, then it will bee good for the horseman to beare in minde the places and coastes that then she passed through: for and if hee returne at any other time, and haue her in course with the dogs, shee will passe by the same places, and practise the same shifts she did the day before when she escaped, and thus being before acquainted with her crafts, and waies which she will run, he may greatly helpe his dogs.

Some hares as soone as they heare the horne doe start, and take some riuer or lake, and then you must vse what good meanes you can to cause her to voide the water, drawing the dogs nere the place most likely for her landing that so they may take her.

The females are more often in practising their wiles, and in shorter space, which the dogs loue not: for it is a wearisome irksomnes to courageous and lustie dogs, to bee drawne aside so oft: it being their chiefe desire to course such a beast as will run out before them, that so they may run according as their strength wil serue them. And for such hares as are giuen to winde and turne so oft, it is requisite that you take great compasse of ground, that so you may inclose all her wiles, leauing no passage for her to finde but onely one way to goe out, and by this meanes you shall abridge her much of her helps, and driue her to forsake her shifts and sleights.

There are also some hares giuen to run in troden pathes, and high waies, to the ende the dogs might not come by any sent of them, there being neither branch of tree, nor hearbes, nor moisture, which can touch their bodies, to gather any sent for the dogs; in such manner as there would, if they were in other couert places, as woods, corne and other coole places, and especialie when they feede in anie Greene corne, because they rest their bodies in one place. When the horseman shall finde such hares, and shall perceiue the default of the dogs, by reason of the high way, hee must draw them on foreward all along the said high way, following them continually vntill such time as the dogs find her out gate, or elie vntill he haue found some little vally or coole place in the middelt of the way, where the dogs may seeme to haue found her sent. And he himselfe also must light from off his horse to see if that he can espie any of the traces of the hare, such as wee haue described them before.

The hare hath a thousand other shifts, all which in generall the warie and wile horseman may meete withall, if when he hath seene her fetch, her first compasse, and withall got the knoweledge of the coast, which shee betaketh her selfe vnto in her course, he get before her

her to behold her with his eies, and in the same place incourage the dogs, making them to fetch great circuits, to the end they may be sure to include and compasse all her wiles and shifting tricks.

Hares liue not aboue seven yeeres at the most, and especially the males: they haue this trick with them, that if the male and the female do liue together in a countrie, they wil neuer suffer other strange hares to abide there, if they can remedie it, except it be such as they haue bred: and thereupon some say: That the more that any place is hunted, the more hares are found there, because that strangers and those of other countries doe come thither.

The hare being killed it will be good to giue the dogs their fees, the better to incourage them and to cause them with more ioy to hunt in that place afterward. This their repast or fees may be made of bread, cheese, and some other dainties, all put into the body of the hare, that so it may be moistened and ouer drowned with blood, and after spred vpon the cleane grasse. For their second sort of meate as a more royall banquet if there be store of hares taken, it will be good to vncafe one & first taking out her lights, then to cast the whole carcasse to the dogs, giuing them leaue to teare and eat her: and after that they haue eaten her to giue them bread least they should prouoe sick at their stomacks and cast their gorge seeing that hares flesh is enemie vnto them. In like manner when the dog which is taught to hunt the hare, shall be brought to course the Hart, he will not make any more accompt of the hare, because he hath found and tasted the flesh of the Hart, to be farre better, then that of the hare.

The fower and thirtieth Chapter.

What profit cometh by the killing of the hare.

THE like commodity as is found in the killing of the Hart & wild bore, may be found also in the hare: and to speake first of the fooderising thereof, we see not any foode more common, nor more in request in our countrie of France then the hare: it is true in deed that phisitions do iudge the flesh of the hare to be melicholike, hard to digest in the stomacke and begetting a grosse iuice: but this is to be vnderstood of old hares, as such as are about a yeere old, & such as are kept tame in boroughes and in other inclosed places: but the yoong leuerets haue a verie pleasant and daintie flesh to eat: yea in those which are growne great, there are some parts, which are in request, as the loines, the shoulders & haunches. There may be marked in this little beast a maruailous fruitfulness in nature, for that monthly she bringeth forth a great number of yoong ones. I know that some thinke, that the male and female are of both sexes, and that both of them do conceiue and ingender as if they were hermaphrodites: but

The fruitfulness of the hare.

it is a false conceived opinion and a thing altogether strange and vniaccustomed to be in the workes and generation that is according to nature. And it is furthermore most true that the female being bagd ceaseth to ingender againe for the time, that is to saie, to admit the companie of the male thereby to haue a second conception, but by and by after she hath kindled, she taketh the bucke againe, and that is the cause of their so great fruitfulness: as much may be said of conies which are a kinde of hare.

*The fluxe of
the belly.*

As concerning the medicinall vertues of the hare: the flesh of the hare well rotted is a great helpe against bloodie and humorall fluxes of the bellie: the liuer dried in the oven and made into powder is singular good for them which haue a weake liuer.

The braines throughlie boiled and rubd vpon the gums of yong children, helpeth them of the paines they haue of their teeth, and helpeth forward their growth.

*The stone of
the reines.*

Take a whole hare both skin and haire (saue that you must take awaie her entrails) close them vp in an earthen pot well stopped and luted: afterward put the pot into a hot oven, and there leaue it so long as till the whole bodie may be made easilie into powder, in such sort as that there be left no manner of fat nor moisture, for else you should be constrained to put the pot againe into the oven vntill euerie part and parcell were brought into powder. The weight of a french crowne of this powder, taken with white wine euerie morning two howres before meate, doth take awaie the difficultie of making water and breaketh the stone both of the reines and bladder: but yet before the vse of this powder, the bodie must be purged: and during the time of the vse thereof, there must be applied vpon the reines, two plates of lead of the bredth of iowre fingers, sewed together betwixt two linnen clothes.

The gall.

The gall of the hare mingled with sugar, cleanseth the eies and taketh away the pearle or spots of the eies.

The dung.

The dung of the hare being caried about women, hindreth their conception: but one thing of a certainty if it be put vp into the secret parts of a woman in forme of a pessarie, it staieth the termes flowing excellently, and drieth the mother that is too moist.

The bloud.

The bloud of the Hare dried or fried, and applied vnto a scab or ringworme, drieth and healeth it incontinently.

*The bones of
the hare.*

The Hare hath a little bone in the ioynt of her legs, which is so-ueraigne against the colicke.

The

The hunting of the Brocke and Foxe.

The five and thirtieth Chapter.

*The profite comming of the hunting of the
Foxe and Brocke.*

THe killing of foxes and brockes, bring neither pleasure nor profite to the hunters: taking profite in this place for meate and nourishment: for the foxe his flesh, (and much lesse the brocks) is nothing pleasant to eate, in as much as it hath an vnlauiorie, strong, and wilde kinde of taste. Howbeit *Galen* in a certaine place letteth not to say, that the flesh of the foxe hath the like facultie and vertue with that of the Hare: and yet in another place as retracting his former assertion hee saith, that the foxe is of the same temperature with the dogge. It is certaine that some countrie people hauing not the benefite of any other victuall, liue not vpon any other then foxe flesh, but it is in the time of Autumne onely: because that at such time the foxe feedeth of nothing but of grapes, by which meanes it may bee that his flesh may prooue somewhat good. Howsoeuer it be, if anie profite growe vpon the killing of the foxe and brocke, it is onelie because they deuour foule, and annoie the conies and warren.

*The best of
the foxe is
in autumn.*

*At what time
the flesh of the
foxe is good.*

Adde heereunto that the Physicians doe make great account of the lunges of the foxe, for the disease of the lungs and shortnesse of breath: and of his greafe for the paine of the finewes: of his bloud for the stone: of the oile wherein the whole bodie of the foxe hath bene boiled, either quicke or dead, (whereof we haue spoken in the third booke,) for all manner of ioint-ach: and of the priue members of the foxe against the stone.

*The profite
that the bodie
of the foxe
doth bring
saith in me-
dicine.*

The fixe and thirtieth Chapter.

Of the two sorts of foxes and brockes.

BEfore we goe any further, there are two sorts of foxes, and two sorts of brocks, that is to say, great foxes and little ones accustomed to lie and luke in their dens, and brocks some like swine, & some like dogs. The two sorts of foxes are sufficiently knowne: the hoglike brocks are whitish, and haue the haire about their noses and vnder their throats a great deale more white then the doglike haue: their bodie of a greater bulke, their head and snout also more grosse. The hoglike in going out of their dens doe freely dung, but euermore they make a little hole with the end of their snout before, or else scrape one with their feete, and then dung therein: the doglike make

*Brockes some
like hogs and
some like dogs.*

make their dung a farre off from their earthes: the hoglike commonly make their dens in sandie or other ground that is easie to digge and open places, to haue the heate of the sunne, and being giuen to sleepe continually, they are fatter then the doglike. The doglike make their abode in tougher earth, or else in rockes, making their holes and dens deeper and narrower then the hoglike, bicause they cannot digge the stiffe and tough earth or rockes, as the other doe the sand and light ground: the doglike haue their nose, throat, and eares yellowish, after the manner of the throat of a Marten, and they are a great deale blacker and longer legd then the others. They two sorts accompany not togither, but they feede of all manner of flesh: they doe much harme in warrens, especially vnto the yooing rabbits which are within their nests, and are very swete and daintie, but more to pigs and hogs, whereof they feede more then of any other flesh: they feede also of all sorts of wilde flesh, as geese, hens, and such like: they are verie colde and chill, and if they be left in any roome where fire is, they will goe lie in it and burne their feete: they will liue hardly, as also they haue a hard skin: they feare their nose notwithstanding verie much, neither can one giue them cuer so little a blow thereupon with a stick, but they die sodainly: they are deadly enemies vnto the foxes, and oftentimes fight with them.

The seuen and thirtieth Chapter.

Of two sorts of earth dogs vsuall to course foxes and brocks with ball, and the manner of teaching and training them thereunto.

Two sorts of earth dogs.

AS concerning the hunting of the foxe and brocke, it is to be performed with earth dogs, which are of two sorts: the one hath crooked legs, and commonly short haire: the other hath straight legs, and a shagd haire like water spaniels: those which haue the crooked legs creepe more easilie into the earth then the other and they are best for the brocks, bicause they stay long there, and keepe better without comming forth. Those which haue straight legs serue for two vses, bicause they run as coursing dogs aboue ground, & also take the earth more boldly then the other, but they tarric not in so long, bicause they vex themselves in fighting with the foxes and brocks, whereby they are forced to come forth to take the aire.

How to teach, nurture and traine vp the earth dogs.

Now if it fall out that the huntsman haue nor earth dogs readie taught, he may traine them in this manner. The time to begin to take them in hand must be when they are betwixt the age of eight and ten moneths: for if he will not be brought to take the earth at a yeere old, he will scarce cuer be able to be made to take it: againe, they must not bee roughly dealt withall in the time of their trayning, neither so handled

handled, as that they may take any hurt of the brocks in the earth; bicause that if they should be beaten or hardly handled, they would neuer take the earth more. And for that cause it must be carefully looked vnto, that such yooing trained dogges bee neuer made take the earth, where there are any olde foxes or brockes, but to let them first staie out their yeere, and be throughly nurtured. & furthermore there must some olde earth dogs be put in alwaies before them, to indure and beare off the furie of the brocke.

The most conuenient and readiest way to traine them is thus: at such times as foxes & brocks haue yooing ones, you must take all your old earth dogs, & let them take the earth, afterwarde when they shall begin to stand at an abbaie, then must the yooing ones be brought vnto the mouth of the hole one by one (for feare they shoulde beare themselves) and there cause them to heare the abbaie. When the old brocks or foxes shall be taken, & none remaining but their cubs, then you must take and couple vp all the olde earth dogges: and after let loote the yooing ones, incouraging them to take the earth, and cying vnto them: creepe into them bairer, creepe into them, Hou take them, take them: and when they haue holde of any yooing brocke or foxe, they must bee let alone, till they haue strangled him in the burrow or hole, taking heede that the earth fall not in vpon them, least it might hurt them: afterwarde you must carrie all the yooing brockes and foxes vnto your lodgings, and cause their liuers & the blood also to be fried with cheefe and fat, making them meate thereof, and shewing them the head of their wilde flesh.

They may also bee trained and taught after another manner: as namely, you must cause the olde brockes and foxes to be taken aliue by the olde earth dogs, and with pincers fit for the purpose, take and break all the teeth of the neather iaw, wherein the great gripers stand, not touching the vppermost at all, so the ende that by it may continually appeare and bee scene the rage and furiousnes of the beastes, although they bee not able to doe any harme therewith at all: afterwarde you shall cast earles in some meadow plot of sufficient largnes, for the dogs to turne themselves, and go in by couples together on a brest, couering the burrowes afterwarde with bordes and greene turfes: This done the brocke must be put in, and all the dogs both yooing and old let slip and incouraged as hath already beene said. And when they haue baird him sufficientlie, you must strike seauen or eight great blowes vpon the side of the hole with a spade to harden and acquaint them therewith, against the time when you shall stand in neede to vie deluing: then you must take vp the planks ouer the place where the brocke is, taking hold vpon him with pincers, killing him before them, or else causing him to be stifled by some greyhound, that so there may meat be made of him for them. And you must haue cheefe which

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which you must cause to bee cast them presently after their wild flesh when it shalbe dead: and if peradventure you woulde not breake all the teeth of the neather iaw of the brocke, yet you must cut off all the greater and maister teeth, that so he may be kept from byting and doing of mischief.

The eight and thirtieth Chapter.

The manner of killing the foxe.

AS for the manner of killing of the fox it is much more easie then that of the brocke, herein especially, seeing that after they once sent the dogs which baite them, they gather themselves together, and rush out vpon the lodaine: except it be at such time as the female hath young ones, for then they will not forsake them.

The fox his borrow.

Naturallie they are given to dig their earthes in places that are hard to be digged, as in rocks or vnder the roots of trees, they haue but one hole, both it is but strait, and reacheth far: when the dogges haue once ouerthrowne the foxe, hee rethit a little, but it is not with anie such boldnes and courage as to daunt the dogs, neither hath hee anie dangerous byte: and yet some saie that hee hath this shift as to clap his taile betwixt his legs, (when hee seeth himselfe once ouerthrowne by the dogs,) and to pisse vpon it, and therewith to besprinkle the dogs, to the end that feeling the stench thereof, they may be driuen backe and let him depart.

That the fox his urine stinketh.

How to take the fox without hunting him.

If you take a bitch foxe when she is salt, and cutting away her priue member, and the gut annexed thereunto, with the little testicles or stones, which are the cause of ingendring, (being the same that gelders vse to take from bitches, when they geld them) and put all the same cut in pretty gobbets into some little pot all hot as they were cut awaie, & take *Galbanum* and put it in, mingling altogether, and couering it, that all may not breath out: you may keepe it a whole yeere, and make it serue at any time when you woulde make a traine to allure the dogge foxe, by taking the skin or a collop of lard, and putting it vpon a gridiron, and when it shall bee broiled and all hot, moistning it in the pot where the priue part of the foxe and *Galbanum* is, therewith making all your traines: then you shall perceiue the male foxes following of you euerie where: but he that maketh the traine, must rub the soles of his shoes with cowes dung, least they should take the sent of his feet. Thus you may see the meanes howe to drawe on the dogge foxes to any place where you may take them in a snare, or grin, and so kill them in the euening with a crossbow.

This is most true, that if you rub an earth dog with brimstone, or with oile of the lees or oile, and thereupon cause him to take the earth, where

where there are foxes or brocks, they will geethemselues thence, and come no more there for two or three moneths. There is furthermore another thing to be noted; that after that the earth dogs are come out of the earths of foxes or brocks, they must be washed with warme water and sope, to rid them of the mould that shall be gotten betwixt the haire and the skin: for else they would grow scabbed of a scab that would very hardly heale.

Some subtile foxe hunters take the foxe without any helpe of dogs, with this wile: they rubbe the sole of their shooes with a great peece of lard lately roasted, at such time as they are about to returne home from the woode, or from any plaine where they knowe that there is any foxes: after the same manner they vse to scatter by the way (as they goe) little morsels of hogs liuer dipped in hony, drawing after them a dead cat: whereupon the foxe following the trace at hand, allured by the sent of the lard and hogs liuers: they haue a man accompanying them with a harquebuzze, or arrowe to kill him at a blow.

The nine and thirtieth Chapter.

The manner of killing the brocke.

AS for the killing of the brocke, it is more difficult then the killing of the foxe (as hath bene saide) because their holes are deepe and narrow, and consisting of many conueiances and passages: for which cause it is more and conuenient for the vnder-taking of such a worke, first to haue fower or five men furnished with spades and tooles fit for the digging of the earth: secondly, halfe a dozen good earth dogs at the least, euerie one armed with his collar about his necke, of the breadth of three fingers, and hung with little bells to enter the seuerall earthis, to the end that the brockes may bee driuen the sooner to their staude, and the dogs defended the better by those collars, from taking any hurt: and when it is perceiued that the brocks are at their stande, or that the dogs growe wearie and out of breath, or the bells to be full of earth, you must take vp the dogs, and take away their collars from them: whereas at the first they are of great seruice, and cause the brocke the sooner to take them to their stande.

But before you let slip the dogs, there must regard be had to view the earthis what manner of ones they be, and the place wherein they lie, and where the farthest parts of them are: for otherwise a man should but loose his labour: in so much as if the earthis shoulde bee on the side of a hill, it were requisite that the dogs were put in vnderneath toward the valley, to the end that the brocke may be compeld & forced to the ytermoist end of the vppermost holes, where the laid

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earthes

earthes are not so deepe as the other, and therefore may the more easily be digged.

But otherwise if the earth should be in some raised peece of ground, and therewithall round about the same, the rising ground being seated in the midst of a flat peece of ground, then the dogs must be put in at the holes which are highest, and nearest vnto the top of the rising ground: but before they be let slip & put into such earths, there must twenty or thirty blowes be giuen with the head of the spade vpon the highest parts of the earths, thereby to cause the brockes to remooue from out of the midst of them, and to cause them to descend to the furthest ends of their earths which are in the bottome of the rising ground. There must alwaies two or three dogs be let slip at the mouths of the holes, that so by their vehemencie and eagernes they may part and put alunder the brocks which shall be together, and force them to flie to their rests.

They haue a trick to stand the abbaie at the places where their holes do meete, and stoutly to resist the dogs in such places: which, when it is perceived, it is requisite to smite three or foure blowes with the spade, and if yet for all that they wil not remooue, you must forthwith discover them with an augur. Then when it is perceived that they are fled vnto the furthest part of their holes you must not pearce through right vpon them, for then they would bolt forward againe into the wide spaces and meetings of their holes and offer violence vnto the dogs: for which cause it becometh that the hole be bored right ouer where the voice of the dog soundeth with a round augur, for the nature thereof is to cast vp the earth and not to let it fall downe within, and after that is done presently to put a flat augur into the hole of the round augur, that so it may crosse the hole right in the midst, least the brocke should recoile vpon the dog: & if it be possible to shut the dog forth on the hinder part of the augur, it will be very good, for and if he should be shut within toward the forepart of it, the brocks might beate and handle him roughly, seeing that sometimes there are founde mustered together in the vttermoost ende of one hole sixe or seuen, which might beate and driue backe the dogge. When the hole is thus crosse barred with the flat augur, you must presently make a trench with spades and shouls, to the ende that it may serue to set a man in, and at conuenient time to let in some dogs by the trench, and to cause them to hold a baie in that place, where a man may see waring and fighting on all sides. These things thus furthered, care must be had that the brockes doe not cover themselves with earth, which they are very ready to doe, being driuen to their vttermoost places of flight, in so much as that the dogs are sometime vpon or ouer them, & yet not know where they are. Afterwarde their forte being throwen downe, you must pull them forth, not by the whole body, but by the

neather

neather iawes: for if you shoulde take them by the whole body they might hurt the dogs: & if by the vpper iawe, then you might hurt their nose which is in them verie tender, in so much as that being hurt therein, bee it neuer so little, they die incontinently. When they are thus drawne out, they would be put in some sacke, and after carried into some court or garden closed in with wals, to make them coursing game for yong earth dogs: but in the meane time it will bee good to drawe your bootes vpon your legs, for when they are once thoroughly heated they spare not to run vpon men after the manner of the wilde bore, in such sort as that oftentimes they carrie away with them peeces of their stockings, yea, the flesh also which is vnder them.

The fourtieth Chapter.

The hunting of the conie.

WE haue intreated of conies largely inough where wee spake of the warren, the hunting whereof is profitable, not only in respect of the prouision of fooode which it ministreth, and that very good, but likewise in respect of the damage which this little beaſt bringeth vnto corne, trees, and herbes: and that so dangerously as *Strabo* writeth, as that certaine nations were constrained in the daies of the raignes of *Tiberius* and *Augustus* to send embassadors to the Romans to haue their aide and succour against the vrgent and fore pressing iniuries and damages which their countreies sustained through the excessive number of this little beaſt.

We haue made in our treatise of the warren two sorts of conies, the one of the clapper, and the other of the warren: those of the clapper are easie to hunt, because they are tame: those of the warren are somewhat more hard to take, because of their nature more inclining vnto wildenes: the manner of hunting them is chiefly of two sorts, and both of them very well knowne, that is to saie, either with pursnetts, or with the ferrets: as concerning the ferrets they are put into the holes of the conies to fight with them, whereby they being astonished & frighted, bolt forth by and by out of their holes, & fall into the pursnetts which lie spread vpon the tops of their holes: sometimes the ferret doth kill them within, which falleth out to bee the occasion of no small attendance oftentimes vnto the hunters.

The catching of birds.

The one and fourtieth Chapter.

That men of olde time made no account of catching of birdes.

THe taking of birdes hath not bene much approoued nor liked of by men of olde time, by reason of the little exercise which it affordeth:

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affoordeth: ſeeing they made no account of any manner of hunting, whereby the bodie receiued no kinde of exerciſe, whereby it might be made more nimble and ready to manage matters of greater importance: againe, we find not any mention made of the hunting of birds, in the bookes of the auncient writers as *Aristotle* or *Plinie*, who ſeemeth not to haue beene ignorant in any thing that might make for the truth of his writings: neither yet of hauking, which is the nobleſt kind of hunting of birdes of all therelt. All which notwithstanding, the men of our time haue not ceaſed to put in praſtiſe many ſorts of taking of birds, as, with birdes of the praie, which excelleth all the reſt, with great nets, firall nets, tonnelling, fire, ſnares, bundles of ſtrawe, with the croſbow, long bow, nooſes, pit ſals, chirping, pipes, horſe, crow, bell, hand, and many moe waies, which are well inough known to birders: we will firſt ſpeake of hauking.

Of hauking.

The two and fortieth Chapter.

What hanking is.

IT is moſt certaine that the ſkill and knowledge of hauking hath beene brought into an arte of late time as hath beene ſaid; auncient writers as *Aristotle* and *Plinie*, the admirers of high and excellent things, and the diligent and induſtrious ſearchers out of all thinges, woulde not haue caſt behinde them ſo great and famous a worke of the ſkill of man, as to lure and reclaime the birdes of praie, but would haue written of it, if it had beene then in uſe. For this is a wonder to ſee a birde which hath beene wilde to become tame, to drop out of the ſkies and to light vpon a mans ſitt: to ſoare aloft as high as the cloudes to ſeeke other birds to kill them, and alſo to make warre vpon the fowles, and ſuch as liue below vpon the earth, and withall to take certaine fower footed beaſtes, as the hare, rabbits, and conies. This ſkill is now a daies ſo highly honored, as that the great nobles of the world, will that it ſhould bee conſecrated wholie to themſelues, as reſeruing it for a paſtime onely beſeeming them, and in this our countrie of France it is had in ſuch price, as that the gentleman which is ignorant in this ſkill, & that other of hunting, is lightly prized, as though he lackt the two things which of all other (chiuallrie and martiall ſkill excepted) are the moſt rare and excellent.

Now as hauking is the arte and ſkill of luring and reclaiming of birdes of the praie, to cauſe them to flie at other birdes liuing either in the aire, vpon the earth, or about the waters: ſo hee is called a faulconer whole place and office it is to reclaime ſuch birdes: wherein if wee pleaſe to looke a little more neerely into the name, it ſhould ſeem that

that the later Frenchmen haue folowed the elder and auncient Frenchmen and Greekes in their giuing of names. For euen as the auncient Frenchmen were of iudgement that the name of *Sacre*, which the Greekes named *ἰεραε*, & the Latins *Accipiter*, was the general name vnder which ſhould be comprehended all birds of pray (howſoeuer that *Sacre* in French, & *ἰεραε* in Greek be the ſpecial name of a bird of pray) euen ſo the Frenchmen of our time haue agreed together, that the faulcon ſhould bee the chiefe in his kinde, and affoord the generall name (as by the way of ſurpaſſing excellencie) vnto all other birds of pray: becauſe that the faulcon (compared with all the birds of pray) is the beſt of wing, and exceeding all the reſt in goodneſſe, ſtoutneſſe and tractableneſſe, as if a man were diſpoſed to ſay, the faulcon gentle, the pilgrim faulcon, the Tartarie faulcon, the Barbarie faulcon, the Gerfaulcon, the faulcon *Sacre*, the faulcon Lanier, the Punician faulcon, and ſo of the reſt.

The three and fortieth Chapter.

What birdes are good to make haukes of.

NOW we muſt not thinke that all birdes of pray are good and fit to make haukes of, but onely ſuch as are ſtout and of a reſolute courage, and are able to fly any bird either water fowle or land fowle, of which nature there are ten ſpeciall kinds, ſufficiently known of euery one, and for the moſt part very common to be had in France, that is to ſay, the Eagle, the Gripe, the Buzzard, the Sparrowhauke, the Gerfaulcon, the Merlin, the Faulcon, the Lanier, the *Sacre*, and the Hobbie.

Fowre of them flie from the ſitt and kill at randome; as the Buzzard, the Sparrowhaukes, the Gerfaulcon and the Merlin: and fowre of them lie aloft in the aire as the Faulcon, the *Sacre*, the Lanier, and the Hobbie. As for the Eagle and the Gripe, they are not any thing knowne in France. A great part of theſe birds (the Gripe excepted) haue the feathers of their trains and wings very much glittring for the moſt part. All of them haue their beakes and talons crooked, and they are almoſt like one vnto another for they ſhew no difference except it be in games, ſeeing likewiſe that their colour doth diuerſlie change according to their mues, which cauſe them to be called Hagards or Sores, all one with that which is vſuallie done by dried herings which are called Sores or red herings. There are verie manie birdes of the praie which are rours abroad, neither can it be learned well from what countrie they come, nor whither they go, ſo that we might alwaies remaine ignorant of what countrie our haukes are; were wee not giuen to vnderſtand by them, which vſe to bring haukes out of Italie, Germanie, and other ſtrange countries. Such as bring

vs haukes do take them for the most part with lime twigs, which is the cause of the crushing of their feathers, which yet may at pleasure be taken away with warme water.

But whether they be brought from far, or bred neere about vs, for to reclaime & bring them to the lure, first, they must not be taken out of the nest, before they be strong and growne prettie great ones and able to stand vpon their feet: for and if they should be taken away sooner, yet they must not be handled but kept in a nest as like vnto their owne as may be. Afterward as the time shall affoord they are to be set vpon blocks, or vpon some pearch for the better preseruing of their feathers from grating vpon the ground.

They must be fed with lue meat as oft as may be, because it will make their feathers to put forth the better. Notwithstanding the meat & flesh that is more then ordinary good for them, is to feed them with the legs or neckes of hens: cold flesh is naught for them: beefe, porke and such other are of too strong digestion for them, and especially the flesh of night beasts, that is to say, such as flie about in the night, and are scarce euer seene in the day time, such are the great duke, the little duke, the owle, the shrich owle, & the bat, for if they should eat thereof, they would die: the flesh of pigeons, yoong swallowes and mitton, is far better for them: hens flesh being sweet & pleasant doth trouble the belly of the bird, if she eat it cold: wherefore the bird that is greatly delighted with such flesh might possibly forsake the game, and feaze vpon hens, if she see any in her way as she is flying. Wherefore to meet with this inconuenience you must feed the bird with yoong pigeons, or yoong swallowes: the flesh of pies and olde pigeons is bitter, and bad for these kinds of birds: cowes flesh is bad for them, as making them too laxative, which commeth by the heauines thereof, which causeth hard digestion. And if necessitie compell you to feede them with grosse flesh, for want of better, let it be tempered and washed with warme water: if it be in winter you must presse it, & in sommer it must be washed in cold water. The flesh that you feede your birds withall, must be picked that there be not fat sinewes, or veines left vpon it: you must not suffer them to eat whiles they will at once, but with some smal distance of time betwixt, letting them rest in eating, and now and then to hide away their meate, before they be full gorged, and then afterward to giue it them againe: but when it is taken from them, as also when it is giuen them, they must not see it, for feare of making them bate.

Likewise it is good to make them plume vpon small birds, as they did in the woods: ycerely in the beginning of autumn they must be brought downe by laxative medicines, if they be too high, as namely, by giuing them aloes with their meate: which must be of some good lue and warme meate, for otherwise they would be taken downe too much.

much. After that they haue beene purged, you must prepare them for the game, and againe when you are purposed to flie them, it will not be amisse to giue them casting of tow couered with flesh and made in forme of a pill, and that at night, to the end they may cast it vp againe in the morning with much more flegmaticke matter: for by this means they will become more healthfull, of a better appetite, more empty, swift and readie for the pray. Porkes flesh giuen them warme with a little aloes maketh the bird loofe and to slice out readily: but you must obserue and see that she be put in a warme place after she hath beene purged, and withall to feed her on your fist with some lue bird; for at such times her entrailes are much dried. They are discerned to be sick when their fundament swelleth and becommeth red, as also their nostrils and eies. And thus much of the luring and reclaiming of them in generall, now let vs go vnto the particular.

The fowre and fortieth Chapter.

Of birds of the pray in particular.

THE vulture called of the Grecians *vul-tur*, and of the Latines *Vultur*, is the greatest bird of pray, a passenger (or bird for a time) in Egypt, knowne in this country rather by his skin and feathers then othervise, because the skinners are wont to make stomachers to lay ouer the stomacke, and the fletchers feathers therof to set vpon arrows. They may be fed with small tripes, dead carcases, and outcastings of beafts; likewise some report of them that ordinarily they follow camps, because of the dead bodies; they cannot rise from the earth to flie, except they first take their aduantage by running, or else take their leaue vpon some great but.

The eagle is called the king of birds, very vndhandsome to cary vpon the fist, by reason of his copulencie: hard to reclaime being once wild, because of his boldnes, might, readines, and casie inclination to hurt the faulconer in the face or elswhere. Wherefore who so desireth to haue him good, must take him in the nest, and reclaime him with courting dogs, to the end that when he is to flie, he may follow them, that so they hauing put vp the hare, foxe, roe-bucke, or any other such beast, he may seaze vpon it to stay it: he may be fed with any manner of flesh, especially of such beafts as he taketh and seazeth vpon. The faulconer must be diligent to attend him wel, because he is very apt to flie away, but that mischief may be prevented by sewing the feathers of his train in such sort as that he cannot spread them to fly with them: or else by plucking bare the hole of his fundament in such sort as that it may appeere, for therupon he being driuen into a feare of the cold, he will not be halty to soare so high: the eagle is knowne to be good and faire, when he is of a red colour, hauing deepe eies, and a whitenesse vpon his head or backe.

The

*The sparrow
hauke and the
buzzard.*

The sparrow hauke & the buzzard differ not in any other point than in greatnes and strength: because the buzzard is of a stronger nature, and therefore not so soon sicke as the sparrow hauke, they are both of one kinde, as are also the rauen and the iay, the great dog and the little one, and both of them are of two sorts, either such as are taken abroad in the woods, or else such as are taken yoong out of the nest. Of this sort there is good choise to be made, in respect of their aptnesse to learne; as also of those which are fliers but haue neuer mued their feathers, neither made any aire or fed any yoong ones.

The goodnes and fairenes of a sparrow hauke is known by their being great and short, and yet hauing a little head and somewhat round above, a thicke beake, the eies somewhat hollow, and the circle about the apple of the eie of a colour betwixt greene and white, a long and somewhat thicke necke, open in the place where the reines lie, sharpe towards the traine, not very long, set with good and large feathers, hauing flat and short legs, sharp talons, thicke and broad shoulders, long and small feete, blacke feathers when they are taken yoong in their aire, and which follow the old one from bough to bough, hauing neuer yet mued.

The way to take them is thus: the birder must be hid behind a bush, and before the bush a plaine or smooth aire but fowre square, and fixe sticks prickt downe about it of the thicknes of ones thombe, and of the height of a man, three on euery side: to these sticks you shall tie nets of green threed that is very fine, & to them a small line or cord, which shall be at the command of the man that is hid behind the bush: within the aire there shall feed diuers small birds, especially spinks, or chaffinches: whereupon the sparrow hauke will not faile by and by verie fiercely to flie into the nest, thinking to take the birds, but indeed becoming fast, and overcast in the nets: then the birder shall take her and bind her wings below, together with her legs and traine, that so she may not struggle or beat herselfe.

They are purposely woont to hide themselves in winter vpon long poles, amongst high and tall trees, vnder some small and slender tree in some hedge row: they are reclaimed by keeping them long, and oft vpon the hit, but especially at the breake of the day: they must be fed twise a day, or once, as when it is determined to flie them the day following: for then she must be kept sharpe, that so she may bee the more eager vpon the pray; which likewise they will performe if they haue put off their gorge of the same day, which is perceiued by the emptines of their gorge. They mue yeerely in March or Aprill, and at such times they must be kept in warme places, or in such places as where the South sun shineth against some wall. Their meat must be of good flesh, as birdes or mutton, that so they may become verie fat: the sparrow-hauke is apt to flie away, but to preuent the same, her

her keeper must be carefull to doe her no hurt, neither yet to gainsay her in any thing, being giuen to be disdainfull: when he goeth forth to flie her, hee must not let her range any farre way off, because that if she misse of the birde she flieeth at, she goeth for anger, & flieeth to some tree, refusing to returne againe to her keeper: he must not flie her too oft, but content himselfe with what she can reasonable take, giuing her of her pray to feede vpon, that so shee may perceiue and find that her pray is something woorth vnto her, and thereby become the more freely stirred vp to flie: the birdes which she taketh, are the partridge, quaille, stare, blacke bird, and other such like.

There must great care bee had to heale her when shee is sicke: if she fall into an ague after much flight, or by reason of other accidents, shee must be set in coole places, vpon some pearch wrapped about with wet clothes, and feede her a little and often with the flesh of little chickens, first soaked in water, wherein haue beene steeped the seedes of cucumbers or gourds: if shee be overcooled, she must bee set in warme places, and fed with the flesh of some cockrell or pigeons soaked in wine, or in the decoction of sage, margerome, or such other hearbes: if she haue lice, you must annoint her pearch with the iuice of nightshade or wormwoode: if she haue the wormes in her belly, you must powder her meate with the powder of peach tree leaues: if shee digest her meate ill, and keepe it altogether, you must make her swallow downe the hart of a frogge into her throate, pulling the same hacke againe by and by, being helde by a small thred, for so you shall make her cast all her meate: if she haue the gout in her wings or legs, you must let her bleed some fewe drops of bloude vpon the veine that is vnder her wing or thigh: if shee haue the gout in her foote, you must annoint her feete with the iuice of the hearbe called in French *Le-Étorelle*, as also her pearch, annointing the place afterwarde with tallow.

The faulcon (as we haue said) in the arte of hauking, is sometimes a generall worde taken for all kindes of haukes, sometimes it is taken for a speciall worde, and according to that sense there are diuers sorts of that name, which I omit to intreate seuerally of, because of such as haue written of the nature of birdes: but howtsoever the faulcon is the prince of the birds of praie (I meane in respect of flight) for her stoutnes and great courage, and is to bee accounted of great value when shee hath a rounde head, and the top of her head is full, her beake short and thicke, her nostrils great and open, her eie browes high and thicke, her eies great and cloaked, a long necke, a high brest, large shoulders, the feathers of her wings thinne, long thighs, short and thicke legs, greene, great, and well spread feete, blacke, sharpe and pearcing talons: and which is for bignes neither too great nor too little.

The

The faulcon as al oþher birdes of pray, hath her tierfelet, and they are called of the Latines *Pomiliones*, that is to say, small birdes, resembling them, and nothing differing from them, save onely in greatnes: and they are all of them as it were the males of the birdes of pray, the females being for the most part of greater bulke and bodies, then the males. That of the faulcon is called nothing but a tierfelet, or the male faulcon. The tierfelets of the other haukes haue their proper names: as the male sparrow hauke is called a musket: the male lanier a lanieret: and the male Sacre a Sacret. The tierfelet of the faulcon hath his feathers verie glittering, his head and eies blacke, as he coloured vpon his backe and traine, and yet glittering: hee is a hauke for the lure, as also the faulcon, and not for the fist. His legs and feete are yellow, hauing for the most part a pale breitt, hee catcheth two very blacke spots vpon his feathers, on the sides of his eies. To reclaime the faulcon, you must haue him commonly vpon your fist, feede him with the wings & legs of hens soaked in water, and set him in a darke place, sometimes presenting them with a basin full of water, wherein they may bathe themselues, and after their bathing, drie them at the fire: they must bee vsed first to take small birdes: then indifferent great ones, and afterward great ones: but you must not feede them with any part of the birdes which they shall haue taken. They flie merueillous swift, and mount very high, there hovering and soaring, but withall still looking downward, and when they see the ducke, the greene goose, crane, or heron, they come downe like an arrow, their wings shut and drawne together, right vpon the fowle to breake in vpon her with hir talons behinde, at which time if they happen to misse, and the fowle flie away, they presently flie after, but and if they cannot seaze vpon her, as enraged and angrie, they take so long a flight thereupon, as that they loole their master.

The faulcon is more fit then any other hauke to flie the heron, & all other fowle of the river. Her diseases and the curing of them, are like vnto those of the sparrow hauke: howbeit the faulcon is of a stronger nature then the sparrow hauke.

The hobbie is the least of all haukes in respect of bodie except the merlin, and is likewise for the lure, and not for the fist: being of the number of those that soare aloft, as the faulcon, the lanier, and the Sacre. This birde is sufficiently knowne euerie where: for there is not any cuntry where the hobbies do not follow the hunters, in as much as it is the proper worke of the hobbie to make her praise of the little birdes as they flie, as by name, the lark: this is his speciall propertie that hauing founde the hunters in the felds, going to hunt the hare or the partridge, hee keepeth them companie, still flying ouer their heades, hoping to meete with some one little birde or other which the dogges shall put vp: but for the most part these little birdes doe rather

rather choose to become a pray vnto the dogges, or else to finde out some meanes to saue themselues amongst the horses, or to be taken alive, than to commit themselues to the mercy of the hobbie their mortall aduersarie. But howsoeuer, the hobbie will not follow the hunter longer than a certaine time, as though he had his houres limited him: for leauing them he goeth to looke out the place of his rest amongst the woods of high timber trees, where they keepe and pearch ordinarily. He hath a blew beake, yellow legs and feete, the feathers vnder his eies verie blacke, the top of his head betwixt blacke and a darke yellow, two white spots about his necke, but vnderneath his throat and on either side of his temples rustler ones, his wings verie blew, his backe, traine and wings blacke on the vpper side, his traine very much consisting of variable colours vnderneath by reason of red spots traced onerthwart amongst the blacke: if you see him flying in the aire he may be perceiued to be somewhat red vnder his traine and betwixt his legs.

The hobbie is so quicke and swift, as that he dare aduenture vpon the rauens and geese in many a die bob in the aire.

The merlin is the least of all other haukes which faulconers make any vse of, he is for the fist and not for the lure, howbeit for necessities sake, he may be trained to the lure, he resembleth the faulcon so naturally as that there may seeme to be no difference betwixt them, save onely in greatnes: for he hath the same gestures plumage and conditions: wherefore he must be reputed as royall as the faulcon, or at the least of the same lineage and nature with the faulcon. He is very stout of courage, for although he be not much bigger then a blacke bird or pigeon yet he dareth to aduenture vpon the quail and partridge, and such other birds greater then himselfe, and his courage is such as that oftentimes he will flie them to the next houses or villages, yea into burning fire, and vnder the garments of men or women. He must be fed and handled after the same maner that the faulcon. It is the onely bird amongst all the other birds of pray, which hath no difference or distinction betwixt the male and the female: for there is not found any tierfelet of the merlin.

The gerfaulcon is a bird that is seldome seene, except it be amongst faulconers belonging to great Lords, she is a great bodied bird: in so much as that she is thought of some to be a kinde of eagle: she is fit to flie at any thing, for she is bold and neuer giueth ouer anie thing, but she is more harde to reclaime and bring to the lure, then any other hauke, because she is so venturous and fantastical, for and if she be not handled gently, and haue a mild master to vse her kindly, she will neuer become reclaimed. This is the strongest of all other birds except the eagle: she is kept vpon the fist, she is long bodied, hauing her bill, legs and feet of a blew colour, her talons very open and long: she is

a cunning workeman at the taking of the birds of the riuer : for ſhee wearieth them in ſuch fort, that in the end they are forced to yeeld, as not being able to diue any more.

The ſacre.

The ſacre being a principall bird amongſt thoſe of the pray, is like vnto the faulcon in greatnes, a hauke that is good for the kite, but he may be made fit for any wilde fleſh, as alſo for the open field to take wild geefe, ſeaſant, partridge, and all other ſorts of wild fowle.

The ſacre is of more ill fauoured coloured feathers than any other hauke, for ſhe is of a colour as it were betwixt red and ſinokie, ſhort footed, hauing blewe legs and talons. It is a wandring bird and ſeldome found in this country : her tierſelet is the ſacret : ſo that the ſacret is the male, and the ſacre the female. Noble men deſirous to haue ſome ſport betwixt him and the kite, do firſt make the kite to ſtoupe (for the kite is woont in the ſommer to keepe on high in the aire, to enioy the coolenes of the aire, which is greateſt in the middle region of the aire) by hauing ſome one or other faulconer to carrie a duke vpon his ſit, hauing a certaine quantity of a foxe taile hanging thereat, thus letting her flie in ſome plaine ground, they giue the kite occaſion to ſtoupe : for when the kite is aduised of the duke he ſtoupeth by and by vnto the ground, & drawing neere vnto her, doth there keep himſelfe without doing any other thing but beholding of her as marvel-ling at her forme : then the ſacre is to be caſt off at him : who thinking himſelfe ſwift, hopeth by flight to ouertake him : wherenpon the kite mounteth vpward, turning round therewithall as much as he can : and ſo the combat becommeth pleaſant to behold, eſpecially if it be in a plaine without trees, and that the aire be cleere and without wind : for one ſhall ſee both the ſacre and the kite to mount ſo high, as that they will be both out of ſight : but all will not ſerue, for the ſacre will make him yeeld, beating him downe to the ground with ſuch thumps, as he lighteth vpon him withall.

The lanier.

The lanier differeth not much from the faulcon, and he taketh his ſurname of the faulconer : for he is commonly called the faulcon lanier : he is commonly found in this country, and for that he is of gentle conditions, and better endureth groſſe meats than any other hauke, men are woont to content themſelues with him, cauſing him to ſerue their purpoſe euerie way. Faulconers chooſe thoſe laniers that haue great heads, ſhort bills, blew and yellow ſcete, their forefeathers of a mixture of blacke and white, not hauing ouerthwart ſtrakes, as the faulcon, but ſtraight ſpots going along the feathers, a ſhort and ſomewhat thicke necke, as alſo a bill of the ſame faſhion. The lanier is the female, and the lanieret is the male, and hath not ſo big a body as the female, neither yet ſo well eſteemed of, but as for the reſt he is almoſt like the female in plumage. There is no kinde of birde that keepeth his perch more conſtantly. He abideth with vs in winter, and is to be ſeen of vs

at

at all times, contrarie to the faſhion of others, which keepe not in our countries but in the ſommer time. Faulconers when they would make the lanier a forreſter, they put him in a lower roome, ſo darke as that he can ſee nothing, except at ſuch times as he is fed, and likewise they neuer carrie him vpon their ſit but in the night.

And when that he is readie to flie, they make a fire in the chamber for to heare him, that ſo he may afterward be bathed in pure wine, and hauing dried him againe, they giue him to feede on the braines of a hen : then getting forward before day toward the place where the game is, they call him off a good way from the place where the crane is, at ſuch time as it beginneth to be day : and though hee take him not the firſt day it is all one, for it will bee as good in the daies following, and eſpecially from after mid Iulie vntill towards the end of October. And yet after the time he will be better then before, but it is not good in the time of winter.

Thus much of the manner of luring and reclaiming of haukes, as well in generall as in particular : and yet it remaineth that wee ſpeake a word or two concerning the ſame matter.

You muſt vnderſtand that all birdes of the pray doe ſerue to flie either vpon riuers, or elie in the fields : of which ſome flie from the ſit, and that without any ſpare, of this ſorte is the buzzard, the ſparrow hauke, the gerfaulcon and the merlin : The others flie on high, as namely the faulcon, the lanier, the ſacre and the hobbie : the one of them is called from the flight, by holding out the ſit vnto them, and the other by caſting out vnto them, the lure, that is to ſay, an inſtrument made after the faſhion of two fowls wings coupled together hung at a leaſh, and at the ende thereof a tennis ball or crooke of horne : for by theſe lures the haukes are allured, thinking them to be liue hens.

Some of them begin not the game, but follow it being begun by the *To lure.* haukers, as we haue ſaid of the eagle. To be breef, haukes ſeeme not to differ, ſaue that all of them doe not flie at all kinde of birds and fowles alike, for in deede euery one of them buckleth himſelfe vnto the bird, to the flying whereof he is giuen and addicted, and not to others. And as concerning all the ſorts of flying and hauking, you may finde a more ample treatiſe in the particular deſcription of the nature and properties of euery bird of pray which we haue made.

The five and fortieth Chapter.

Of the taking of melodious ſinging birdes.

VWe haue ſpoken of the ſport that is made with birdes of the pray called hauking, and now we will enter into ſome ſpeech of taking of birdes, which ſing melodiouſly with ſweete and pleaſant ſongs,

songs, wherewith the maister of our countrie farme, may take his recreation and pleasure, by hearing them sing in his closes, parke, lowe woods, and high woods, or in his chamber window: or else shut vp in some cages or rooms made for the purpose to containe the subiect of such pleasure and delightfull melodie. And that wee may not omit any thing, before wee set downe any manner or way of the particular taking of such birds, we will take a brief view of the nature, feeding, and diseases of the same. For it were but lost labour to take the birds, it to the end that wee may haue their sweete and melodious songs a long time, we know not what meane is good for them, what diseases they are subiect vnto, and what meanes and remedies are necessarie for their distemperatures. In the meane time I minde not heere to bring in the fabulous histories touching the originall and breeding of the most part of them, which fantastical Poetes haue inuented. I meane to tell my selfe in this onely perswasion, namely that all birdes were miraculously created of God by his almightie power, that is to say, of his own meere will and word, whereby likewise he did create all other creatures in the beginning of the creation of the world.

The sixe and fourtieth Chapter.

Of the nightingale.

WE will make our choice of the Nightingale in the first place, which according to the iudgement and common content of euery one, singeth the most sweetly and melodiously of all the rest: shee is a bird sufficiently knowne, especially in the countrie of Italy, and is called of the Latins *Luscinia* or *Philomela*: shee maketh her nest in the spring, at such time as the earth in the moneth of May, is all ouer covered, beset and hanged with flowers and pleasant greene, and that in groues and thicke bushes, vpon which the sunne in the morning doth cast his coole and temperate beames: from noone till sunset, shee haunterh the coole places, fountaines, brookes, thicke hedges, and well shadowed places. True it is that some of them doe make their nests vpon the ground, vnder hedges, or amongst the waste groundes: and other some of them make it in a place somewhat raised, as vpon some greene and thicke graile growne, clod of earth or butte. The number of their eggs is vncertaine, for some lay fower, and some five; and those which nestle in sommer, lay (according to *Aristotle*'s assertion) sometimes sixe or seuen. Now the Nightingale, which you would keepe, must be bred in the spring: for how much the earlier bird shee is, by so much will shee become the more perfect, and you may haue better hope and assurance of her longer living, and of her being brought vp and kept with more ease, because that comming (as all are wont) to moue her feathers, if she bee

The nightingale
in nest.

ouerrunne of certaine cattle in August, the cold comming & finding her bare of feathers, causeth her to die, which thing happeneth vnto manie of those, which were bred in sommer. The yong nightingales must not be taken from their nests, vntill such time as they be feathered, and that they bee almost covered all ouer with the same, that so you may haue the lesse trouble in bringing of them vp, keeping them in a solitarie and by-place; their meate must bee the hart of a weather cleane and old. And you shall make of the fat of the skin, which cometh the hart, and of certaine sinewes which are within the same cur and shred small in little peeces, meat in manner of wormes, wherewith you shall feede them once euery howre, or oftner if neede bee, giuing them at euery time three gobbets: and thus you shall feede them in their nests as long as you can, and after they be grown vp, you shall put them in cages made fit with little stickes and pearches, to the end they may beginne of themselves to stand vpon their legs: and within the said cages you must put mosse, hay or chaffe, whereupon they may rest themselves, if so be they will not sit vpon the pearches, alwaies taking heed to keepe them cleane as much as may bee. It will bee requisite also that their cage haue not any light but on one side onely, and for this cause such as are most carefull doe hang their cage for the space of three whole parts of it with greene cloath. When you know that the Nightingale eateth alone, you shall mince her the hart of a weather verie small, after the manner of pye meate, and lay it vpon some small paper, in such places as where you shall know that she may feede easily and without any trouble, you shall vse this care and diligence vntill the bird hath got the custome to eat alone not neglecting norwithstanding to giue her sometimes a day as much as a bird carrieth in her bill to be the surer and for the better: take order likewise least shee die, that she neuer want any of the foresaid meat, and withall that it stinke not, as it falleth out oftentimes in sommer: Besides the hart of the weather, you may giue her diuers other sortes of meate, as the paste whereof we will speake hereafter for one: or in steed of that paste take a new egge (for else it might cause some disease to breed in her, & bring her easily to her death) boyle it hard, giue her the yelke to eate: it is true that you must not giue it her oft, or not at all, except it bee for want of other meate, because it is giuen to binde them in their bodies and make them continue. You may likewise feede them with certaine wormes which are found in a doones nest, or else in old flower of meale: but this must be done as seldome as may bee, because that such meate should rather be vnto her as physicke, then ordinarie foode, as we shal say hereafter. If shee will not picke vp these meates, shee may haue them mingled amongst her meate of a sheepes hart, that so shee may learne to feed of whatsoeuer shall be set before her.

Meat for the
Nightingale.

The seven and fortieth Chapter.

How Nightingales taken in the moneth of August must be fed, as also those that are taken after they be through growne.

The manner of the keeping of the Nightingale taken in August.

SO soone as you haue taken the Nightingale in August, tie her wings presentlie, that so shee may not beat her selfe in her cage. and by this meanes she will growe tame sooner, and more easily, and withall fall to eate, whereas otherwise shee will be hard to tame: for seeing her selfe deprived of her libertie, she becommeth not tame, till of a long time after. You shall shut her vp in a cage covered and wrapt round with paper, not hauing any sticke for her to pearch vpon at all: in the meane time haue regard to feed her five or sixe times euerie day, and that very handfomely: sometimes lay before her flies or little wormes which by their crawling will stirre vp the bird to picke them, wherefore for the first time you shal giue her them aliue, whereas afterward you may cut and mince them: the thirde time you shall beginne to feed her with a sheepes hart shred small, mingling amongst the same of the wormes afore mentioned likewise minced and knodden together for to accustome her to the saide hart. And if you perceiue that the birde doth not feed her selfe, neither yet desire or seeke after any thing but wormes, you shall leaue off to giue her them mingled and tempered with the sheepes hart by a little and little, and so offering her such meate as is most easie, you shall woont her to eate of the saide hart without any mixture all alone: you may doe the like with the paste, if you perceiue that shee doth eate it willingly, which thing is easily discerned by any man of indgement.

The eight and fortieth Chapter.

To bring vp Nightingales that are taken in March.

To bring vp Nightingales taken in March.

THE Nightingales that are taken after the first of March vnto the middelt of April are very fit to keepe and bring vp. When therefore you haue a nightingale of this season, you shall put her in a cage well wrapt about with paper, for feare that vpon the sight of any man, she should beat herselfe and crie, as also to the ende that shee may learne to eate alone. For to doe this you shall haue a vessell of glasse like a cup without any foote, wherein you shall put seven or eight small wormes and set them neere the birde, who seeing them crall within the glasse, will by and by forenue at them fall of pecking them, wherefore you shall giue her them quicke for the first time. The second time mince and cut them small. And when you see that shee eateth well of such meate, you shall take of a sheepes hart

hart well bet and cut, and mingle it with the said wormes, and making thereof as it were a paste giue it her to eat. But and if you perceiue, that in feeding, she choose to eat of nothing but the wormes, leauing the hart, you shall indeuour your selfe to mixe it with all possible care and cunning, that so in eating she may not choose but eat of both together, that is, both of the wormes and of the hart. And when she is accustomed to eat of this mixture, you shall by little and little take away the wormes and feed her only with the hart. Let it not be found strange vnto you to see your nightingale continue some daies without eating. For the cause why it so fallerth out, is, because they are greued for hauing lost their liberty, and thereupon continue some time without eating or feeding of any thing; some, three daies; others, five or sixe daies; yea, eight or ten daies; whereat you must not maruell, neither yet leaue off to feed them. For there are some old ones which though they be hard to feed, become notwithstanding better singing birds then any of the yong ones.

If peraduenture the bird will not take any other thing then wormes, giue her a birds bill full fower times a day, and three or fower moretels at a time and not any more because of digestion, and when she shall haue accustomed to take the mixture of the hart with the wormes, giue her twise a day only, that is to say, morning and euening for to preferue and maintaine her. And this is the order and course that ye shall take.

The nine and fortieth Chapter.

To know if the Nightingale begin to eat of herselfe, and whether shee will prone good, or no.

WHen the Nightingale beginneth to sing, it is a most certaine token that shee eateth likewise alone; there are some which make not any kinde of noise or sound for the space of eight daies, others of fiteene: and other some continue a whole moneth without singing. If they exceede this time without singing, it is to be thought that either they are femals, or else that they will neuer be ought worth. They giue great hope of proouing perfect birds which begin to sing quickly, and vse to eate quickly likewise by themselves.

The fiftieth Chapter.

How to order a Nightingale which eateth alone and singeth.

WHen the Nightingale shall eate well by herselfe and shall sing, you shall take away by little & little the paper where-with the cage was compalled about; every day a little in

such sort as that the bird may not perceiue it, covering the place again from whence you shall take the paper, with some greene, in so much as that all the paper being taken away, and the cage covered againe with greene leaues, you shall by little and little accustome her to see the light. For if that you do otherwise, you will be the cause of making her loofe her singing, either for dildaine or for feare, which will not come to passe, if you order her as hath been said. Notwithstanding that *Elian* in the thirteenth booke of his naturall historie saith (following the aduise of *Aristotle*) that it is hard to bring that bird to singing, which is not taken in her owne nest. Which opinion is found to be most false by ordinarie experience: for verie often it is seen that old nightingales become more perfect and excellent then the other.

The one and fiftieth Chapter.

How the male Nightingales are knowne from the females.

*Nightingales
male and fe-
male.*

THE opinions and iudgements of men concerning Nightingales (as namely to know of whether sexe they bee) are verie diuers. For some distinguishing the cocke from the hen by their grossenesse: saying, that the cocke is the grosser birde: others are of minde that the cocke hath a greater eye: some say that he hath a red-dish taile: all which opinions I haue found to be farre wide: for I haue had perfect good Nightingales and that a great number of them that haue bene very small and little: as also hens with all those markes which are assigned vnto the cockes. Wherefore for a more sure and certaine signe, you shall rest vpon and trust to that which followeth. That is to say, when you haue a Nightingale taken out of the nest, which shall begin to eat alone without hauing of it cramd into her, and shall record diuers melodious notes from day to day, contenting herselfe therein sometime with pleasant and bebecoming noises, you may thereby assure your selfe that the same is a male. But vnto this you shall adde certaine other notes: as namely, her quiet and peaceable abiding in her cage: her standing vpon one leg onely and to hold on the warbling of her breatt, which continuance is not to be found in the hen: more then that, she goeth hopping and whistling vp and downe the cage with a noise or song that is verie much interrupted and short. I will not deny notwithstanding, but that sometimes the cocke may be knowne from the hen by the markes which some haue set downe before: but this is that which I affirme: namely, that some are night-tillie deceived by those markes, and that by their singing, the nightingales taken in August are most certainly and clearly knowen and discerned. And as for those which are taken in March, the knowledge of them resteth, not onely in singing, but also in the lower parts of the

the sexe which the cockes doe put forth, but the hens doe not, for then is the time that birds do couple together. These therefore are the most certaine euident and infallible arguments, whereunto you may trust and betake your selfe.

The two and fiftieth Chapter.

Of the King of birdes or the little King, otherwise called Robin-Redbreast.

THE little king or king of birdes is naturally verie small, of a daintie tractable complexion, hee singeth most sweetly, and is not much inferiour in this respect vnto the nightingale. Hee is oftentimes seene in winter vpon the tops or roofes of houles, or vpon old ruines on that side that the sunne shineth, and where as the winde may least annoy him. He is to be fed in this sort: you must keepe him warme in his nest, giuing him for his meare of a sheepes hart or of a calues hart minced, in all points as wee haue already said, speaking of the nightingale. Hee must be fed with a little at once and oft, by reason of his digestion, being carefull that he take no cold, and especially in the night. For which cause you shall put him in a cage, which hath some prettie prouision made in manner of a little chamber trimmed vp with red cloth, and made as it were a little hothouse, whereinto he may withdraw himselfe in the night season and shunne the cold all the whole yeere. Now when he shall be vsed to be fed, you shall feede him with some hart well beaten and small minced, and sometimes you shall giue him of the paste that is vsed to bee giuen to nightingales, which will doe him no small good. And you shall giue him sometimes flies to pecke for his greater ioy and speedier taming, and herein you shall vse great diligence.

The three and fiftieth Chapter.

Of the Finch.

AMongst the fairest and most beautifull birdes, yea or rather the most beautifull of all is the Finch, being no lesse delightome to the eye, then pleasant vnto the eare: and yet there is not that account made of her that should, because of the great number of them that is to be found. They neettle thrife a yeere, that is to say, in May, Iune, & August. Some are of opinion that those which are bred in August are the best, and amongst them those which are of the third feather, or which haue mued thrife. Others affect those most which haue their nests amongst the thornes, and haue certaine orange coloured feathers, which I my selfe doe not millike: but I say further, (that whereas the blacke ones are commonly the perfectest and best birds

birdes of all) that there is not any one better or more perfect then an other. It is true that those which breed amongst the thornes, are stouter and stronger birdes then the other and better made to sing. They are vnlike the other, in as much as their feathers are somewhat more graie & darke. The cockes haue a blacke throat, as likewise the shoulders and head blacke and long and flat. The hens haue their shoulders gray, their throat blacke, and their head round.

The fower and fiftieth Chapter.

How the Finch must be fed.

How to feede the finch.

WHen you haue taken the Finch with her nest, you shal feed them in manner as followeth: you shall first soften in the water of sweet almonds, and afterwarde chawe very well a little peece of bisket or of a pan cake, and you shall make of these two things a paste, and cram into the birde of the same, as shall be needfull. Afterward you shall worke the things afore said in a morter together: & hauing tempered them with water, you shall giue them as much as a bird will hold in her bill, with a chickens feather, vpon paine that you make her meate new euery day least it should grow fowre & spoile the bird. When you haue fed the birde you shall take a little stickie like a tooth-picke, at the point whereof you shall tye a little cotton: you shall wet this tooth-picke in water, & with the same you shall wash the birds bill, that so there cleaue not thereto, or hang there about any of the faide paste, for causing of apostems or vlcers, such as wherewith shee might be kept from being able to open her bill, and so she would easily dye. Now when shee beginneth to eate alone, you shall giue vnto her in her little boxe a little bruised mustard seede, and you shall renue it dayly, least it should become ranke, which would make her die. The same diligence must bee obserued in bringing vp of greene Finches, Canarie-birds, Linets, Goldfinches or Silkins and Spinkes. You must be careful when they moue to aire them and besprinkle them with a little wine, setting them also a little in the sunne twice a weeke.

The fise and fiftieth Chapter.

How to feede the spinke.

What meat the spinke must haue.

THe spinke is a very beautifull and melodious birde, but all spinkes haue not one and the same tunes: for some of them sing after one fashion, and some after an other: which needeth not to be further proued, for there is great variety of them, and they are called after diuer sorts. Some bring them vp after the way, that is vsed in bringing vp of finches. This bird hath this imperfection, namely,

ly, that she easily looseth her sight. Wherefore when you perceiue that she is in the way to grow blind, take of the iuice of beets, and mingle it with a little water in her water pot, and that for a day onely, that so she may drinke thereof. And furthermore make her a pearch of fig tree wood, whereupon, and against which she may rub her eie, which will doe her much good: you shall giue her likewise to eat of the seedes of melons the space of two or three daies, because they are cooling and wholesome. And if by this means the spinke do not mend and become better, giue her leane to take her libertie in the fields, for she will neuer be ought.

The sixe and fiftieth Chapter.

To relieue the diseases of the finch and nightingale.

WHen the finch is in her mue, you shall comfort her by sprinkling her lightly with wine, that so shee may moue the sooner, which will be to her further good. And if she happen to haue lice after this sprinkling with wine, set her in the sunne, and there let her stand vntill such time as she be drie. Some of them moue in Iune, some in Iuly, and other some in August, according to their complexion and heate. And this is the course which they follow which are put into the cage, hauing spent one yeere abroad before, for those which are taken in the nest doe moue within a moneth that they are put in, and this must be vnderstoode in generall of all birdes. And therefore to come to the particular. The nightingale is troubled with fatnesse, and therefore she must bee purged twice a weeke, giuing her two or three wormes of the pigeon house, as wee haue taught before for the space of fiteene daies. If she growe melancholike, you shall cut the bladder which is about her rumpe, and put into her drinking pot some sugar candie, little lumps or paste of sugar, of the bignes of a nut. And if you see that she complaine her selfe of sicknesse, put into her water pot some fixe chyles of saffron, or thereabout, continuing therewithall to giue her the paste, and sometimes of a sheepes hart. And if peradventure she still grow woorse, giue her the yelke of an hard egge and the white also. Besides, the nightingale hauing bene two or three yeeres in the cage, becommeth gouty: now when you shall perceiue it, annoint her feet with butter, or else with hens grease, which is a verie good remedie for to cure her. The nightingale is likewise subiect to haue apostems breaking out about her eies and neb, for which you shall likewise vse butter and hens grease. It is meete also to make prouision for the nightingale that is leane, when you see needfull that way to require it, giuing her new figs to eate in their season, and at other times drie figs well chawed: and afterwarde you shall bring

bring her to her ordinarie diet, and so you shall continue with her to maintaine and keepe her. There hapneth also vnto the nightingale another disease called the streitnes or strangling of the breatt, which commeth of hauing eaten some ranke or fat thing, and it is perceiued by the beating and paine before not accustomed, which she abideth in this place, and also by this, that then she is giuen oft to gape and open her bill. This disease commeth also of some sinew or threed of the sheepes hart, which was not minced small enough, and so thereby doth hang in her throat: wherefore you shall very handiſomely open her bil, and take it from her with a pinne, you shall know it to be this disease, when you see in her throat certaine broken or loose flesh: giue her afterward a little sugar candie, which shall be a very good remedie for to cure her. In brieſe, all ſuch birdes as eate ſheepes harts, or the harts of other beaſts, are ſubiect to be troubled with the diſeaſe about ſpoken of.

The ſeuē and fiftieth Chapter.

To know the Canarie birde from others, and what diſeaſes ſhe is ſubiect vnto.

THe Canarie bird is brought from the Ilands called the Canaries, and is of much account amongst vs, becauſe ſhe both cometh out of a ſtrange countrie, as alſo becauſe ſhe is a good ſinging bird. She is knowne from others by this, becauſe ſhe continueth and heaueth the pailages of her throat in ſinging more then any other doe. Beſides ſhe is of a leſſe body, and of a longer taile. Inſo much as the leſſer they be, the perfecter they be. On the contrarie, the great ones which ſometimes turne their heades behinde them, after the manner of fooles, and for that cauſe are called fooles, are the woorſt, and come from the Iles of *Palme verte*. Wherefore the nature of the Canarie bird is not to be fat, or to maintaine and keepe her fleſh well. She is verie ſubiect vnto impoſtumes which happen vpon her head, and thoſe of a yellow colour, and they muſt bee annointed with butter or hens greaſe about three times, then leauing off to doe any more vnto them for the ſpace of three daies, you ſhall then take them in hande againe, and open them gentle, whereupon you ſhall ſee comming out of them thicke matter, like vnto an eggs yelke. Which done, you ſhall annoint the ſaid impoſtumes verie well with the foreſaid greaſe, and this you ſhall doe as often as they ſhall returne. This birde is likewiſe troubled with melancholie ſometimes, and then the end of her rumpe would be cut and wrung out very well, giuing her of theſe herbes, lettuses, beets and ſuch like. But and if for all theſe things you ſee that the Canarie birde doth nor amende the better, you ſhall coole her with a little of the ſeede of melons, giuing it her to eate,

eate, and you ſhall put into her water pot a little ſugar candy, twiſe, or thereabout, and that ſo much as may endure and laſt one whole weeke. Which may bee done likewiſe when ſhe is in health twiſe a moneth.

When the Canarie bird moureth, giue her of the ſeedes of melons, and ſprinkle her with a little good wine, in ſuch ſort as hath beene ſaid in ſpeaking of other birds, and that twiſe or thrice a weeke, ſetting her afterward in the ſunne, and by this meanes you ſhall make her moure more properly. This courſe you ſhall likewiſe practiſe if ſhe haue lice, to kill the vermine that would waſte and conſume her, that ſo ſhe may be preferred.

The Canarie bird in moure.

The Canarie bird hauing lice.

The eight and fiftieth Chapter.

Of the linnēt and of her diſeaſes.

THe linnēt is a good and melodious bird, euen that which is taken in her neſt. Sometimes ſhe will be melancholicke: ſhe haunteth the mountaines amongst the mirtle buſhes, boxe trees, iuniper trees, and bay trees: ſhe maketh her neſt of very ſmall rootes, and other matter like vnto feathers. This bird bringeth forth yong ones thrice a yeere. She is ſubiect vnto the diſeaſe called the pthiſicke, which may be perceiued by the ſeeing of her melancholike, and her feathers ſtanding in ſtaring wiſe, and by her bellie, which then will ſhew it ſelfe ſomewhat more puffed vp then ordinarie, full of red veines, and her breatt leane, and by ſeeing her ſpill and pecke muſtard ſeede. This diſeaſe commeth to her by feeding vpon muſtard ſeede, which is verie hot: wherefore it were better to giue her pannicke: or elle continuing to giue her muſtard ſeed, to vie withall this remedie: which is, when you ſee her troubled with this diſeaſe, to cut the end of her rumpe, and to giue her ſugar candie, or ſome other ſine ſugar to drinke: and for her meate you ſhall giue her beets, lettuses, and other ſuch like herbes to eate: as namely, ſometimes ſome mercurie. If you haue vſed to feede her before with muſtard ſeede, you muſt giue her pannicke to eate, to coole her withall, or elle the ſeedes of melons well huſked, and to continue the ſame meate the ſpace of three daies. Her ordinarie meate ſhall be of the ſaid herbes. Beſides this, you ſhall put into her cage a little earth, and that in ſuch ſort, as ſhall ſeeme good vnto you: howbeit, it would bee beſt to put therein ſome beaten morter, or ſome clay, to the end that feeding vpon it ſhe may bee healed.

The linnēt is likewiſe ſubiect vnto the ſtreitnes or conuulſion of the breſt, wherefore being oppreſſed with this diſeaſe, you ſhall feede her with the ſeedes of melons, and in her water you ſhall ſteepe ſome ſugar candy, or elle ſmall moricls of paſte. You ſhall put therein furthermore

The linnēt.

The linnēt is ſubiect vnto the diſeaſe called the pthiſicke.

The manner of feeding the linnēt.

thermore a little peece of licoras, to the end the water may somewhat taste of it, and so you must continue it for the space of five daies, one day alwaies betwixt, that is to say, one day and not the other. Seeing to it that you giue her a beet leaf or some other, vpon the day that you shal giue her pure water to drinke. The same remedy will serue to help her to her voice againe if the bird were hoarse, for thereby she shall finde her selfe well. Notwithstanding that there are but few that escape of the phthisicke. You shall vse the like remedies for the benefit of other birds, which are found to be greened with such diseases, as those are whereof we will now speake.

The nine and fiftieth Chapter.

*Of diuers infirmities hapning to little cage birds,
together with their remedies.*

AMongst other diseases of birds, they are subiect easily to loose their sight and become blinde, if it be not speedily looked to, & especially the spinks. Wherefore, for their better recovery before they be quite blind, you shall take beets and draw the iuice out of them, mingling it with a little sugar, and with this licour you shall make her drinke for the space of two or three daies, to be taken euery second day, after the manner that we haue spoken of in the behalfe of the linner. And you shall lay in her cage a sticke of the woode of the figtree, in such sort as that the bird may vse it for a perch, and rub her eyes against it, for the curing of them. Which remedie will then be expedient, when you perceiue their eyes to begin to shed teares, and their feathers begin to stare and stand vp. When they shall be troubled with impostumes, you shall vse the same remedies which we haue spoken of in the chapter of the Canarie bird.

But in as much as it often falleth out that birdes doe breake their legs, I haue thought it good to teach you the way to heale them. You shall giue them their meate in the first place, in the bottome of the cage: secondly you shall take away their rods and pearches, that so they may not thereby take occasion to be hopping to looke for their meate, and so thereby to labour and stirre their leg, because by stirring thereof they perish and are spoiled. And this course will likewise serue when any bird hath her thigh broken: and I woulde aduertise you not to binde or swaddle it after the manner of the worlde, for so you should cause some impostume to grow in the place where you did binde and tie it. You shall doe that which hath beene said very easily, if you lay her meate in the bottome and lowest part of the cage; all manner of pearching being cut off by the taking away of the rods and stickes which were in it for that purpose, and keeping them in some by-place for feare, that by the hearing of noyse they should beate and shake

shake themselves, letting their legge or thigh which they shall haue broken remaine vntide and vnbounde: for nature will heale it, and make it to growe together againe speedily.

The sixtieth Chapter.

*The manner how to serue ones turne of birdes, when he
woulde take and catch them, and howe
to make them sing.*

Notwithstanding that all birdes except the Spinke doe sing in winter, as by name the finche, the linner, the fiskin and other such like: there are some founde notwithstanding which being come out of the mue, doe giue ouer their singing, because of the said mue. Wherefore from the beginning of May you shall purge them, which you woulde vse for your purpose to catch other birds withall, in such maner as followeth. You shall giue them in the first place of the iuice of beetes mingled with a little pure water, and the day following you shall giue them a leafe of the said herbe. The thirde day following you shall keep them close in the house, setting them vpon the ground, that so they may eate their meate vpon it, for the space of tenne daies, withdrawing them by little and little day after day from the light into some obicure and darke place. And when they haue thus passed ouer ten daies, you shall giue them some beetes againe, and shut them vp in some square chest in a darke and by-place. At the euening you shall dresse them with a lamp, so dealing as that the said birds may see the same light for the space of two houres, during which time you may make cleane her water pot, changing their mustard seede euery eight day, and giuing them of the leaues of beetes euery fourth day, and euery twentieth day of the iuice thereof, especially vnto the spinke, being the most subiect of al others to become blind. And that you may keepe them without lice, you must change their cage euery twentie daies, as also for an other reason, which is because of the filth & stench thereof, which might easily kill them. Thus you must stil be practising of these courses, vnto the tenth of August, which terme being expired, you shall purge them a newe in like manner as before, suffering them by little and little more freely to see the light, vntill the twentieth of the same moneth, taking heede that they come not in the sunne: Thus they will serue you verie well to take and catch birdes withall in September and October, and finally in all the rest.

The

Apoplexies about birdes.

Birds hauing their thigh or leg broken.

The one and sixtieth Chapter.

*Of the misken.**The misken.*

AMongst the little birdes of the cage, the misken is of a cheerefull nature, and singeth sweetly and delightfully, she is faire and exceeding pleasing vnto the sight: shee breedeth thrise a yeere; first about the ende of Aprill amongst the shrubs or hedges of iuie or laurrell. Secondly about mid-May: and thirdly and lastly in the end of Iune: and this is their ordinarie and most common course. For sometimes they come sooner or later, more or lesse. Their nestes are made of the most fine roots of herbes, and oftentimes of the leaues of reeds, according as the place will afford them where they nest.

To feede the misken taken out of her nest, you shall giue her of a sheepes hart minced very small, taking away the fat and the sinewes, or elsie of a calues or heyfers hart, taking from it likewise the sinewes & fat, all the rest being well beaten and shred, because of digestion. You shall feede her in her nest oftentimes, giuing her euery time one morsell or two, and no more, least they should die, by being to much filled. And when you shall perceiue that the misken will eate alone, you shall hang at her cage a little of the saide hart minced, not ceasing notwithstanding to feed her by putting it in her mouth certaine times euerie day for more assurednes. After that she hath bene accustomed to eate alone, you may giue her some paffe, feeding her therewithall onely, without giuing her any more hart, when she shall be accustomed thereto. Furthermore if you haue any great desire that shee shoulde learne some proper song, take the paines for to teach her, for it is a bird that is very easie to be taught. The miskens, which are taken in birding, prooue better and more perfect then the other. They are wont to continue without singing the space of ten daies after they are taken. You shall feede them for the space of eight daies, with new or drie figs, and after you shall begin to giue them of the paffe which is wont to be made of the nightingales, whereof we will speake hereafter: such as are fed with paffe doe liue longer then those which are fed with nothing but figs.

The two and sixtieth Chapter.

Of the solitarie sparrow.

THe solitarie sparrow is by nature giuen to be melancholike, she loueth by-places, and thereupon cometh her name, because they are very solitarie, as namely, the olde decayed walles of churches, and other vninhabited places, as being far remooued from the companie of other birdes: shee is very zealous ouer her yong ones, she

she maketh her nest in the holes and clefts of old buildings, and breedeth thrise a yeere: first in Aprill: secondlie in Maie, and thirdly in Iune.

If you will bring vp and take any pleasure by the solitarie sparrow, which you haue taken yoong in their nests, you must chuse the greatest and biggest, namely such as are well couered with feathers, for elsie you shall neuer bring them to any prooue.

If peraduenture when they are grown thus great, they will not open their bills, you shall open them, giuing them as much as a birde will hold in her bill three or fouer times. But and if you perceiue that they will eate of themselves, you may put in their trough or meate-boxe some of the foresaide hart, not giuing ouer notwithstanding to put it into their mouthes, vntill such time as they eate well alone. But for such as open their bills, you shall feed them with the saide hart; after that you haue taken off the skin round about and the far also, and that once euery howre or more if you heare them crie and see them gape. Put in their cage a little straw or hay, keeping them as neate and cleane as possibly you can; for if you doe not they will become lame, or elsie die in a small time. Wherefore you shall doe as hath bene saide, vntill they haue moued, and afterward if you will keepe them in hand it will be verie good: howbeit I thinke it better to keepe them in haie all the winter following. And when as they shall eate of themselves, their meate shall be sheepes hart small minced, and sometimes of the paffe which is wont to be giuen to nightingales. And sometimes for an extraordinarie dish, you may giue them hard egges, as also rayfins.

The three and sixtieth Chapter.

Of the Throftle.

THe Throftle is a bird known to euery one, and she is as good to be eaten, as to sing: she maketh her nest in hils full of snow and ice, vpon high trees, it is made of the mosse of the wood mingled with earth, and fashioned of a round forme with singular cunning, in the midst thereof they leaue a hole, to the end that it may not fill with water through long and continuall raine, which might prooue to the drowning of her yong ones. They breed thrise a yeere as other birds do, that is in Aprill, May and Iune.

The Throftle taken in the nest must bee kept and fedde in like manner as the solitarie sparrow, as well whiles they are yoong and small, as when they become olde and great ones. Furthermore, you must know that the Throftle is a great deale more delicate and finer then the solitarie sparrow and hath tenderer bones. So that to preserve and keepe her aliue, shee must bee kept verie neate and cleane.

See

See that the throstle which you would bring vp and keepe be a great one and well feathered : for if you choose her great, and that she begin to eate alone and to moult, you shall be the more able to bring her vp, and she will prouoe the better.

You must note also that there are two sorts of throstles: those which are best to bring vp for singers, are rather the little ones then the other; and those which are of a browne and darke coloured feather called in Italian *Tordi sassoli*. On the contrarie, those which are nothing worth to sing, are much greater, and their feathers of a whiter colour, called by the Italians, *Tordelli*, which in my iudgement are better for the belly then the eare.

The sixty and fourth Chapter.

Of the Calander, Corydale and Larke.

The Calander.
The corydale.
The larke.

WE know the nature of the Calander by the effects, for she is hard to tame if she be not taken in the nest: she will be so vexed sometimes as is maruellous, and a thing almost incredible, for being caried from one place to another: and in this vexation she will continue a whole moneth without singing: yea there haue some bene scene which did neuer sing againe after, except they were brought backe to their accustomed place.

The Larke, notwithstanding that she is disdainfull doth not forsake her singing in such cases about two or three daies, as doth in like manner the Coridale. These birds make their nests vpon the ground and in medowes, and sometimes amongst the corne. Their nests are made of the drie roots of herbs, and they breed thrise a yeere: first in the beginning of May, then in the beginning of Iune, and lastly about mid Iuly. Notwithstanding they differ herein sometimes according to the season and time, as do all others.

These three sorts of birdes as they are of one and the like nature, so they are fed and eate after one manner. For their ordinarie meate and feeding shall be no other then that which we haue said to be good for the other birdes: namely, the hart of a sheepe beaten and minced very small. If they eat not alone, you shall feed them very diligentlie in their nests, according as you shall see it needefull. Looke to it that they continue not too long in their nests for feare they shoulde become lame. But after certaine daies put them in their cage strawed with small sand, and there leaue them day and night. Being accustomed to eate alone, you shall giue them hart mingled with the graine called of the Latines *Far*, or else with paste which is made for nightingales, and therewith you shall feede them till they become great ones and stand vpon their feete. Afterward you shall scatter some of the aforesaide corne called *Far*, amongst the sand of the cage, to the ende that

that the birdes may learne to know of themselves the saide corne amongst the sand, and to pecke it now, and then, continuing notwithstanding to feede them, and to put into their mouthes of sheeps hart according to your former custome. But when these birdes begin to moult you may giue them hempseed, spelt, and the siftings of corne. You shall also put into their cages a peece of drie mortar or else of the pumice stone, or of clay, whereupon the birdes may sharpen and rub their bills, which is verie apt to grow blunt with pecking, and to the end that they may eat some of it also sometimes: for it is a thing that doth them much good, and serueth for to purge them.

The fiae and sixtieth Chapter.

To make the paste which the Nightingales eate, being likewise good for the solitaire Sparrow, Muskies, Blacke birds, Throstles, and many other birdes.

TO make paste for the said birdes, whereof we haue made mention before: take the meale of white Chick-pease, & boile it diligently with a boulder, as is vied to be done with wheat meale, and in such quantitie as you shall see to bee needfull. For example: Let the quantitie of meale bee two poundes, with one pound of sweete almonds chosen and husked, which afterward you shall take and stampe verie well, in such sorte as is vied when paste for marche paines is to bee made. Heerewithall you must haue three ounces of fresh butter, which butter you shall put in a copper vessell tinned, and mixe therewithall the said flower and almonds together. After that you haue done this, you shall set the said vessell vpon charcole fire that so it may not smell of smoake, stirring it diligentlie whiles it is vpon the fire with a wooden spoone, that so it may boyle by little and little putting thereto the yelkes of two eggs and a little saffron: when you perceiue the butter to begin to melt, you shall furthermore drop into it of liquid honie so much as shall serue for the incorporating of the paste, and bringing of it into cornes, still continuing to stirre it with a spoone for feare the fire shoulde make it burne to. When you haue thus done, you shall take a Colander made with such holes as will let passe so much at once as the birdes for which you make it will eate. And when the paste is thus strained through the Colander: and the cornes made in such quantitie and qualitie as is requisite for the necessitie of the birdes, you shall take the paste which could not passe through the saide holes, and set it vpon the fire to boile againe verie well: and againe assay to force it through the said colander, so far forth as that the whole may come to be of a iust consistence. And for the keeping of it, you must powre honie aboue, handling and stirring of

of it cunningly, and ſo you ſhall be ſtored of prouiſion for fixe monethes.

The fixe and ſixtieth Chapter.

The way to know many and ſundrie maladies which doe happen vnto birdes.

THe diſeaſes of birdes are diuers, & this diuerſitie cauſeth diuers effects & diuers ſignes, which lying hidden the diſeaſe continueth vnknown, and ſo there is no admiſttring of any thing, in as much as it is not known whence it cometh that ſhe is in that caſe, nor what diſeaſe it is, nor what medicine or remedy is good or conuenient for the curing thereof. Wherefore it is neceſſarily required that there ſhould be good regard giuen vnto the outward ſignes by them to know the miſchiefe that lurketh within, and that no leſſe in the behaſe of birdes, then generally of all other creatures. Wherefore I haue induoured my ſelfe briefly to collect and gather into this Chapter whatſoever hath been deliuered ſcatteringly and diſſedly ellewhere, in the touching of the infirmities and diſeaſes of birdes and of the knowledge thereof, for the benefit & inſtructions of ſuch as would know the diſeaſes whereunto ſuch birdes as they delight in and loue to keepe are ſubiect.

Birdes therefore are ſubiect amongſt other diſeaſes vnto iſtumes which doe happen vnto them and appeere in the head of a yellow colour, as great as a hempe ſeed, yea, ſometimes as bigge as a peaſe, a diſeaſe commonly haunting all birdes, eſpecially thoſe which are of a hot complexion.

Another kinde of diſeaſe with which birdes are troubled is called the ſubtile diſeaſe *phthiſis*: for the birde that is troubled with this diſeaſe, ſwelleth in her body, as hauing it euerie where leſer with reines full of blond, the breſt notwithstanding being thin and leane, and furthermore, the birde ſo diſeaſed, doth nothing but take, caſt awaie, or ouerturne her meate and hempe ſeed.

The goutte is another ſort of diſeaſe common to birdes, and vexing them ſore: for when as they are diſeaſed thereof, they can neither ſtand nor ſit, becauſe of the paine they do indure: This diſeaſe is known by the roughnes of their legs and feete.

The difficultie of breathing, or harde drawing of their breath which troubleth them: and it is knowne by hoarſenes, ſo as that they cannot vtter their tunes, or if they do, yet very harſhly and imperfectly, or elſe by their not ſaying any thing at all. You ſhall lay your hand vpon her breſt, and by that alſo you ſhall perceiue it, for you ſhall feele an extraordinary beating, as ſhewing it ſelfe to come from ſome oppreſſion and great difficultie: by all which you may gather for certain

taine that ſhe is infected with this diſeaſe. Oftentimes it likewiſe cometh to paſſe that they crie and caſt forth lamentable noiles, complaining themſelues, which declareth evidently that they haue the diſeaſe called *Aſthma*, or ſhortnes of breath. Birdes alſo oftentimes fall blinde, which if it be not quickly helped, they will neuer bee cured: and this diſeaſe is perceiued by the trickling of teares from their eyes, and by certaine feathers about their eyes which doe curl and crooke by turning in againe.

The falling ſicknes is likewiſe incident vnto birds, whereof they are ſcarce euer cured, for there is no other remedie for it; but to keepe the birde which you bring vp, from the ſunne in ſommer: if ſhe eſcape the firſt time, you muſt cut the nailes of her feete, and beſprinkle her well with good wine: purge her oft.

Some ſay that birdes are ſubiect to the diſeaſe called the pip, which is ſalle: for the diſeaſe which they call the pip is not the pip in effect, but another diſeaſe which groweth in the bills of birds, for which it is good to vſe this remedie: Take the ſeede of melons, and ſteeping them in pure water, make them to drinke thereof three or fouer daies, and perceiuing the bird to growe better, you ſhall giue her a little fine ſugar, tempered likewiſe with ſugred water.

It is hard to know when the birde hath the diſeaſe of the rumpe, and for my part I can not tell how to giue you a better ſigne thereof then her growing melancholike, as by ſurceaſing and abſtaining to ſing. The remedie is to cut away halfe of the ſharpe point which ſhe hath there, for you ſhall not deuſe to doe her ſo great good any other waies. This is a grieſe which all birdes are troubled withall, euen thoſe that are kept in the cage.

Befides the diſeaſes before named, birdes haue ſometimes the fluxe of the bellie, which is knowne by their making of their dung more thinne and liquid then ordinarilie they were wont, by the beating of their taile, and in that they keepe it cloſe and neere together. The remedie is to cut the feathers of their taile, and thoſe alſo which are about the fundament, annointing it with a little oile. And in ſteede of hempe ſeede you ſhall giue her the ſeedes of melons for the ſpace of two daies. But and if theſe be birdes which vſe not to eate any hempe ſeede, but hart, or paſte, deterre not to take it from her, and in place thereof to giue her hard roſted eggs, in ſuch ſort as we haue ſaid before.

The ſeuen and ſixtieth Chapter.

Of the diſeaſes that happen particularly to euerie particular ſort of birdes.

Old Nightingales of the cage are subiect to gouts and conuulsions in the breast, vnto which diseases the solitarie sparrow is also subiect, besides the falling sicknesse or giddinesse of the heade.

The linnet is troubled with the subtiler or close and secret disease more then any other birde, as also with hot apostemes, conuulsions, and gouts.

The finch is wont to haue impostumes and the subtiler disease.

The fiskin on the contrarie, is not so subiect vnto diseases, both because she is of a better complexion, as also of more strength. And this is the cause likewise why she seldome times falleth blinde.

The spinke is more subiect to blindness then all the rest, and when she is once ouerrunne of this disease, shee is no more woorth anie thing, for she will euer and anon fall into it againe of set purpose.

Two onely diseases doe voluntarily molest the goldfinch, that is the subtiler disease caused through olde age, and impostumes proceeding of the eating of hempe seede.

The same two diseases wee finde to befall the Canarie birde of Spaine, howbeit the subtiler disease is seldome times founde to trouble her: she is also subiect to the conuulsion and oppression of the breast, because of her excessive naturall heate. The miskin is more subiect to the gout then any birde that is. The solitarie sparrow is haunted with impostumes and melancholie, which causeth her often to die. The Corydale falleth blinde sometimes, and sometimes she is troubled with the subtiler disease. As it also hapneth vnto the other kind of larke which hath no crest vpon her head. The calander likewise is subiect vnto the subtiler disease, apostemes, gouts, & that which is woorse, namely to become quickly blinde. The birde called in Latine *Thraupis*, is likewise verie subiect vnto impostumes, and oftentimes dieth of fat. The strongest and stoutest bird that can be, is the blacke birde, wherein I cannot finde any disease to kill her except old age, which is the common maladic deuouring all mortall things. Fat and impostumes doe sometimes hurt the throttle, as also the disease of the rumpe, which is likewise common to all birdes that are kept in the cage.

The eight and sixtieth Chapter.

Birdes are to be purged, at what time and how oft in the yeere.

The nightingale and other birdes which eate hart and paste, must be purged at the least once euerie moneth with two or three wormes out of the pigeon house euery time: two daies after put into her

her water pot the quantitie of a nut of fine sugar, and when her voice faileth her, you must put into the saide water some licoras, as namelie so much as may giue some taste to the water, and this will cleere her voice very excellently. The foresaide purgation is verie needfull when they are about to moue. The cage must neuer be without earth or sande: she must be sprinkled ouer with wine at the least twise a weeke to further her in her mouting, and for the better preserving of her life, setting her afterward in the sunne till she be almost drie: the like course must be taken when she is troubled with lice: and if you giue her any drie figs they will much reioyce her.

The nine and sixtieth Chapter.

To purge birdes that feede vpon hempsced.

THE birdes that eate hemp-seed, shall take for to purge them the seeds of melons husked; & herbes (as you shall thinke good) namely Succorie, Beetes, Lettuses, Scariole, and Mercurie, which is principally good for the linnet, but giue them what herbes you please: for they are verie good to giue to birdes to purge them: yea and though they haue no need to be purged, yet you must not cease continually to bee giuing of them some: giuing then furthermore amongst, either earth or drie mortar in their cage, to the ende they may cate of it, or dust themselves in it at their pleasure and conuenient time, which is verie wholesome for them: and likewise you must giue them some sugar, as you haue bene taught before. You shall perceiue when the birde would moue by the feathers in her cage, and then you shall besprinkle her lightly with wine, as we haue alreadie said before. Some birdes moue in the ende of Iuly, and others in the ende of August. Those which are taken in the nest begin to moue as soone as they bee bred, and their mouting continueth a moneth. You shall besprinkle them with wine at the least twise a weeke to cause them to moue the sooner.

The seuentieth Chapter.

To know how long the birdes liue.

IF any man desire to know how long these birds liue, let him know that amongst nightingales some liue three yeeres, some fiue, and others vnto eight and sing vntill that time, but from that time forward they are not anie longer in perfection, but decline by little and little. It hath bene scene that nightingales haue liued till they haue bene fiftene yeeres old, and continued singing euerie daie lesse or more, so that it may seeme that they liue according to the good ordering which they haue, or else according to their good complexion.

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The Miskins being subiect to the goute, doe liue but a short time, as three or foure yeeres at the most. The solitarie sparrows liue in good state and account for the space of fife yeeres: many of them dye of the subtil disease, some of impostumes, others of goutes, and some yoong ones of the falling sicknesse. Finches liue tenne, yea fiteene, and twentie yeeres, more or lesse according to their complexion, and they are alwaies in good plight, singing to the last day of their life. The linner is short lined, because shee is subiect vnto the subtil disease; some liue two yeeres, some three, and some vnto fife, according to their manner of ordering and gouerning. The Siskins liue, some fife; others eight yeeres: by reason of their good complexion, and because they are not so subiect vnto diseases as other birdes. The Spinke liueth but a short time, because they are subiect to blindnesse: some liue one yeere, some two, others till fower: many of them dye of the falling sicknesse, because they haue been set forth into the sunne in the sommer time, whereby the heat hath searched and penetrated into their braine. The Calanders, Corydales, and Larkes, liue alike long, the one sort and the other, as three or fife yeeres. Some Calander doth liue longer then the Corydale, but she groweth melancholy, beeing remooued out of one place into another. The Canarie birde liueth long, as fife, ten, and fiteene yeeres: yea there haue some beene seene to liue twentie yeeres, continuuing alwaies good. The *Thraupis* is of the continuance of fixe yeeres or thereabout, according as she is kept better or woorse: It is a birde that is not much regarded, for her singing is but yrkesome and tedious: some take pleasure in it, and some doe not.

The one and seuentieth Chapter.

The manner of taking small birdes, as well those which sing as those which are for to eate: as also all other sorts of small birdes.

TO take birds with the voice of some leafe, knife, or such other like thing, a man must stand in a bush shadowing himselfe with the leaues thereof, and with a whistle, make a noise or cry counterfaying some bird that hath beene taken before, or is then taken. Some take a sparrow being kept somewhat neere, and held in a snare and make her crie, pinching together her winges or legs: and then the birds will flocke about her to aide her, thinking that the owle hath caught her: and hauing set lime twigs or lime bushes vpon the branches of the trees, the birds that shall come to succour her, lighting will be limed.

To take spinkes as they are going, that is to saie in the place where manie spinkes are wont to passe, you must enuiron their trees (after they

they haue beene cut and planted in a plaine ground, one distant from an other some small distance, as three toote or there about) with leaues below, as if it were a lodge, and amongst them lay a coarde made fast vnto a bough, and caried vp on the other side with some prop, this shalbe held by a man placed a good way off, and one the laid bough shalbe hanged and made fast two or three spinkes: then you must let the saide trees verie choiselie and thin with lymetwigs, and some distance off from thence two or three cages, wherein there shalbe some spinkes for to call to such flocks as shall come flying that waie, which perceiuing those in the cages, as also those which are hanged vpon the stick, will lime themselves on the trees.

To take partridges with the tonnell or tombrell, there must a man be placed behinde a cow, or a horse of wood or of oser painted in such sort as that it may resemble the fashion of a cow or a horse, and in the meane time he shall ouercast the nets vpon the partridges. This kind of taking of partridges is now a daies forbidden.

To take partridges and woodcocks on the night with fire, you must light a match of old drie woollen clouts, dipt in melted tallow, wrapping them vp afterward together in forme of a torch, as thick as ones arme, and of the length of a foote; then you must altonish and amaze the partridges in such sort, as that they may cast themselves into the nets, wherewith they shalbe beset and compassed.

To take birds with your hand you must scatter in some plaine and smooth piece of ground corn or miller, steep in the lees of good wine and the iuice of hemlocke and afterward drie them; wherof when the birds shal haue eaten, they wil not be able to flie afterward, so that one may take them with his hand.

To kill birds with the long-bow, or stone-bow vpon houses, trees, or butts, it is requisite that he that shooteth should haue double shafts forked before, when he would kill geefe or other great birds, and those verie sharpe euerie where, to the end they may cut off the wing or the necke, where they shall touch them, for to strike them with the common shaft, would not so hurt the bird as that she might be constrained to abide in the place: for she would flie away notwithstanding that she were hurt or shot through, although she would die of it in an other place.

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