

Flint.
Marcha-
site.

Cos.

Corticula.

Smiris.

Saxum.

Pumex.

Tophus.

Precious stones.

* With Plin.
lib. 37.
Adamant.

h Some say that
the blood of a
Deer or Lion
will also mollifie
it; and make it
fit to be broken:
melted Lead al-
so mixed there-
with in a burning
furnace, doth the
like.

not shining solid stones are these; and the like: 1. The *Flint*. 2. The *Marchasite*, or that whercof they make millstones; which being struck with Steel, procures fire, like to the *Flint*. 3. *Cos*, which is of power to sharpen edgetools; wherefore we commonly call it a whetstone. 4. *Corticula*, or *Lydius lapis*; which is of force to trie the truth in metallis: we therefore call it a touch-stone. 5. *Smiris*, which is an hard stone wherewith glasiers cut their glasse: some call this an *Emery*. 6. Those which we name wheaten stones, or any kinde of rockie stone; or such as may be comprehended under the word *Saxum*.

Common stones lesse solid, are the *Pumex* and *Tophus*. 1. The *Pumex* is of a spongie nature, and is apt to swimme by reason of the light matter whercof it consisteth. 2. The *Tophus* is a sand or gravell stone that may easily be rubbed to crumbe.

But come now to precious stones: and amongst them we have the noble, and the lesse noble: both which sorts are begotten of a more subtil and thin matter then common stones, and fostered with a more singular influence of the heavens. My task were (in a manner) endlesse to reckon * all sorts: yet some must be remembered.

The more noble precious stones, are, 1. The *Adamant* or *Diamond*, the most precious of all stones, and the hardest; in somuch as it cutteth glasse, and yeeldeth not either to stroke of hammer or fire: notwithstanding it is softened with ^h Goats blood being warm, soon after she hath eaten parsley or drunken wine.

Plinie maketh 6 kindes of *Adamant*: The 1. is *Adamas Indicus*, being neare akin to crystal; for in colour and clearenesse it is much like it: and in quantitie it is in bignesse as a filbert or hasell nut. The 2. is *Adamas Arabicus*, like to the other, excepting that it is something lesse. The 3. is called *Cenchros*, answering in big-

nesse

nesse to the grain of Millet. The 4. kinde is *Adamas Macedonicus*; and this is like to the seed of a Cucumber. The 5. is *Adamas Cypricus*; this is found in *Cyprus*, and tendeth somewhat to the colour of brasse. The 6. is called the * *Siderite*; which, although it be heavier then the other, yet it is of lesse vertue and esteem; the colour whereof is like to the colour of iron: And this, as also that of *Cyprus*, are tearmed by ¹ *Plinie*, degenerate kindes; because they will be broken by the hammer, or otherwise with blowes; and may also be cut or rased by other Adamants. All these kindes, the two first onely excepted, are said to have their place of generation amongst the Gold, and in golden Mines.

2. The *Saphire* is a very cleare gem, very hard and of a skie colour, growing in the East, and specially in India: the best sort hath in it as it were cloves inclining to a certain rednesse. This stone is said to be of a cold nature: and being drunk it preserveth chastitie, corroborateth the heart, helpeth against the stinging of serpents, poyson and pestilence.

3. The * *Smaradge* is of a green transparent colour, making the aire green neare about it. The qualitie of this stone, in physick, is much like to the former, or of more vertue: for it is said to defend the wearer from the falling sicknesse. And so greatly doth it favour chastitie, that if it be worn whilest the man and the woman accompanie themselves together, it breaketh in the very act.

4. The *Hyacinth* is of a wattrish colour, or rather something blew like a violet. It is exceeding hard, and cloudy in the dark, but pure and cleare by day: like unto a false flattering friend, whose blithe looks are onely seen in time of prosperitie; but gone when the cloudie night of dark adversitie beginneth to approach: For where true friends are knit in love, there sorrows are sha-

O o 3 red

* Some say, that
it hath power to
set variance be-
tween men.

lib. 37. cap. 4.

Saphire.

Smaradge.

* *Plinie* maketh 12
sorts of this stone,
lib. 37. cap. 5.

Hyacinth.
Wher false
friends are like
untoe.

red equally; and best are they perceived in a doubtful matter.

Si fueris felix, multos numerabis amicos:

Tempora si fuerint nubila, solus eris.

Whil't thou art happy, many friends thou hast:

But cloudie times those many friends do waste.

Moreover, this stone is of a cold qualitie, moderating the spirits of the heart and of the other parts; also it causeth mirth, and being worn obtaineth favour, as some report.

5. The *Amethyst* is a gem or precious stone, which in colour resembleth a deep claret-wine; and (as^k some suppose) it hath power to resist drunkenesse.

6. The *Carbuncle* (of which *Plinie* writeth in his 37 book and 7 chapter) is a gem shining with a light like fire, representing a flame. Some say it is the noblest, and hath most vertues of any precious stone.

7. The *Calcedon* is of neare nature to the *Carbuncle*: it is of a purple colour, and shineth like a star: it is said to expell sadness and fear, by purging and chearing the spirits: it also hindreth ill and fearfull visions or dreams in a mans sleep.

8. The *Rubic* is a red gem, shining in dark like a spark of fire: it cleareth the sight, and expelleth sad and fearfull dreams.

9. The *Chrysolite* is a stone of a golden colour, and shining, but brightest in the morning. It is good against melancholy; and fire is much hurtfull unto it.

10. The *Astarite* is a cleare shining Crystalline stone, having in the midst the image of a full moon: or being turned about, the sunne or the moon may be seen shining within it. *Plin. lib. 37. cap. 9.*

11. The *Selenite* is a transparent gem like glasse: it hath a kinde of spot in it which bears the image of the moon,

Amethyst.
k Aristotle affirmeth no lesse.

Carbuncle

Calcedon.

Rubic.

Chrysolite.

Astarite.

Selenite.
A stone which follows the course of the Moon.

moon, increasing and decreasing as the moon; and therefore it is called the *Moon-stone*. *Ibid. cap. 10.* It is of a white, black, and yellow colour: and the scrapings of it heal the falling sicknesse.

12. The *Sardonix* is a cleare gem, in colour representing the nail of a mans hand: it preserveth* chastnesse, and healeth ulcers about the nails. *Albertus Magnus* witnesseth that if it be hanged about the neck, it doth greatly corroborate the strength of the body.

13. *Achates* is a stone of divers colours, insomuch that the colours of other gems are not sufficient for it: sometime it is black with white veins and yellow: sometime it is as it were sprinkled with bloud; & (like a *Protus*) is of so many colours that one would scarce beleve it were one and the same stone. Eagles (as is said) lay it in their nests to preserve their young from poyson. And *Pyrrhus*, K. of *Epirus*, had one of these gems in a ring, in which were the nine Muses to be seen, and Apollo with his harp; not engraven by art (saith^l *Plinie*) *sed sponte nature ita discurrentibus maculis*, but on natures own accord the spots being so disposed. *Plinie* also sheweth the divers kindes of this stone in the 10 chapter of his 37 book, affirming that it is good against poyson, and stinging of scorpions; and is supposed to procure eloquence, and make men wise and fair-spoken. See more in *Scal. Exerc. 117.*

14. *Sardius* is a kinde of *Onyx*, of a blackish or deep yellow colour. ^m *Plinie* saith it is a common stone, and was found first about *Sardis*, but the best are neare *Babylon*. Some call it a * *Corneoll*. It stoppeth bleedings at the nose, sharpens the wit, and makes men cheerfull and merrie, and set in a ring it restraineth anger.

15. *Jasper* is a green stone, pointed with spots like drops of bloud.

16 Theⁿ *Topaz* is a precious stone whereof there be two

* The Indians therefore used to hang it about their necks.

Achates.

How Eagles keep their young from poyson.

Plin. lib. 37. cap. 1.

Sardius.
^m *Ibid. cap. 7.*

* It helpeth to stop fluxes, and is good against pyles in the fundament.

Jasper.

Topaz.
ⁿ *Ibid. cap. 8.*

A stone that will suddenly cool feeding water.

Emerald.

two kindes; one of gold colour casting beams in the sun; the other of a saffron colour, not so good as the other. This stone being put into boyling water doth so presently cool it, that one may forthwith pull it out with his hand, and feel no scalding heat: or being laid to a wound, it stencheth bloud.

17. The *Emerald* is a precious stone of a green colour, something like unto the *Smaradge*.

Opall.

18. The *Opall* is a precious stone of divers colours, wherein appeareth the fiery shining of the *Carbuncle*, the purple colour of the *Amethyst*, and the green shew of the *Emerald*, very strangely mixed together.

Turcois.

A compassionate stone, the reason whereof is shewed in *Corrall*.

19. *Turcois* is dark, of a skie colour, and greenish. It helpeth weak eyes and spirits, refresheth the heart; and, if the wearer of it be not well, it changeth colour and looketh pale and dim, but increaseth to his perfectnesse as the wearer recovereth to his health.

The sympathizing Turcois true doth tell,

By looking pale, the wearer is not well.

Now follow some such as are lesse noble gemmes.

Crystall.

1. *Crystall* is a kinde of Ice made of waters which congeal themselves by a vehement and very long cold, as for the space of 10 or 12 continuall yeares. There is some quantitie thereof found in the Alps, and other cold mountains: and being polished, men make thereof works of divers fashions; as Vessels, Glasses, Mirrours or Looking-glasses, and other common things. His qualitie is said to be binding; and therefore his powder is helpfull in Laxes, and increaseth milk in womens breasts. Also another kinde is sometimes found in the earth; as in some places of Germanie.

Good against Laxes.

Corrall.

2. *Corrall* is a stone growing in the sea like a slimie shrub, which by the aire presently is made hard and turned into a stone. The Greeks call it *καββερνδρον*; which is as much as if you should say, *A stonie shrub*. It is taken

up

up full of mosse, but being unbarked, it appeareth cleare in its proper colour.

The red and branchie *Corrall* cometh something neare in nature to the *Turcois*; for when it is worn by those who are shortly to fall sick, it waxeth pale and wan: the reason whereof may be, in that his tender substance is affected by the bad vapour, which is not so soon perceived in the bodie, because at the first it is not strong enough to afflict it. This stone, they say, is good against the falling sicknesse, fore eyes, and the stone. Also know that there be 3 kindes of *Corrall*; white, black, and red.

Hematites, or the *Bloudstone*, is a stone outwardly of a bloudie colour, inwardly like iron; and of such hardnesse that the file can scarcely bite it. The qualitie of this stone is to stench bloud, either in a wound, or at the nose: also, it will eat proud flesh out of a fore. It is to be found either in Ethiopia or Arabia.

4. *Magnes*, or the *Loadstone*, is coloured like iron, but blewer, and tending to a skie colour: it hath vertue not onely to draw iron to it self, but also to make any iron on which it is rubbed, to draw iron also. It respecteth the North and South pole; and loseth not this secret vertue, unlesse it be rubbed with onions or garlick: which is certainly true, as may be proved by cutting any of the foresaid roots with a knife touched by the Loadstone. Some affirm, that physically used, it purgeth the dropisie, and helpeth the flux.

Also, it is supposed that there are certain magneticall hills, or mountains of Loadstone under the artick pole; and they are the causes why things touched with this stone, tend alwayes that way. But learned * *Scaliger* (as well he might) laugheth at this conceit. Again, others (with better probabilitie) are perswaded that the Loadstone inclineth towards the starres of the pole by a secret

P p

sympathic;

How it comes to passe that there seems to be compassion in a stone

Bloudstone

Loadstone.

* In his exercises against Garden.

sympathie; even as certain flowers and plants turn themselves with the sunne. And for the attractive vertue which it also hath in drawing iron, it is supposed to be also by a kinde of sympathie and likenesse of substance; there being two causes of attraction: one is *Similitudo*; and the other is *Fuga vacui*. Heat draweth in *Fuga vacui*; and in the similitude of substance, every part is supposed to draw its own proper nourishment. Whereupon (saith ° one) sith iron is as it were the aliment or nourishment of the Loadstone, it therefore draweth iron to it. And, that iron is a kinde of nourishment to the said stone, appeareth in that the filed dust of iron covering it doth long preserve it; and in tract of time the dust will be consumed; augmenting thereby the accretion of the stone. Not that it eateth, or is nourished by it as a thing having life: but even as the elements are moved to their places, as being their end and perfection; so it is in the attraction between this stone and iron, and the accretion which is caused by their reall contaction.

This I think may be supposed. But I leave it to the readers further enquire, and abler examination.

Asbestos.

5. *Asbestos* is a stone of an iron colour, which being once fired can hardly be ever quenched. *Plinie* saith that it is to be found in the mountains of *Arcadia*. *Lib. 37. cap. 10.*

Dendritis.

6. *Dendritis* is a white precious stone, which being put under a tree, keepeth the ax that cutteth it, from dulling. *Idem, lib. 37. cap. 11.*

Galactites.
lib. 37. cap. 10.

7. *Galactites* is of an ash-colour; it seemeth to sweat out a kinde of liquour like unto milk. *Plinie* saith it increaseth milk in nurfes, and keeps the mouth of the childe moist if it be hanged about the neck, &c. some also say that it helpeth running of the eyes, and ulcers.

Amphitane.

8. *Amphitane* is a precious stone of gold colour; square, and of the nature of the Loadstone almost, excepting

o. *Magis. Phys.*
where, by experience he contradicth *Scaliger.*

cepting that it is said to draw gold unto it. *Plinie* saith that this stone is also called *Chryfocolla*, and is found in a part of *India* where the ants cast up gold from their hills. *Lib. 37. cap. 10.*

9. *Androdamas* is a stone hard, and heavie; bright like silver, and in form like divers little squares. It putteth away rage of lecherie: and (as the magicians think, saith *Plinie*) it stoppeth the force of furie and anger.

10. *Pansebastos* is a precious stone taking away barrennesse.

11. There is also in *Plinie*, mention made of the stone *Thracius*, which being steeped in water burneth and sprinkles, but it is quenched with oyl.

12. *Amiantus* is a stone like unto alume: this, being put into the fire, is not hurt nor slurried, but rather more bright and cleare. Unto which, one patient in troubles and adversities, may be likened: for his afflictions harm him not, but better him; making him look in the midst of a fierie triall, not like one slurried with repining, but cleare and beautifull in the sight of heaven, by refining.

But I conclude; and with him who writeth thus, cannot but say,

*Oh mickle is the pow'rfull good that lies
In herbs, trees, stones, and their true qualities:
For nought so vile that on the earth doth live,
But to the earth some secret good doth give,
And nought so rich on either rock or shelf,
But, if unknown, lies uselesse to it self.
Therefore who thus doth make their secrets known,
Doth profit others, and not hurt his own.*

Now follow metallis of a more friable and brittle nature. They are more mollified bodies, may be easily brought into crumbes or dust, are called precious earths something clammy, and of a middle nature between stones and the lesse pliable metallis.

P P 2

First

A stone which hath power to draw gold to it.

Androdamas.
Plin. lib.

Pansebastos.

Lapis Thracius.

Amiantus.

One patient in trouble, what he may be likened unto.

These which follow are called metallis of a more brittle nature.

Earth of
Lemnos.

* In Constantinople the Apothecaries and Druggists sell of this earth in cakes, on which are stamped certain Arabian characters. On the sixth of August it is digged forth at Lemnos with many ceremonies.

Vermilion.

First I begin with *Terra * Lemnia*, which is an exceeding red earth of *Lemnos* isle, digged in a red hill. In old time this had *Diana's* seal upon it, printed by her priests, who were onely wont to wash this earth: and now, in *Silesia* and *Hassia*, there is almost as good earth found. It is of force to resist poison, and to heal old purtrified or fettered wounds.

2. *Cinoper* is a soft red stone, found in mines; otherwise called *Vermilion*: of which *Plinie* speaketh in his 33 book at the 7 chapter, saying, that in times past it was not onely of great, but of sacred esteem among the Romanes: for they painted their gods with it; as he tells us of *Jupiters* image, whose face was coloured with *Vermilion*. So *Virgil* also, speaking of the shepherds god *Pan*, saith that he was seen,

Sanguineis Ebulli baccis, Mimioque rubentem,

With bloudie Walwort berries stain'd,

And with Vermilion red.

Neither were their gods alone thus beautified, but their own bodies also, in publick feasts and triumphing solemnities; as we reade again in *Plinie*, that *Camillus*, when he triumphed in Rome, was painted with this Vermilion.

3. *Bole Armenian*, or *Bole Armonick*, is of a pale red colour, as easie to break as chalk; being of a very binding nature, and of great vertue against the plague: and seeing it drieth, it profiteth against all fluxes.

4. *Oker* is a light clayie earth, of a red or yellow colour.

5. That which the Grecians call *Arsenick*, the Latines call *Auripigmentum*: but I had rather that *Arsenick* should be the generall name, and that it be divided into 3 kindes; namely, into white, red, and yellow *Orpment*. The white is that which is the common rats-bane. Red *Arsenick* is called *Sandaracha*; of a bright red colour,

used

Bole Armonick.
Good against the plague.

Oker.

Arsenick.

used of painters, and found in mines of gold and silver. Yellow *Orpment* is the right *Auripigmentum*; it is like unto *Brimstone*. This (if it be our common *Arsenick*) is a very dangerous drug: for it is hot and burning, so as it gnaweth the stomach, & pierceth the bowels, producing a fever with an intolerable and an unquenchable thirst.

6. *Red lead* comes something neare to the nature of *Vermilion* and (as *Plinie* writeth out of *Homer*) was used by the Trojans, and honoured before they knew *Vermilion*. For (as *Theophrastus* in *Plinie* witnesseth) *Callias* of Athens first found out *Vermilion*, thinking indeed to draw gold out of it. Howbeit, *Red lead* is no mineral, but made artificially.

7. *Terra Samia* is a white, stiffe, and tough earth coming from the isle *Samos*. *Plinie* makes two kindes of it: the one more glutinous then the other; the other more cloddie, lesse glutinous, and whiter. He saith there be those who preferre the first as best. They are either of them good against spitting of blood. *Lib. 35. cap. 16.*

8. *Chalk* is a white earth, which was first found in *Creet*, and therefore in Latine it is called *Creta*: But now we finde of it in many other places. *Plinie* makes many kindes of *Chalk*; all which are not white: as in his 34 book at the 17 chapter is apparent; *Fallers earth* being a chief kinde among them: and that, by others, is called *Creta Tasconia*. *Brown Umber* cometh also neare to the nature of the said earth.

Calx is *Lime-Chalk*, which after it is burnt will be fired with water, but quenched with oyl; as authors write. It is called *Calx viva*, because it contains a kinde of hid fire in it.

10 *Ampelite* is a pitchie earth, cleaving and black; being much like to that which we call *Pit* or *Sea-coal*, as some imagine: and (haply) the diversitie of climate cau-

P p 3

feth

Red lead.
* *Plin. lib. 33. cap. 7.*

Earth of
Samos.

Good against
spitting of blood.

Chalk.

Fallers
earth.

Brown
Umber.
Lime-
Chalk.

Black
earth like
our coals.

* Lib. 35. cap. 16.

Bitumen.

seth the difference. There is also found another earth, which * *Plinie* calls *Pignitis*, and some others *Paignitis*, and it is as black as this.

11. *Bitumen* is a fat and tough moisture, like Pitch; and is called *Earthy Pitch*. Or thus: It is a kinde of clay or naturall Lime, clammy like Pitch; and is to be found in many countreys of Asia. They who builded the tower of Babel, used this in stead of Morter, as appeareth in Gen. chapter the 11. And so did others also in old time, making it in like manner burn in lamps in stead of oyl.

This pitchie earth is of two kindes: For it is either Hard, or Liquid.

The Hard is more strongly concreted then the other; being like unto clods of the earth, or coals. Or (as some affirm) it is tough and moist at the first, swimming on the water, but being taken forth it waxeth hard. Of this kinde is 1 *Asphaltus*, 2 *Pissasphaltus*, 3 *Succinum*.

Asphaltus is a black *Bitumen*, hard like stone-pitch, cleare, and smelling scarce so ill as Pitch. It is found throughout Babylon, and especially in the lake *Asphaltites*; neare unto which stood those cities of Sodome and Gomorrah, that were consumed with fire and brimstone: and where also do as yet grow apples, which (according to *Solinus*) are fair and fresh without, but within are full of Sulphur; and being handled they fall all to ashes: In which they are Emblemes of the vanities of this world, alwayes seeming more then they are.

Pissasphaltus is said to be *Mummie*, or a kinde of *Bitumen* somewhat * differing from *Asphaltus*, and is not seldome found in clods rolling from mount *Ceravine* to the Sea; as authours witness. In stead of this, it is supposed that we have counterfeit *Mummie* often out of Syria,

Two kindes of Bitumen.

Hard Bitumen.

Three kindes of hard Bitumen.

Asphaltus.

Worldly vanities like to Sodome apples.

*Pissasphaltus.**Mummie.** As having more pitch in it according to *Plinib* 35. cap. 15.

Syria, Egypt and some other places, which is taken from poore mens bodies that die there: For in stead of Myrrhe, Aloes, Cassia, &c. (which the rich men have in their butialls and embalmings) the poore are dressed and stuffed up with *Bitumen*. This therefore which is but counterfeit, is nothing else but a corrupted humour taken out of old tombes, which there droppeth from embalmed bodies: and most ridiculously (in my opinion) do they erre who say it is made of mans flesh boyled in Pitch. It is hot in the second degree, and good against all bruifings, spitting of bloud, and divers other diseases.

Succinum is a Bituminous suck or juice of the earth, being hard as if it were a kinde of stone. It is of three colours; White, Yellow, and Black. The White and Yellow are called *Amber*; and the Black is *Jet*.

They make beads of *Amber*. And some would have this *Amber* to be rather a gumme growing on a tree, then to be a suck of the earth. The tree, by some, is called *Ibex Romana*. But (as others report out of *Dioscorides*) it falleth in manner of a liquour from Poplar trees into the riuer *Po* in Italie, where it congealeth and becometh hard, in that form as we see it.

Jet hath more plentie of fatnesse in it then *Amber*; and therefore it will burn like a candle, and smelleth like the Pine-tree. It hath an attractive vertue in it to draw chaffe, straws, and such other light stufte unto it, especially if it be rubbed till it be hot. And these are the kindes of Hard *Bitumen*.

The Liquid and soft, is like an oily moisture flowing, and is of divers colours according to the varietie of the place: but the white is said to be most precious. And for the kindes, the chief are these; *Naphtha*, and *Amber of Arabia*.

Naphtha, is a liquid Bitume like unto chalkie clay, or (as it were) the fat of Bitume; whereunto if fire

Poore folk are glad of any thing.

Good against bruises, &c.

*Succinum.**Amber.*
Jet.

Soft Bitumen, and his kindes.

Naphtha.

Water cannot
quench this
liquour.

fire be put, it kindleth in such wise, that if a little water be cast thereon, it burneth more vehemently: And indeed it hath in it such a fiery force, that it will draw fire unto it, although it be farre off. When it is found to flow out of rocks, then it is called *Naphtha Petreolum*; and by some, taken for oyl. In the island Sicilie are fountains, from whence great store of this liquour floweth, which they frequently burn in Lamps.

Amber of
Arabia.

Amber of Arabia, is *Bitume* of an ash colour, and of a fragrant sweet smell, desired and sought after as a most precious merchandise. It is found in *Arabia felix*, neare unto a town which is called *Sichris*. Howbeit *Olau Magna* calleth that *Amber*, which is *Sperma Ceti*: but then it is *Ambergreese*, and rather the spawn then the feed.

Alume.

12. From *Bitume*, I come to *Alume*: which is said to be a salt sweat of the earth, according to *Plinie*; congealing it self with a glutinous earth and water.

Lib. 31. cap. 15.

It is either white or black.

The white is either cleare or thick.

Roch-
Alume.

The cleare is softer and fatter then the other: This is *Roch-Alume*; and if paper be washed with this, it will bear ink very well, although it be bad.

Harder
Alume.
Black Alume.

The thick is more hard, and of a grayer colour. Black *Alume* is found in *Cyprus*: and with this, gold is purified and purged. They that desire more, may reade *Plinie* in his 35 book at the 15 chapter.

Vitriol.

13. *Vitriol* is a suck of the earth concreted, obtaining the perspicuitie of glasse: some call it *Chalcantum*, which word may signifie either *Copperas* or *Vitriol*. This suck is very poysonous.

Salt.

14. *Salt* is called *Sal, à saliendo*; because when it is put into the fire, it skipeth and danceth. It is a friable metall.

metall, begotten of a waterish and earthie moisture, mixt and decocted together: the efficient cause whereof is the heat of the sunne and other starres; who, out of a salt matter, drawing away the thinner and the sweeter parts, leave the earthie still behinde, which being throughly rosted by heat, become salt. For there be two things requisite in a salt savour: The first, are drie and earthie parts; The other, is an aduision of the said parts, as Philosophers witnesse. Salt hath force to binde, to scowre and purge, to disperse, make thin, and the like: which thing Physicians can best declare.

There be 2 kindes; Naturall and Artificiall. The Naturall, is digged Salt. The Artificiall, is made or boiled Salt. Digged Salts are gotten either from the earth, or from the waters; as some distinguish.

Salts digged out of the earth, be principally of foure kindes.

The first is *Salt Ammonaick*. This is found in Africa under sand, and is something like unto alume. It is said to be hot and drie in the fourth degree, and serueth to purge slimie humours. Some affirm that that which Apothecaries sell in black clods, is made of Camels stale; and because store of Camels be in Armenia, it is called *Armeniack*.

The second is *Salt of Indie*, of which you may reade in *Plinie*, lib. 31. cap. 7. that it is digged out of mount *Oromene*; and that the King hath there a greater yearely pension or custome, then out of gold and precious stones.

The third is called *Salt-gem*, which is a kinde of glittering Salt; white, and shining after the manner of Crystal. Sometimes it is also called stonie, marblie Salt; Salt *Dacian*, or *Sarmatick* Salt.

The fourth is called *Salt-nitre*: and this is that which we call *Salt-peter*, found in drie places under ground, and in hollow rocks.

Salt is either Na-
turall, or Artifi-
ciall.

Salt Am-
monaick.

Salt of In-
die.

Salt-gem.

Gunne-powder
and gunnes how
invented, and
when.

* Polydore Virgil
saith he was ma-
king a medicine.
Lib. 2. cap. 7.
de Invent.

Of this is made that fatall dust, called *Pulvis Bombardicus*, or *Gunne-powder*: the invention whereof was after this manner. A Germane Monk or Frier, of the order of *S. Francis*, whose name was *Bertholdus Swart*, being very studious in Alchymie, was one evening (for the finding out of some * experiment) very busie in tempering brimstone, sulphureous powder of dried earth, and certain other ingredients, in a mortar, which he covered with a stone: and growing dark, he took a tinder-box to light him a candle; into which whilest he assayed to strike some fire, a spark by chance flew into the mortar, where catching hold of the brimstone and salt-peter, it fired with a sudden flash, and violently blew up the stone: The cunning Chymist, guessing which of his ingredients it was that produced this effect, never left till he found it out: then taking an iron pipe he crammed it full of the said ingredient, together with some stones; and putting fire to it, he saw that with great furie and noise it discharged it self. Soon after, he communicated this his invention to the *Venetians*, who having been often vanquished by the *Genoaias*, did, by help of these bombards or gunnes, give them a notable discomfiture: which was in the yeare of our Lord 1380, as *Bucholcerus* writeth in his chronologie, saying, *Hoc tempore BOMBARDÆ ad hominum perniciem inventæ sunt & excogitata à Bertholdo Nigro-Chymista, & (ut quidam volunt) Monacho Germano*. Wherein we see that he calls them bombards invented for the ruine of men. For by these (saith he) it comes to passe, that now (in a manner) all the force of the footmen, all the splendour of the horse, and all right warlike power, doth shamefully cease, lie dead, faint, and dull. *Polydore* also saith, that of all other instruments which ever were devised to the destruction of man, the gunnes be most devilish. In which regard (sith he was not well instructed concerning

cerning

Polyd. Virg. lib.
2. cap. 7.

cerning the *Almains* name that invented them) he ad-deth yet thus much more, saying, *For the invention he received this benefit, that his name was never known, lest he might for this abominable device be cursed, and evill spoken of as long as the world remaineth*. And in the continuation of *Carions* chronicle, by *Caspar Peucer*, it is also said, that about the beginning of *Wenceslaus* his reigne *That raging kinde of engine and tormenting torture (which from the sound we call a bombard) was found out by a Monk, the devil being the chiefest enginer or master-workman. For it was their care, that seeing the authoritie of idle superstitions should decline and fade by little and little, (which through these authours had bewitched the mindes of mortalls, and cast them into eternall destruction) this might therefore succeed, by them, the same authours, as another kinde of mischief, which should rage against their bodies, as that other had done against their souls*. To this purpose *Peucer*. And indeed an experiment of his speech we then beheld, when the upholders of that tottering kingdom would have traiterously tried to have * sent at once, even all the peers of this our land piece-meal into the aire. But he that keepeth *Israel* shall neither slumber nor sleep. *The Lord himself was our keeper*, so that their sulphureous fire could neither burn us by day, nor scare us by night: although *Faux* were taken the night before, among the barrells, and wished that then (sith he had done so much, and could do no more) his match with fire had toucht the powder.

Oh never let the mem'rie of that day

Flie from our hearts, or dully slide away.

God thought on us, that we remembering this,

Might think on him whose hand defendeth his.

But whither am I transported now? These foure, although they be the principall kindes of salt digged from the ground, yet there be other also, amongst which,

Q 9 2 thofe

q Lib. 3. pag. 317.

r Bombarda vocatur
d' lombes, id est,
scilicet, qui solent
Bos Greec dicitur.
Buch. in chronol.

* In the powder
treason Anno
Dom. 1607.

Salt of spais. E

those Spanifh mountains would be remembred, where there is a salt cut out, and drawn as stones are out of a quarrie; in which place it afterwards increaseth, and filleth up the gap with more salt again. *Du Bartas* calls this the brine-quar-hill in Arragon.

And as for Salt digged out of waters or watrie places, or not digged from under ground, it is thus caused; namely, by the heat of the sunne percocting those waters which are extreamly salt. For when salt waters are throughly concocted by the sunne, they are so dried, congealed, and thickened, that in their shores, by their banks, and often upon their very surfaces or superficies, they render liberally good store of Salt. Thus in the summer time is the Tarentine lake (of which *Plinie* speaketh) turned into salt: the salt being in the surface of the waters, to the depth of a mans knee. So also in Sicillie, in the lake *Coranicus*. And in some rivers, the water is known to runne underneath in its ordinary course, whilst the uppermost part is turned into salt: as about the Caspian *straits, which are called the rivers of salt; and also neare the *Mardi* and *Armenians*, whose countreys are in Asia.

But leaving these, I come to the second kinde of Salt, which is artificall and made, or boiled salt. For although the matter be naturall, yet the making is by art. From whence it comes to passe, that of one and the same salt water, this man will boil better Salt then that man; and he then another. Yea, some, out of water lesse salt, will boil and make better Salt, then others out of fountains more salt.

Many be the places where they make Salt after this manner, by boiling of salt water: neither is this kinde of ours destitute of such fountains or wells. For at the towns called the *Witches* in Cheshire, there is a brinie water, which by boiling is turned into white Salt.

And

Salt not digged
from under
ground.

*Plin. lib. 31:
cap. 7.*

* They are wales
about the Caspi-
an sea, scarce the
breadth of a
wain.

Boiled
Salt.

And the same water is said to be as good to powder any kinde of flesh, as brine: for within 24 houres it will powder beef sufficiently. A great blessing of God to raise up such springs for our use so farre within the land: as also an evident argument, that the Sea is made salt by the substance of the ground; of which I have spoken my minde already.

And here unto all this, I could adde the necessitie of Salt; which is such, that we cannot well live without it: and therefore it is the first thing that is set on the table, and ought to be the last taken away; according as one translateth out of *Schola Salerni*, saying,

Salt should be last remov'd, and first set down

At table of a Knight, or countrey clown.

This, I confesse (as pertinent) might be added; but it is now high time to put a period to the discourse of this dayes work. Take the rest therefore, all in one word; and then it is thus,

The eve and morn conclude the third of dayes,

And God gives to his work deserved praise.

Salt necessitie.