



THE COMPLETE WORKS
OF

RUDOLPH
GLAUZER

trans; Chris. Packe



PHILOSOPHICAL
FURNACES

SECOND PART

The
Second Part
of
PHILOSOPHICAL FURNACES:

Wherein is Described the Nature of the Second Furnace; by the help whereof, all volatile, subtile, and combustible things may be distilled; whether they be Vegetables, Animals, or Minerals, and that after an unknown and very compendious Way; whereby nothing is lost, but even the most subtile spirits may be caught and preserved, which else without the means of this Furnace is impossible to be done by Retorts or other Distilling Instruments.

Of the Structure of the Second Furnace.

The Distilling Vessel must be made of Iron, or good earth, such as can abide in the fire (whereof in the fifth Part of this Book it shall be taught) and you may make it as big or as little as you please, according as your occasion shall require. That of iron is most fit to be used for such spirits, as are not very sharp or corroding, else they would corrode the vessel: but that of earth may be used for such things, as shew their activity upon the Iron, and do make it to melt, as sulphur, Antimony and the like; and therefore you ought to have two such vessels, viz, one of iron, and one of earth, to the end that for both sorts of materials (corrosive or not corrosive) you may have proper vessels, and

fit furnaces for their distilling, and that they may not be Spoiled by things contrary and hurtful to them. The shape of the vessel is shewed by the foregoing figure, viz, the lower part of it somewhat wider than the upper part, and twice as high as wide; at the top having a hollow space between the two edges or brims, whereunto the edge of the lid may close and enter in an inch deep. The lid must have a ring or handle, by which it may be taken off and put on again with a pair of tongs. The lid must have a deep edge answering to the hollow space aforesaid. The lower part must have three knobs or shoulders thereby to rest upon the wall of the furnace; the form whereof is no other, than that of a common distilling furnace with a sand Copple; as the figure of it doth shew: but if you will not have the furnace, then it needeth no knobs or shoulders, if so be the distilling vessel be flat at the bottom, or else have legs, for to stand upon them: Beneath the edge of the vessel there comes forth a spout or pipe of a span in length, and one or two inches wide, and somewhat narrower before than behind, through which the spirits are conveyed into the Receiver.

See the fourth Figure before the first part, wherein the Letter A, represents the Furnace, with the Iron distilling Vessel fastened into it, whereunto a Receiver is applied.

B. The Distiller, with his left hand taking oft the lid, and with his right hand casting in his prepared matter.

C. The external form of the distilling vessel.

D. The internal form of the vessel.

E. Another distilling vessel, which is not fastened to a furnace, but only standeth upon Coals.

The way or manner to perform the Distillation.

When you intend to distil, then first make a fire in the furnace, that the distilling vessel come to be very hot. But if it be not fastened to the Furnace, then set it upon a grate, and lay some stones about it, and coals between, and so let it grow hot, and lay melted lead in the space between the two edges or brims, to the end, that the lid, when it is put on, may close exactly, so that no spirit can get through. This done, take a little of the matter you intend to distil, and cast it in, and presently put on the lid, and there will be no other passage left but through the pipe, to which there must be applied and luted a very big receiver. As soon as the species cast in come to be warm, they let go their spirit, which doth come forth into the receiver: and because there was but little of the matter cast in, it hath no power to force through the lute, or to break the receiver, but must settle it self. This done, cast in a little more of your matter, cover it and let it go till the spirit be settled: continue this proceeding so long, until you have spirits enough: but take heed, that you cast in no more at once, than the receiver is able to bear, else it will break. And when your vessel is full, the distillation not being ended, then take off the lid, and with an iron ladle take out the Caput Mortuuin; and so began again to cast in, and still but a little at a time, and continue this as long as you please.

Thus in one day you may distil more in a small vessel, than otherways you could do in a great retort; and you need not fear the least

loss of the subtile spirit, nor the breaking of the receiver by the abundance of the spirits: and you may cease or leave off your distilling, and begin it again when you list: also the fire cannot be made too strong, so that it might cause any hurt or damage; but by this way you may make the most subtile spirits, which is impossible to be done by any Retort. But if you distil a subtil spirit by a Retort, as of Tartar, Harts-horn, Sal armoniack, or the like, you cannot do it without prejudice (though there were but half a pound of the matter in it) the subtilest spirits coming forth with force, seek to penetrate through the lute, if that be not good, but if that be good., so that the spirits cannot pass through it, then they break the receiver, because it cannot possibly hold such a quantity of subtile spirits at once. For when they are coming, they come so plentifully, and with such a force, that the receiver cannot contain them, and so of necessity must fly asunder, or must pass through the lutum; All which is not to be feared here, because there is but little cast in at once, which cannot yield such a quantity of spirits, as to force the receiver to break: And when there comes forth no more spirits, and the former is settled, then more of the matter is to be cast in; and this is to be continued so long, until you have spirits enough. Afterward take off the receiver, and put the spirit into such a Glass (as in the fifth part of this book, amongst the Manuals, shall be discovered) wherein it may be kept safely without wasting or evaporating.

In this manner all things, Vegetable, Animal, or Mineral, may be distilled in this Furnace, and much better, than by means of a Retort:

especially such subtile spirits (as by the other way of distilling cannot be saved, but pass through the lutum) are got by this our way; and they are much better than those heavy oils, which commonly are taken for spirits, but are none, being only corrosive waters. For the nature and condition of a spirit is to be volatile, penetrating and subtile, and such are not those spirits of salt, Vitriol, Alloxne and Nitre, which are used in Apothecary shops, they being but heavy oils, which even in a warm place do not evaporate or exhale.

But a true spirit, fit for Medicinal use, must rise or ascend before the phlegm, and not after; for whatsoever is heavier than flegm is no volatile spirit, but a heavy spirit or (rather called) a soWer heavy oil. And it is seen by experience, that the Apothecaryè spirit of vitriol will cure no falling sickness, which virtue is ascribed to that spirit, and indeed justly: for the true spirit of vitriol performeth that cure out of hand. Likewise their spirit of Tartar (as they call it) is no spirit, but only a stinking phlegm or vinegar.

The way to make such true spirits, I will now shew, because much good may be done by them in all manner of Diseases. And this way of distilling serveth only for those which seek after good Medicines: but others which care not whether their medicines be well prepared or no, need not take so much pains as to build such a furnace, and to make their spirits themselves. For at any time they can buy for a small matter, a good quantity of dead and fruitless spirits at the common sellers and Apothecaries.

Hence it is no marvel, that now adays so little good is done by

Chymical medicaments, which of right should far out-strip all the Galenical in goodness and virtue. But alas I it is come to that pass now, that a true Chymist, and honest Son of HERMES, is forced almost to blush, when he heareth men talk of Chymical medicines, because they do no such miracles, as are ascribed unto them. Which infamy is occasioned by none more, than by careless Physicans, which though they make use of Chymical medicines, (because they would fain be esteemed to know more than others) yet they do take greater care for their kitchen, than for the welfare of their Patients; and so buying ill-prepared Medicines of unskillful stillers, and, withal using them undiscreetly (whereby they many times do more hurt than good to the sick) they lay such foul aspertions upon the noble Art of Chymistry.

But an industrious and accurate Physican is not ashamed to make his Medicines himself, if it be possible, or at least to have them made by good and well exercised Artists: whereupon he may better rely, and get more credit, than one that knoweth not whereof, nor how his Medicine which be doth administer to his patients is prepared. But such wicked and ignorant men will one day fall short of their answer before the Judgement of the righteous Samaritan.

How to make the Acid Oil and the volatile spirit of Vitriol.

Hitherto I have taught, how to distil in general, and to get the subtile spirits. There remaineth now to describe what Manuals or Preparations are fitting for every matter in particular; and first;

87.

Of Vitriol.

To distil Vitriol, there needs no other preparation, but only that it be well viewed, and if there be any filth amongst it, that the same be carefully pickt out, lest being put together with the Vitriol into the distilling vessel, the spirit be corrupted thereby. But he that will go yet more exactly to work, may dissolve it in fair water, then filtrate it, and then evaporate the water from it till a skin appear at the top, and then set it in a cold place, and let it shoot again into Vitriol; and then you are sure that no impurity Is left in it.

Now your vessel being made red hot, with an Iron ladle cast in one or two ounces of your Vitriol at once, put on the lid, and presently the spirits together with the phlegm will come over into the receiver, like unto a white cloud or mist; which being vanished, and the spirits partly settled, carry in more Vitriol, and continue this so long, until your vessel be full: Then uncover your vessel, and with a pair of tongs or an iron ladle take out the Caput Mortuum, and cast more in; and continue this procedure as long as you please, still emptying the vessel when it is filled, and then casting in more matter, and so proceeding until you conceive that you have got spirits enough. Then let the fire go out, and let the furnace cool; take off the receiver, and pour that which is come over into a retort, and set the retort In sand, and by a gentle fire distil the volatile spirit from the heavy oil; having first joined to the retort the receiver, which is to receive the volatile spirit, with a good lutum, such as is able to bold such subtile

spirits, the making whereof shall be taught in the fifth part of this Book, amongst the Manuals.

All the volatile spirit being come over, which you may know by the falling of bigger drops, then take off the receiver, and close it very well with wax, that the spirit may not make an escape; then apply another (without luting it) and so receive the phlegm by it self, and there will remain in the retort a black and heavy corrosive oil, which if you please, you may rectifie, forcing it over by a strong fire, and then it will be clear; if not, let all cool, then take out your Retort together with the black oil, and pour upon it the volatile spirit, which in the rectifying went over first, put the retort into the sand, and apply a receiver, and give it a very gentle fire, and the volatile spirit will come over alone, leaving its phlegm behind with the oil, which by reason of its dryness doth easily keep it. Thus the spirit being freed from all phlegm, is become as strong as a meer fire, and yet not corrosive. And if this spirit be not rectified from its own oil, it will not remain good, but there doth precipitate a red powder after it bath stood for some time, and the spirit loseth all its virtue, insomuch that it is not to be discerned from ordinary water, Which does not happen when it is rectified. The reason of this precipitation is no other than the weakness of the spirit, which is accompanied with too much water, and therefore not strong enough for to keep its sulphur, but must let it fall; but after it is rectified by its own oil, it can keep its sulphur well enough, because then it is freed from its superfluous moisture. However the red powder is not to be thrown away, but ought

to be kept carefully; because it is of no less virtue than the spirit it self. And it is nothing else but a Volatile sulphur of Vitriol. It hath wonderful virtues, some of which shall be related.

The Use and Dose of the Narcotick Sulphur of Vitriol.

Of this sulphur 1, 2, 3, 4, or more grains (according to the condition of the patient) given at once mitigates all pains, causeth quiet sleep; not after the manner of Opium, Heribane, and other like medicines, which by stupifying and benumbing cause sleep, but It performeth its operation very gently and safely, without any danger at all, and great Diseases may be cured by the help thereof. PARACELSUS held it in high esteem, as you may see, where he doth write of SULPHUR EMBRYONATUM.

Of the Use and Virtue of the volatile spirit of Vitriol.

This sulphurous Volatile spirit of Vitriol, is of, a very subtile and penetrating quality, and of a wonderful operation; for some drops thereof being taken and sweated upon, doth penetrate the whole body, openeth all obstructions, consumeth those things that are amiss in the body, even as fire. It is an excellent medicine in the falling sickness, in that kind of madness or rage which is called MANIA, in the Convulsion of the Mother, called SUFFOCATIO MATRICIS, in the Scurvy; in that other kind of madness which is called Melancholia Hypochondriaca and other Diseases proceeding from Obstructions and Corruption of the

Blood: It Is also good in the Plague, and all other Fevers: mingled with spirit of wine, and daily used, It doth wonders In all external accidents: Also in the Apoplexy, shrinking and other diseases of the Nerves, the distressed limb rubbed therewith, it doth penetrate to the very marrow in the bones; it doth warm and refresh the cold sinews, grown stiff: In the Cholick, besides the internal use, a little thereof in a clyster applyed, is a present help: Externally used in the Gout, by anointing the places therewith, asswageth the Pains, and taketh away all tumours and inflaninations: It doth heal scabs, tetteres and ring-worms, above all. other medicines; it cureth new wounds and old sores, as Fistulaes, Cancers, Wolves, and what name soever else they may have:

It extinguisheth all Inflammations, scaldings, the Gangrene, dlsspatcheth and consumeth the knobs and excrescencjes of the skin. In a word, this spirit, which the wise men of old called SULPHUR PHILOSOPHOPUM, doth act universally in all diseases, and its virtue cannot sufficiently be praised and expressed: And it is much to be admired, that so excellent a Medicine is no where to be found.

If it be mingled with Spring water, it doth make It pleasantly sowerish, and in taste and virtue like unto the natural sowre water of wells.

Also by this spirit, many diseases may be cured at home; so that you need not go to baths afar off, for to be rid of them.

Here I could set down a way, how such a spirit may be got in great abundance for the use of bathing, without distillation, whereby miraculous things may be done, but by reason of the ungratefulness of men, it shall be reserved for another time.

Of the virtue and use of the corrosive oil of Vitriol.

This oil is not much used in Physick, although it be found almost in every Apothecaries shop, which they use for to give a sowerish taste to their syrups and conserves. Mingled with spring water and given in hot diseases, It will extinguish the unnatural thirst, and cool the internal parts of the body. Externally it cleanseth all unclean sores, applyed with a feather; it separateth the bad from the good, and layeth a good foundation for the cure.

Also if It be rectified first, some metals may be dissolved with it and reduced into their Vitriols, especially Mars and Venus; but this is to be done by adding common water thereunto, else it will hardly lay hold on them. The way of doing It Is thus.

How to make the Vitriol of Mars and Venus.

Take of your heavy oil, just as it came over, viz, together with its pheigni (but that the Volatile spirit be drawn off from it first) as much as you please, put it into a glass body together with plates of copper or iron, set it in warm sand, and let it boil until that oil will dissolve no more of the metal, then pour off the liquor, filter it through brown paper, and put it into a low gourd glass, and set it sand, and let the phlegm evaporate until there appear a skin at the top, then let the fire go out, and the glass grow cool; then set it in a cold place, and within some days there, will shoot fair Crystals; if

of Iron, greenish; if of Copper, then something blueish; take them out and dry them upon filtering paper, the remaining liquor, which did not shoot into Vitriol, evaporate again In sand, and then let it shoot as before; continue this proceeding, until all the solution (or filtered liquor) be turned to Vitriol. This Vitriol is better and purer than the common; for it yeldeth a better Volatile spirit, and for that reason I did set down the way how to make it. There also may be made a good Vitriol of boththese metals by the means of ordinary yellow brimstone; but because the making of it is more tedious, than of this here set down, I think it needless to describe its preparation in this place.

The way to make a fair blue Vitriol out of LUNA (that is, silver.)

Dissolve the shavings or filings of silver with rectified oil of Vitriol, adding water thereunto, but not so much as to Iron or Copper:
 Or else, which is better, dissolve calcined silver, which hath been precipitated out of Aqua fortis either with Copper or salt water; the solution being ended pour it off and filtre it, and drop into It of spirit of urine or Sal armoniack, as long as It doth hiss, and almost all the silver will precipitate again out of the oil, and so there will fall a white powder to the bottom; This precipitated silver together with the liquor pour into a phial-glass, set it to boil in sand for twenty four hours, and the liquor will dissolve again almost all the precipitated silver-calm and become blue thereby. Then pour off the solution (or liquor) and filter it through brown paper, and abatract

the moisture till a skin arise at the top; then in a cold place let it shoot to Vitriol. With the remaining liquor proceed further, as above In the preparation of the Vitriol of Iron and Copper bath been taught.

By this way you will get an excellent Vitriol out of silver, which from 4, 5, 6, to 10 grains used only of it self, will be a good purge, especially in diseases of the brain.

If you have a good quantity of it, that you may distill a spirit thereof, you will get not only an acid (or sower) but also a volatile spirit, which in the infirmities of the brain is most excellent; that which in the distilling remains behind, may be reduced again into a body, so that you lose nothing of the silver, save only that which is turned into spirit.

Moreover, the acid (or sower) oil of common Vitriol, doth precipitate all metals and stones of beasts or fishes; also pearls and corals, they being first dissolved in spirit of salt or of Nitre, and inaketh fair light powders of them (which by the Apothecaries are called Magisteries) much fairer than by precipitation with salt of Tartar Is done, especially of corals and pearls, such a fair glistening and delicate powder is made; and likewise also of mother of pearl, and other shells of snailes, that it giveth as fair a gloss to them, as the fairest oriental pearls have; which way bath not been made common hitherto, but being known only to few, bath been kept very secret by them, as a singular Art. Such Magisteries commonly were precipitated out of vinegar only by salt of Tartar, which for lightness, whiteness and fair gloss

are not comparable at all to ours: But if instead of the oil of Vitriol you take oil of sulphur, then these powders will be fairer than when they are done by the oil of Vitriol, in so much, that they may be used for painting for a black skin.

Having made mention of Magisteries, I cannot forbear to discover the great abuse and error, which is committed in the preparing of them.

PARACELSUS in his Archidoxes teacheth to make Magisteries, which he calleth extracted Magisteries: but some of his disciples teach to make precipitated Magisteries which are different from the former. PARACELSUS is clean of another opinion in the preparing of his Magistcries, than others in the making of theirs: doubtless PARACELSUS his Magisteries were good cordial living medicines, whereas the other are but dead carcases, and although they be never so fair, white and glistening, yet in effect they prove but a gross earthly substance, destitute of virtue.

I do not deny, but that good medicines may be extracted out of pearls and corals, for I my self also do describe the preparations of some of them; but not at all after such a way as theirs is. For what good or exalting can be expected by such a preparation, where a stony matter is dissolved in corrosive waters, and then precipitated into stone again? Can its virtue be increased thereby? surely no, but rather it is diminished, and made much the worse thereby. For it is well known, that the corrosive spirits (no less than fire) do burn some certain things; for not all things are made better by fire or corrosives, but most of them are absolutely spoiled by them. Some perchance will say, that

such preparations of Magisteries are only for to be reduced into a finer powder, that so much the sooner they may perform their operation. To which I answer, that pearls, corals, and other things of the like nature, if they be once dissolved by corrosive waters, and then precipitated andedulcorated, never or hardly can be dissolved again by acid spirits. Whence it is evident that by such preparations they are not opened or made better, but rather closed or made worse. And we see also by daily experience that those Magisteries do not those effects, which are ascribed unto them. By which it appeareth clearly, that to the Archeus of the stomach they are much less grateful than the crude unprepared corals and pearls; whose tender essence being not burnt up by corrosives, do oftentimes produce good effects. For our Ancestors have ascribed unto corals and pearls, that they purifie the impure and corrupt blood in the whole body, that they expel Melancholly and sadness, comforting the heart of man, and making it merry, which also they effectually perform: whereas the Magisteries do not. And this is the reason, why unprepared corals, pearls and stones of fishes have more effect, than the burnt Magisteries. For it is manifest and well known, that the abovesaid diseases for the most part do proceed from obstructions of the spleen, which obstructions are nothing else, but a tartarous juice or a sower flegme which hath possessed and filled up the entrals, and coagulated It self within them. By which obstruction not only head-ache, giddiness, panting of the heart, trembling of the limbs, a spontaneous lassitude, vomits, unnatural hunger; also, loathing of victuals; then hot flushing fits, and many more strange symptoms are caused; but also

a most hurtful rottenness and corruption is Introduced into the whole mass of blood, from whence the leprose, scurvey, and other loathsome or abominable scabs do spring.

Of which evil the only cause (as hath been said) is a crude acid Tartar, from which so many great diseases do rise.

This to be so may easily be proved; for it is notorious, that melancholick folks, hypocondriaques, and others do often cast up a great quantity of acid humour, which is so sharp that no vinegar is comparable to it, and doth set their teeth on such an edge, as if they had eaten unripe fruit.

What remedy now? take away the cause and the disease is taken away. If you could take away the peccant matter by purgings, it would be well, but it remaineth obstinate and will not yield to them. By vomit it may be diminished in some measure. But because that not every one can abide vomiting, it is therefore no wisdom to turn evil into worse. Shall, then this tartar be killed and destroyed by contraries, which indeed in some sort may be effected; as when you use vegetables or animals, whose virtue consisteth in a volatile salt: such are all species or sorts of cresses, Mustard-seed, horse-radish, scurvy grass, also the spirit of Tartar, or Harts-horn, and of urine and the like, which by reason of their penetrating faculty pass through all the body, finding out the Tartar thereof, destroying the same, as being contrary unto it; and in this combat two contrary natures is kindled, a great burning heat, whereby the whole body is throughly heated and brought to sweating; and whensoever by these contraries a sweating is caused, there is

always mortified some of this hurtful Tartar. But because that of that acid humor but a little at a time can be mortified and edulcorated by contrary volatile spirits, and that therefore it would be required to use them often, for to kill and expell all the Tartar; and because also (as hath been mentioned before) a strong sweat always is caused by every such operation, whereby the natural spirits are much weakened, so that the patient would not be able to hold out long, thereby, but by taking away of one evil, another and greater one would be occasioned.

And therefore such things must be offered to that hungry acid humour, by which the corrosive nature thereof, may be mortified and grow sweet, with that proviso nevertheless, that those things be such as are not contrary or hurtful to the nature of man, but grateful and friendly, as are corals, pearls and crabs eyes, & etc.

For amongst all stones none are more easily to be dissolved than Pearls, Corals, Crabs eyes, and other stones of fishes.

But the truth of this, viz, that every corrosive is killed by feeding upon pearls and corals, and thereby can be made sweet; and besides, how a soure coagulated Tartar, by the help of corals or pearls may be reduced to a sweet liquor (a pleasant and acceptable medicine to the nature of man) which never can be coagulated again by any means, shall be afterwards proved and taught when I shall come to treat of Tartar.

Now in tartareous coagulations and obstructions of the internals proceeding from the predominancy of an acid humor there is no better remedy, than to give the patient every morning fasting from 1/24 ounce to 1/8 ounce (more or less, according to the condition of the patient)

of red corals and pearls made Into powder, and let him fast two or three hours upon it, and so continue daily until you see amendment: By this means the hurtful acid humor is mortified, and dulclified by the corals and pearls, so that afterwards it may be overcome by nature, whereby the obstructions are removed, and the body freed from the disease.

This my opinion of the abuse of Magisteries and the good use of corals I could not conceal, although I do know for certain, that it will take but with few, in regard that it will seem very strange to most. However, happily there may be some yet, that will not be unwilling to search Into the truth, and to consider further of it, and at last will find this not to be so strange, as it seemed to them at the first; but he that cannot believe or comprehend it, may keep to his Magisteries.

And if it seem so strange unto any, that corals or pearls made into powder shall be concocted in the stomach, and so put forth their virtue, what will you say then, if I do prove, that even whole pearls, crabs-eyes, and corals being swallowed, are totally consumed by the Melancholy humor, so that nothing cometh forth again among the excrements? and which is more, even the like may be said of hard and Compact metals, as Iron, and Speaucer or Zink: But this must be understood only of those that are of a Melancholick constitution but not so in others, viz. those that are of a sanguine, and those that are of a phlegmatIck constitution, to whom such like things are seldom prescribed. For I have seen many times, that against obstructions, to strong bodies there hath been given at once from 1/24 to 1/8 ounce of the shavings or filings of Iron, and they found much good by it, yea more help then by other costly medicines

of the Apothecaries, whereof they had used many before, but to no purpose, by reason whereof their excrements came from them black, just as it useth to fall out with those that make use of medicinal sowre waters, which run through iron mines, and thereby borrow a spiritual mineral virtue.

Now if those filings of iron had not been consumed in the stomach, how come it that the excrements are turned black? so then it is sufficiently proved, that even a hard unprepared metal can be consumed in the stomach: and if so, why not as well soft pearls and corals?

Which is also to be seen by children, that are troubled with worms, if there be given unto them 4, 6, 8. to 16 grains of the finest filings of steel or iron, that all the worms in the body are killed thereby, their stomach and guts scowred very clean, and their stools also turned black. But this must be observed by children, when the worms are killed, and yet remain in the guts (because that the iron in a small quantity is not strong enough for to expel them, but only make the body soluble) that a purge must be used after, for to carry them out; for else if they do remain there, others will grow out of their substance. But to those that are more in years, you may give the Dose so much the stronger, as from 1/24 to 1/8 ounce that the worms also may be carried out, they being better able to endure it than little children, and although sometimes a vomit doth come, yet it doth no hurt, but they will be but so much the healthier afterward.

And thus Iron may be used, not only against worms, but also against all stomach-agues, head-ache, and obstructions of the whole body, without

any danger and very successfully, as a grateful or very acceptable medicine to Nature; for after a powerful magnetical way it doth attract all the ill humors in the body; and carrieth them forth along with it. Of whose wonderful virtue and nature, there is spoken more at large in my Treatise of the Sympathy and Antipathy of things. Which some Physicans perceiving and supposing by Art to make it better, they spoiled it, and made It void of all virtue: for they taking a piece of steel, made it red-hot, and held it against a piece of common Sulphur, whereby the steel grew subtile, so they did let It drop into a vessel filled with water; then they took it out, and dryed it, and made it into powder, and used it against obstructions, but to no effect almost; for the Iron was so altered by the sulphur, and reduced to an insoluble substance (which ought not to have been so) that it could perform no considerable operation: But if they had made the steel more soluble (whereas they made it more insoluble) than it was of it self before, then they had done a good work: for he that knoweth sulphur, doth know well enough, that by no AQUA FORTIS or AQUA REGIS it can be dissolved; and how could it then be consumed by an animal humor?

Hitherto it hath been proved sufficiently, that in some men, especially in those that are of a Melancholick constitution there Is an acid humor, which can sufficiently dissolve all easily soluble metals and stones: and that therefore it is needless to torture, and dissolve pearls, corals and the like with corrosive waters before they be administered to patients: but that the Archeus of the stomach is strong enough by the help of the said humors to consume those easily soluble things, and

101.

to accept of that which serveth his turn, and to reject the rest.

But it is not my intent here, that this should be understood of all metals and stones, for I know well, that other metals and stones (Borne excepted) before they are duly prepared, are not fit for Physick, but must be fitted first, before they be administred or given unto patients.

For this relation I made only for to she,, how sometimes good things (though with intent to make them better) are made worse, and spoiled by those that do not make an exact search into nature and her power.

I hope this my admonition will not be taken ill, because my aim was not vain-glory, but only the good of my neighbour.

Now let us return again to Vitriol.

Of the sweet oil of Vitriol.

The Ancients make mention of a sweet and green oil of Vitriol, which doth cure the falling sickness, killeth worms, and hath other good qualities and virtues besides: and that the Oil is to be distilled PER DESCENSION. To attain unto this oil the latter Physicans took great pains, but all in vain: because they did not understand at all the Ancients about the preparing of this oil, but thought to get It by the force of fire, and so using violent distillations, they got no sweet oil, but such as was very sowre and corrosive, which in taste, efficacy and virtue, was not comparable at all to the former.

However they ascribed unto it (though falsely) the same virtues,

which the ancients (according to truth) did unto theirs. But daily experience sheweth, that the oil of vitriol as it is found ordinarily, cureth no falling sickness, nor killeth worms, whereas this Philosophical doth it very quickly. Whence it appeareth, that the other is nothing like unto the true medicinal oil of vitriol, neither is it to be compared to it.

I must confess indeed, that PER DESCENSION out of common vitriol, by the force of the fire, there may be got a greenish oil, which yet is not better than the other, because it proveth as sharp in taste, and of as corroding a quality, as if it had been distilled through a Retort.

Those that found out this oil, as PARACELSUS, BASILIUS, and some few others, did always highly esteem it, and counted it one of the four main pillars of Physick. And PARACELSTJS saith expresly in his writings, that Its viridity or greenness must not be taken away or marred (which indeed a very little heat can do) by the fire, for (saith he) if it be deprived of its greenness, it is deprived also of its efficacy and pleasant essence. Whence it may be perceived sufficiently, that this sweet green oil is not to be made by the force of the fire as hitherto by many hath been attempted, but in vain.

And it is very probable, that the ancients, which did so highly praise the oil of vitriol, happily knew nothing of this way of distilling, which is used by us now a days: for they only simply followed Nature, and had not so many subtle and curious inventions and ways of distilling.

But however it is certain, that such a sweet and green oil cannot

be made of vitriol by the force of the fire, but rather must be done by purification, after a singular way; for the Ancients many times understood purification for distillation: as it is evident, when they say, distill through a filtre, or through filtering paper: which by us is not accounted for distillation, but by them it was.

However, this is true and very sure, that a great Treasure of health (or for the health of man) lyeth hidden In Vitriol: yet not in the common, as it is sold every where, and which hath endured the heat of the fire already; but in the Ore as It is found in the earth, or its mine. For as soon as it cometh to the day light, it may be deprived by the heat of the Sun of its subtile and penetrating spirit, and so made void of virtue; which spirit, if by Art it be got from thence, smelleth sweeter then musk and amber, which is much to be admired, that in such a despicable mineral and gross substance (as it is deemed to be by the ignorant) such a royal medicine is to be found.

Now this preparation doth not belong to this place, because we treat here only of spirits, which by the force of fire are driven over. Likewise also, there doth not belong hither the preparation of the green oil, because it is made without the help of fire. But in regard, that mention hath been made of It here, I will (though I kept it always very secret) publish it for the benefit of poor patients, hoping that it will do much good to many a sick man.

For if it be well prepared, It doth not only cure perfectly every Epilepsie or Convulsion in young and old; and likewise readily and without fail killeth all worms within and without the body, as the Ancients

with truth ascribed unto it; but also many Chronical diseases and such as are held incureable, may be happily overcome and expelled thereby, as the plague, pleuresie, all sorts of fevers and agues, what ever they be called, head-ache, collick, rising of the mother; also all obstructions in the body, especially of the spleen and liver, from whence MELANCHOLIA HYPOCHONDRIACA, the scurvy, and many other intolerable diseases do arise: Also the blood in the whole body is by the means thereof amended and renewed, so that the Pox, Leprosie, and other diseases proceeding from the infection of the blood are easily cured thereby: Also it healeth safely and admirably all open sores and stinking ulcers turned to fistula's in the whole body, and from what cause so ever they did proceed, if they be anointed therewith, and the same also be inwardly used besides.

Such and other diseases more (which it is needless here to relate) may be cured successfully with this sweet oil; especially, if without the loss of its sweetness it be brought to a red colour; for then it will do more then a man dare write of it, and it may stand very well for a PANACIA In all diseases.

The preparation of the sweet oil of Vitriol.

Commonly in all fat soils or clayle grounds, especially in the white, there is found a kind of stones, round or oval in form, and in bigness like unto a pigeons or hens-eggs, and smaller also, viz. as the joint of ones finger, on the outside black, and therefore not esteemed when

it is found, but cast away as a contemptible stone. Which if it be cleansed from the earth, and beaten to pieces, looks within of a fair yellow and in streaks, like a gold Marcasite, or a rich gold Ore, but there is no other taste to be perceived in it, then in another ordinary stone; and although it be made into powder, and boiled a long time in water, yet it doth not alter at all, nor is there In the water, any other taste or colour, than that which it had first (when it was poured upon the stone) to be perceived. Now this stone is nothing else, but the best and purest Minera (or Ore) of Vitriol, or a seed of Metals; for Nature hath framed It round, like unto a vegetable seed, and sowed it into the earth, out of which there may be made an excellent medicine, as followeth.

Take this Ore or Minera beaten into pieces, and for some space of time, lay or expose it to the cool air, and within twenty or thirty days it will magnetically attract a certain saltish moisture out of the air, and grow heavy by it, and at last it falleth asunder to a black powder, which must remain further lying there still, until it grow whitish, and that it do taste sweet upon the tongue like vitriol. Afterward put it in a glass-vessel, and pour on so much fair rain water, as that it cover It one or two inches; stir it about several times a day, and after a few days the water will be coloured green, which you must pour off, and pour on more fair water, and proceed as before, stirring it often until that also come to be green: this must be repeated so often, until no water more will be coloured by standing upon it. Then let all the green waters which you poured off, run through filtering paper,

for to purifie them; and then in a glass-body cut off short let them evaporate till a skin appear at the top: then set it in a cold place, and there will shoot little green stones, which are nothing else but a pure vitriol: the remaining green water evaporate again, and let it shoot as before: and this evaporating and Crystallising must be continued until no vitriol more will shoot, but In warm and cold places there remain still a deep green pleasant sweet liquor or juice: which is the true sweet and green oil of Vitriol, and bath all the virtues above related,

But now this green oil further without fire may at last (after the preparing of many fair colours between) be reduced to a blood red, sweet and pleasant oil, which goeth far beyond the green both in pleasantness and virtue, and is in comparjsjon to it like a ripe grape to an unripe: Hereof happily shall be spoken at another time, because occasion and time will not permit me now to proceed further in it. And therefore the Philo-Chymical Reader is desired for the present to be contented with the green oil, to prepare it carefully, and to use it with discretion; and doubtless he will get more credit by it, and do more wonderful things then hitherto bath been done by the heavy corrosive oil.

The use and Dose of the sweet oil of Vitriol.

Of this green oil, there may be taken from 1. 2. 4. 8. 10. or 12. drops at once, according to the condition of the patient and the disease, in fit Vehicles, in Wine or Beer, in the morning fasting, as other

medicines are usually taken: Also the Dose may be increased or lessened, and as often reiterated as the disease shall require.

This Oil expelleth all ill humors, not only by etoole and vomits, but also by urine and sweating, according as it doth meet with superfluities; and this very safely, and without any danger at all; whereby many diseases radically or perfectly may be cured.

Let no man wonder that I ascribe such great virtues unto this oil, it coming from such a despicable stone, and its preparation requiring no great Art or pains, as those intricate deceitful processes do, that are every where extant in books quite filled up with them. And it is no marvel, that men are in love with such false and costly processes; for the most of them do not believe, that any good is to be found in things that are not in esteem; but only make great account of dear things, far fetcht, and requiring much time and pains for to be prepared.

Such men do not believe the word of God, testifying, THAT GOD IS NO RESPECTOR OF PERSONS, but that all men that fear and love him, are accepted of him. If this be true (which no good Christian will doubt) then we must believe also, that God created Physick or the matter of Physick as well for the poor as for the rich. Now if it be also for the poor, then certainly such will be the condition thereof, that it may be obtained by them, and easily prepared for use. So we see that Almighty God causeth not only in great mens grounds to come forth good Vegetables, Animals and Minerals, for the curing of the infirmities of mankind, but that the same also are found every where else. Whereby we perceive, that it Is also the will of God, that they shall be known

by all men, and that he alone, as the Maker of all good, may be praised and magnified by all men for the same.

I doubt not but there will be found self-conceited scoffers, that will despise this so little regarded subject, as if no good thing could be made of it, because they could find nothing in it themselves. But be it known to them, that neither to me nor them all things have been discovered, but that yet many wonderful works of Nature are hidden to us: and besides that I am not the first that writ of Vitriol and its medicine. For the Ancients, our dear Ancestors, had always Vitriol in very great esteem, as the following Verse doth prove.

Visitabis Interiora Terra, Rectificando
Invenies Occultum Lapidem, Veram Medicinam.

Thereby they would give us to understand, that a true medicine is to be found in it. And the same also was known to the latter Philosophers: for BASILIUS and PARACELsus have always highly commended it, as in their writings is to be found.

It is to be admired, that this Ore or Metallical seed, which may justly be called the gold of Physicans (in regard that so good a medicine can be made of it) is not changed or altered in the earth, like other things that grow in it, but keepeth always the same form and shape, until it cometh to the air, which is its earth or ground, wherein it putrefieth and groweth. For first it swelleth and groweth like as a vegetable seed doth in the earth: and so taketh its increase and grows out of the air, just as a seed of an herb in the earth; and the air is not only its Matrix, wherein it groweth and doth increase like a

vegetable, but it is also its Sun which maketh It ripe. For within four reeks at the furthest it putrefieth and groweth black: and about a fortnight after it groweth white, and then green; and thus far it hath been described here: But if you proceed further Philosopher-like therewith, there will come forth to light at the last the fairest red, and most pleasant Medicine, for which God be praised for ever and ever Amen.

Of the Sulphureous volatile and Acid spirit of common Salt, and of Allome.

The same way, which above hath been taught for the making of the volatile spirit of vitriol, must be likewise used in the making of the volatile spirits of common salt and allome.

The manner of preparing.

Allome is to be cast in as it is of it self, without mixing of it, but salt must be mixed with bole, or some other earth, to keep It from melting: with the spirit volatile, there goeth also along an acid spirit, whose virtue is described in the first part. The Oil of Allome hath almost the like operation with the oil of vitriol. Also the spirit volitile of both these, is of the same nature and condition with that which is made of vitriol: but common salt, and allome, do not yield so much as vitriol; unless both, viz. salt and allome be mixed together, and so a spirit distilled of them.

110.

Of the sulphureous volatile spirit of Minerals and Metals, and of their preparation.

Such a penetrative sulphureous spirit may be made also of Minerals and Metals, which in virtue goeth beyond the spirit of vitriol, that of common salt, and that of allome, viz, after the following manner.

The preparation of the volatile spirits of Metals.

Dissolve either Iron or Copper, or Lead or Tin with the acid spirit of vitriol, or of common salt: abstract or draw off the phlegm; then drive the acid spirit again from the Metal, and it will carry along a volatile spirit, which by rectifying must be separated from the corrosive spirit. And such Metallical spirits are more effectual than those that are made of the salts.

The preparation of the volatile spirit of Minerals.

Take of Antimony made into fine powder, or of golden Marcasite, or of some other sulphureous Mineral, which you please, two parts, mix therewith one part of good purified Salt nitre, and cast in of that mixture a small quantity, and then another, and so forth after the manner above described; and there will come over a spirit which is not inferiour to the former in efficacy and virtue; but it must also be well rectified.

111.

Another way.

Cement what laminated or granulated Metal you please, (except gold) with half as much in weight of common sulphur, closed up in a strong melting pot or crucible, such as doth not let the sulphur go through, for the space of half an hour, until that the sulphur hath penetrated and broken the plates of Metal: Then beat them into powder, mix them with the like quantity in weight of common salt, and so distil it after the way above mentioned, and you will get a volatile spirit of great virtue: and every such spirit is to be used for such special part or member of the Body, as the Metal is proper for, out of which the spirit is made. So silver for the brain; Tin for the lungs, Lead for the spleen, and so forth.

The spirit of Zink.

Of Zink there is distilled both a volatile and also an acid spirit, good for the heart; whether it be made by the help of the spirit of vitriol, or of salt, or of allome: or else by the means of Sulphur; for Zink is of the nature of gold.

The volatile spirit of the dross of Regulus Martis.

The black acoria of the REGULUS MARTIS, being first faln asunder in. the air, yields likewise a very strong sulphureous volatile spirit,

not so much unlike in virtue unto the former.

The like Sulphureous volatile spirits may be made also of other minerals, which for brevities sake we omit, as also in regard, that they are almost the same in virtue.

How to make a white acid, and a red volatile spirit out of Salt Nitre.

Take two parts of Allome, and one part of salt nitre, make them both into powder, mix them well together, and cast into the still a little and a little thereof, as above In the making of other spirits hath been taught, and there cometh over an acid spirit together with the volatile spirit; and so many pounds as there is of the materials, which are to be cast in, so many pounds of water must be put into the receiver, to the end that the volatile spirits may so much the better be caught and saved. And when the distillation is performed, the two spirits may be separated by the means of a gentle rectification made in BALNEO; and you must take good heed, that you get the volatile spirit pure by changing the receiver in good time, so that no flegme be mixed with the red spirit, whereby it will be weakened and turn white. The mark whereby you may perceive, whether the spirit or the flegme doth go forth is this: when the volatile spirit goeth, then the receiver looketh of a deep red: and afterward when the flegme doth come, the receiver looks white again: and lastly, when the heavy acid spirit goeth, then the receiver to be red again, but not so as it was, when the first volatile spirit came over.

113.

This spirit may also be made and distilled after another way, viz. mixing the salt nitre with twice as much bole or brick dust, and so framed into little balls to prevent melting; but no way is so good as the first; especially when you will have the red volatile spirit.

Of the use of the red volatile spirit.

This volatile spirit, which (being quite freed from flegm) remaineth always red, and doth look like blood, in all occasions may be accounted like in virtue unto the former sulphureous spirits, especially in extinguishing of inflammations and Gangreens it is a great treasure, clothes being dipt in it, and laid upon the grieved place; Also it goeth almost beyond all other medicines in the Erysipelas and colick: and if. there be any congealed blood in the body (which came by a fall or blow) this spirit outwardly applyed with such waters as are proper for the grief, and also taken inwardly, doth dissolve and. expell it: and being mingled with the volatile spirit of urine it doth yield a wonderful kind of salt, as hereafter shall be taught.

The use of the white acid spirit of salt nitre.

The heavy and corrosive spirit of salt nitre is not much used in Physick, though it be found almost in all Apothecaries shops, and there is kept for such use, as above hath been mentioned of the spirit of vitriol, viz, to make their conserves, and cooling-drinks taste sowerish.

114.

Also it is used by some in the colick, but it is too great a corrosive, and too gross to be used for that purpose; and although its corrosiveness may be mitigated in some measure, by adding of water thereto, yet in goodness and virtue it is not comparable at all to the volatile spirit, but is as far different from it, as black from white, and therefore the other is fittest to be used in Physick; but this in dealing with metals and minerals, for to reduce them into vitriols, calxes, flores, and crocus.

Aqua Regis.

If you dissolve common salt (which hath been decrepitated first) in this acid spirit of salt nitre, & rectifie it by a glass retort in sand) by a good strong fire, it will be so strong, that it is able to dissolve gold, and all other metals and minerals, except silver and sulphur; and several metals may by the means thereof be separated much better than by that Aqua regis which hath been made by adding of Salt Armoniack. But if you rectifie it with LAPIS CALAMINARIS or Zink, it will be stronger yet, so as to be able to dissolve all metals and Minerals (silver and sulphur excepted) whereby in the handling of Metals, much more may be effected, than with common spirit of salt nitre or Aqua fortis, as hereafter shall be taught: and first in the preparing of gold.

The Preparation of Aurum Fulminans, or Aurum Terrestrams.

Take of fine granulated or laminated gold (whither it be refined by Antimony or AQUA FORTIS) as much as you please: put it in a little Glass body, and pour four or five times as much of AQUA REGIS upon It, set it stopt with a Paper in a gourd in warm sand; and the AQUA REGIS within the space of one or two hours will dissolve the gold quite into a yellow water: but if it have not done so, it is a sign that either the water was not strong enough, or that there was too little of it for to dissolve it. Then pour the solution from the gold, which is not dissolved yet, into another glass, and pour more of fresh AQUA REGIA upon the gold: set it again to dissolve in warm sand or ashes, and the remaining gold will likewise be dissolved by it, and then there will remain no more, but a little white calx, which is nothing else but silver, which could not be dissolved by the AQUA REGIA (for the AQUA REGIA, whether it be made after the common way with salt Armoniack, or else with common salt, doth not dissolve silver) so in like manner common AQUA FORTIS, or spirit of salt nitre dissolveth no gold; but all other metals are dissolved as well by strong AQUA FORTIS as by AQUA REGIS. And therefore you must be careful to take such gold as is not mixed with Copper, else your work would be spoiled: for if there were any Copper mixed with it, then that likewise would be dissolved and precipitated together with the gold; and it would be a hindrance to the kindling or fulminating thereof: but if you can get no gold, that is without Copper, then take Ducats or Rose-nobles, which ought to have no

Addition of Copper, but only of a little Silver, which doth not hurt, because that it cannot be dissolved by the AQUA REGIA, but remaineth in the bottom in a white powder. Make those Ducats or Rose-nobles red hot, and afterward bend them and make them up In Rolls, and throw them into the AQUA REGIA for to dissolve. All the gold being turned into a yellow water, and poured off, pour into it by drops of pure oil made of the Salt of Tartar, PER DELIQUIUM, and the gold will be precipitated by the contrary liquor of Salt of Tartar into a brown yellow powder, and the solution will be clear. But you must take heed, to pour no more oil of Tartar into it than is needful for the precipitation of the gold; else part of the precipitated gold would be dissolved again, and so cause your loss. The gold being well precipitated, pour off the clear water from the gold calx by inclination, and pour upon it warm rain or other sweet water, stir It together with a clean stick of wood, and set it in a warm place, until the gold is settled, so that the water standeth clear upon it again; then pour it off, and pour on other fresh water, and let it extract the saltness out of the Eold calx; and this pouring off, and then pouring on of fresh water again, must be reiterated so often, until no sharpness or saltness more be perceived in the water that bath been poured off: Then set the edulcorated gold into the Sun or another warm place for to dry. But you must take heed that it have no greater heat than the heat of the Sun is in MAY or JUNE, else it would kindle or take fire, and (especially if there be much of it) give such a thunder-clap, that the hearing of those that Stand by, would be much endangered thereby, and therefore I advise you to beware, and

cautious in the handling of it, lest you run the hazard both of your gold and of your health by your over-sight.

There Is also another way for to edulcorate your precipitated gold, viz, thus, Take it together with the salt liquor, and pour It into a funnel lined with brown Paper laid double, and so let the water run through into a glass vessel, whereupon the funnel doth rest, and pour on other warm water, and let It run through likewise; do this again and again, until that the water come from it as sweet as it was poured on. Then take the Paper with the edulcorated calx, out of the funnel, lay it, together with the paper, upon other brown paper lying severally double together, and the dry paper will attract all the moistness out of the gold calx, so that the gold will be dried the sooner. Which being dry, take it out of the filtering paper, and put It into another that is clean, and so lay it aside, and keep it for use. The salt water that came through by filtering, may be evaporated in a little glass body (standing in sand) to the dryness of the salt, which is to be kept from the air: for it likewise useful in Physick; because some virtue of the nature of gold is yet hidden in it: though one would not think it, in regard that it is so fair, bright and clear, Which for all that may be observed by this, that when you melt it in a clean covered crucible or pot, and pour it afterward into a clean Copper mortar or bason (being first made warm) you get a purple-coloured salt, whereof 6, 9, 12, to 24 grains given inwardly, doth cleanse and purge the stomach and bowels, and especially it is used in fevers and other diseases of the stomach. But in the crucible, out of which the salt bath been poured, you will

find an earthy substance, which hath separated it self from the salt, and looketh yellowish; this being taken out and melted in a little crucible by a strong fire, turneth to a yellow glass, which is impregnated with the Tincture of Gold, and doth yield a grain of Silver in every regard like unto common cupellated silver, wherein no gold is found, which is to be admired: because that all Chymists are of opinion, that no AQUA REGIA can dissolve silver which is true. The question therefore is, from whence or how this silver came into the salt, since no AQUA REGIA doth dissolve silver? whereupon some perchance may answer, that it must have been in the oil of Tartar, in regard that many do believe, that the salts likewise may be turned into metals, which I do not gainsay, but only deny that it could have been done here; for if that silver could have been existing in the AQUA REGIA, or salt of Tartar (whereas AQUA REGIA cannot bear any) it would have been precipitated together with the gold. But that it was no common silver, but gold which turned to silver after it was deprived of its Tincture, I shall briefly endeavour to prove. For that the salt waters (of AQUA REGIA and salt of Tartar) out of which the gold hath been precipitated, is of that nature, before it be coagiated to salt, though it be quite clear and white, that if you put a feather in it, it will be dyed purple within few days, which purple colour comes from the gold, and not from silver, in regard that silver doth dye red or black: and hence appeareth, that the salt water hath retained something of gold..

Now some body peradventure may ask, if that the said salt water hath retained some gold, how is it then, that in the melting, no gold comes

forth, but only silver? To which I answer, that some salts are of that nature, that in the melting, they take from gold its colour and soul; whereof if the gold be truly deprived, it is then no more gold, nor can be such; neither is it silver, but remaineth only a volatile black body, good for nothing, which also proveth much more unfixed than common Lead, not able to endure any force of fire, much less the cupel: But like MERCURY or ARSENICK vanisheth (or flyeth away) by a small heat. Hence it may be gathered, that the fixedness (or fixity) of gold doth consist in its soul or Tincture, and not in its body, and therefore it is credible, that gold may be anatomized, its best or purer part separated from the grosser (or courser) and so that a Tinctive medicine (or Tincture) may be made of it. But whether this be the right way, whereby the universal medicine of the ancient Philosophers (by whose means all metals can be changed or transmuted into gold) is to be attained unto, I will not dispute; yet I believe that peradventure there may be another subject, endued with a far higher Tincture than gold is, which obtained no more from nature, than it doth need it self for its own fixedness. However, we may safely believe, that a true Anima or Tincture of gold, if it be well separated from its impure black body, may be exalted and improved in colour; so that afterwards of an imperfect body a greater quantity, than that was from which it was abstracted, may be improved and brought to the perfection of gold. But waving all this, it is true and certain, that if the gold be deprived of its Tincture, the remaining body can no more be gold; as is demonstrated more at large in my Treatise (de Auro potabilis vero) of the true

potable Gold: And this I mentioned here only therefore, that in case the lover of this Art, in his work should meet perchance with such a white grain, he may know, from whence it doth proceed.

I could have forborn to set down the preparation of the fulminating gold, and so save paper and time, in regard that it is described by others: but because I promised in the first part to teach how, to make the flores of gold, and that those are to be made out of fulminating (or thundering gold), I thought it not amiss to describe its preparation, that the lover of this Art need not first have his recourse to another book for to find out the preparation, but by this my book may be finished with a perfect Instruction for the making of the flores of gold, and this is the common way for to make AURUM FULMINANS, known unto most Chymists; but in regard that easily an error may be committed in it, either by pouring on too much of the liquor of Tartar (especially when it is not pure enough, so that not all the gold doth precipitate, but part of it remaineth in the solution, whereby you would have loss; or else, the gold falling or precipitating into a heavy calx, which doth not fulminate well, and is unfit for to be sublimed into flores.

Therefore I will here set down another and much better way, whereby the gold may be precipitated quite and clean out of the AQUA REGIA without the least loss, and so that it cometh to be very light and yellow, and doth fulminate twice as strong as the former, and there is no other difference between this and the former preparation, but only that instead of the oil of Tartar, you take the spirit of urine, or of salt armoniack for to precipitate the dissolved gold thereby; and the gold (as before

121.

said) will be precipitated much purer, than it is done by the liquor of the salt of Tartar, and being precipitated, it is to be edulcorated and dryed, as above in the first preparation hath been taught.

The use of Aurum Fulminans.

There is little to write of the use of AURUM FULMINANS in physick; for because it is not unlockt, but is only a gross calx and not acceptable to the nature of man, it can do no miracle. And although it be used to be given PER SE from 6, 8, 12, grains to 1/24 ounce for to provoke sweating in the Plague, and other malignant fevers, yet it would never succeed so well as was expected. Some have mixed It with the like weight of common sulphur, and made it red hot (or calcined it) whereby they deprived it of its fulminating virtue, supposing thus to get a better medicine, but all in vain, for the gold calx would not be amended by such a gross preparation. But how to prepare a good medicine out of AURUM FULMINANS, so that it may be evidently seen, that the gold is no dead body, nor unfit for physick, but that it may be made quick and fit for to put forth or ahew forth those virtues which it pleased God to treasure up in it, I shall here briefly discover.

First, get such an instrument (as above hath been taught) made for you out of Copper, but not too big, nor with a lid at the top, but only with a pipe, unto which a receiver may be applyed, which must not be luted to it; but it sufficeth, that the pipe enter far into the belly of the receiver; and at the lower part it must have a flat bottom, that

it may be able to stand: over the bottom there must be a little hole with a little door, that closeth very exactly: and there must be also two little plates or scales of silver or copper, as big as the nail of ones finger, whereupon the AURUM FULMINANS is to be set into the Instrument; which is to stand upon a Trevet, under which you are to lay some burning Coals for to warm or heat the bottom withal. The Instrument together with the glass Receiver being so ordered, that it stands fast and also the bottom thereof being warmed or heated, then with little pincers one of the little scales, containing 2, 3, or 4, grains of AURUM FULMINANS must be conveyed upon the Instrument set upon the warm bottom, and then shut the little door, and when the gold doth feel the heat, it kindleth and giveth a clap, and there is caused a separation, and especial unlocking of the gold; for as soon as the clap is gone, the the gold doth go through the pipe like a purple coloured smoak into the receiver, and sticks on every where like a purple coloured powder. When the smoak is vanished, which is soon done, then take the empty scale out of the Instrument or Oven, and set it with the gold, which will likewise fulminate and yield it flores. Then the first being cooled in the mean time, is to be filled again and put in, instead of that which is empty, and taken out, putting in one scale after another by turns, continue it so long till you have got flores enough: After the sublimation is performed, let the Copper Vessel grow cold, and then sweep or brush the gold powder which is not sublimed with a haires foot, or goose feather out of the vessel, which powder serves for nothing, but to be melted with a little borax, and it will be good gold again, but

123.

only somewhat paler than it was before it was made into fulminating gold. But the flores in the receiver cannot be brushed out thus, especially when they are cast in with an addition of salt Nitre, as by the flores of silver hereafter shall be taught, because they are something moist, and therefore pour in as much of dephlegmed Tartarised spirit of wine unto it, as you think to be enough, for to wash off the flores with. This done, pour out the spirit of wine, together with the burnt Phoenix, into a clean glass, with a short neck, set it (being well luted first) into a gentle Balneum, or into warm ashes for some days, and the spirit of wine in the mean time will be coloured with a fair red, which you must pour off and then pour on other fresh spirit and set it in a warm place for to be dissolved, this being likewise coloured, put both the extracts together in a little glass body, and abstract the spirit of wine (in Balneo) from the Tincture, which will be a little in quantity, but of a high red colour and pleasant in taste. The remaining flores from which the Tincture is extracted, may be with water washed out of the glass, and then dried if they are to be melted; and they will yield a little pale gold, and the most part turneth into a brown glass, out of which perchance something else that is good may be made, but unknown to me as yet.

N. B. if you mix the AURUM FULMINANS with some salt nitre, before fulmination, then the flores will be the more soluble, so that they yield their Tincture sooner and more freely, than alone of themselves; and if you please, you may add thereto thrice as much salt nitre, and so sublime them in flores, in the same manner, as shall be taught for the making of the flores of silver.

The use of the Tincture of Gold.

The extracted Tincture is one of the chiefeat of those medicines, which comfort & cheer up the heart of man, renew and restore to youthfulness, and cleanse the impure blood in. the whole body, whereby many horrible diseases, as the leprosie, the pox, and like may be rooted out.

But whether this Tincture by the help of fire may be further advanced into a fixed substance I do not know; for I have proceeded farther in it, than here is mentioned.

Of the flores of Silver and of its medicine.

Raving promised in the first part of this book (when I was describing the preparation of flores out of Metals) to teach in the second part to make the flores of gold and silver, those of gold being dispatcht; there followeth now in order after the gold, to speak also of silver and of its preparation, which Is to be thus performed.

Take of thin laminated or small granulated fine silver as much as you please, put it into a little separating glass body, and pour upon it twice as much in weight of rectified spirit of salt nitre, and the spirit of salt nitre will presently begin to work upon the silver and to dissolve it. But when It will not dissolve any more in. the cold, then you must put the glass body into warm sand or ashes, and the water will presently begin to work again; let the glass stand in the warm ashes, until all the silver be dissolved. Then put the solution out

of the little glass body, into another such as is cut off at the top, and put on a little head or Limbeck, and in sand abstract the moiety of the spirit of salt nitre from the dissolved silver; then let the glass body remain in the sand till it be cool; after take it out, and let it rest for a day and a night, and the silver will turn into white foliated crystals, from which you must pour off the remaining solution which is not turned; and from thence abstract again the moiety of the spirit, and let it shoot or turn in a cold place; and this abstracting and crystafising you are to reiterate, until almost all the silver is turned to Crystals; which you must take out and lay upon filtering paper to dry, and so keep it for such further use, as hereafter shall be taught. The remaining solution, which is not crystallised, you may in a copper vessel by adding of sweet water thereto, precipitate over the fire into a calx, and then edulcorate and dry it, and keep it for other use, or else melt it again into a body. Or else you may precipitate the same with salt water, and so edulcorate and dry it; and you will have a calx, which doth melt by a gentle fire, and is of a special nature, and in the spirit of urine, of salt Armoniack, of Harts-horn, of Amber, of Soot, and of hair it doth easily dissolve; and it may be prepared or turned into good medicines, as shortly in our treating of the spirit of urine shall be taught. Or else, you may choose not to precipitate the remaining solution of silver, but with the spirit of urine to extract an excellent Tincture, as hereafter shall be taught.

Of the use of the crystals of silver.

These crystals may be safely be used in Physick alone by themselves 3, 6, 9, 12 grains thereof being mixed with a little sugar, or else made up into pills; they do purge very gently and without danger; but by reason of their bitterness they are somewhat untoothsome to take; also, if they be not made up into pills, they colour the lips, tongue and mouth quite black (but the reason of that blackness belongeth not to this place to treat of, but shall by and by follow hereafter). Also if they touch metals, as Silver, Copper and Tin, they make them black and ugly, and therefore they are not much used. But if you put into the solution of silver (before It be reduced into Crystals) half as much quicksilver as there was of the silver, and so dissolve them together and afterwards let them shoot together, there will come forth very fair little square stones like unto Allome, which do not melt in the air, as the former foliated ones use to do; neither are so bitter, and they purge also quicker and better, than those that are made only of silver.

How to sublime the Crystals of silver into flores, and then to make a good Medicine of the flores.

Take of the foresaid Crystals of Silver as many as you please, and upon a grinding stone made warm first, grind as much purified and well dryed salt nitre amongst it, then put into your Iron distilling vessel

(to the pipe whereof there is to be applied and luted a great receiver) coals made into powder two inches high, and make a fire under it, that the vessel every where together with the coals that are in it, become red hot. Then take off the lid, and with a ladle throw in at once of your Crystals of silver $\frac{1}{8}$ ounce more or less, according as you think that your receiver in regard of its bigness is able to bear. This done, presently put on the lid, and the Bait nitre together with the crystals of silver will be kindled by the coals that lye on the bottom of the vessel, and there will come forth a white silver fume through the pipe into the receiver, and after a while when the cloud is vanished in the receiver, cast in more, and continue this so long, and until all your prepared silver is cast in; then let it cool, and take off the receiver, and pour into it good Alcolized spirit of wine, and wash the flores with it out of the receiver, and proceed further with them, as above you have been taught to proceed with the gold, and you will get a greenish liquor, which is very good for the brain.

Take the coals out of the distilling vessel, and make them into fine powder, and wash them out with water, to the end that the light coal dust may be got from it, and you will find much silver dust (or a great many little silver grains) which the salt nitre could not force over, which you may reduce, for it will be good silver.

There may also be made a very good medicine out of the crystals of silver, which will be little inferiour to the former, whereby the diseases and infirmities of the brain may be very well remedied, which is done thus.

How to make a green oil out of Silver.

Pour upon Crystals of silver twice or thrice as much (in weight) of the strongest spirit of Salt Armoniack, put it in a glass with a long neck well closed, into a very gentle warmth for the space of 8 or 1k days in digestion, and the spirit of salt Armoniack will be tinged with a very fair blue colour from the silver, then pour it off, and filtre it through brown paper, and then put it in a little glass retort or glass body, and abstract in Balneo by a gentle fire, almost all the spirit of salt Armoniack (which is still, good for use) and there will remain in the bottom a grass-green Liquor, which is to be kept for a Medicine.

But in case that you should miss, and abstract too much of the spirit from the Tincture of silver, so that the Tincture be quite dry and turned to a green salt, then you must pour upon it again as much of the Spirit of Salt Armoniack, as will dissolve the green salt again to a green Liquor, but if you desire to have the Tincture purer yet, then abstract all moistness from it, to a stony dryness: upon which you must pour good spirit of Wine, which will quickly dissolve the stone, and then filtre it, and there will remain feces, and the Tincture will be fairer: from which you must abstract most of the spirit of wine, and the Tincture will be so much the higher in virtue. But if you please, you may distil that green salt or stone (before it be extracted again with the spirit of wine) in a little glass retort, and you will get a subtle spirit and a sharp oil, and in the bottom of the retort there remalneth a very fusile silver which could not come over.

It is to be admired, that when you pour spirit of salt Armoniack, or spirit of wine upon that stone, for to dissolve it, that the glass comes to be so cold by It, that you hardly are able to endure it in your hand, which coldness in my opinion cometh from the silver (being so well unlock) which naturally Is cold.

The use of the green Liquor In Alchemy, and for Mechanical Operations.

This green Liquor serveth not only for a medicine, but also for other Chymical operations (for both Copper and glass may be easily and very fairly silvered over therewith) very useful for those that are curious and love to make a shey, with fair household-stuff; for if you get dishes, treacher-plates, salters, cups and other vessels made of glass, after the same fashion as those of silver use to be made, you may easily and without any considerable charge silver them over therewith within and without, so that by the eye they cannot be discerned from true silver plate.

Besides the above-related good Medicines, there may be made another and especial good one out of the crystals of silver, viz, dissolving and digesting them (for a space of time) with the universal water, which hath been distilled by nature it self; and Is known to every body; and after its digesting for a short time, and change into several colours, there will be found a pleasant essence, which is not so bitter as the above-described green liquor, which is not brought yet by heat to ripeness and maturation.

N. B. In this sweet universal Menstruum, may also all other metals by a small heat and the digestion of a long time be ripened and fitted for Medicines (having first been reduced into their vltriols and salts) and then they are no more dead bodies, but by this preparation have recovered a new Life, and are no more the metals of the covetous, but may be called the metals of the Philosophers, and of the Physicans.

Besides Physick or physical use.

Lastly, there may be many pretty things more effected (besides the medicinal use) by means of the Crystals of silver, viz, when you dissolve them in ordinary sweet rain water, you may dye beards, hair, skin, and nails of men or beasts into carnation or pink red, brown and black, according as you have put more or less thereof in the water; or else, according as the hair was more or less times wetted therewith, whereby the aspect of Man and Beast (which sometimes in several occasions may not be contemned) is changed, so that they cannot be known.

This colouring or dye may be also performed with Lead or Mercury no less than with silver, but otherwise prepared, whereof in the fourth part.

Now I have taught how to make flores and tinctures of gold and silver by help of the acid spirit of Nitre. There may be many other medicines taught to be made out of them, but in regard that they belong not to this place, they shall be reserved for other places of the second and also for the other following parts.

As by the help of the spirit of Nitre, good Medicines may be made out of gold and silver, so the like may be done out of other inferiour metals. But in regard that their description is fitter for other places of this Book, I omit them here. Yet nevertheless, I thought good to describe one preparation of every metal; after silver therefore followeth now Copper.

A medicine out of Copper externally to be used.

Dissolve burnt plates of Copper in spirit of salt, and abstract the spirit again from thence to a dryness, but not too hard, and there will a green mass remain behind, which you may cast in by little and little, and so distil it, as of silver hath been taught. It doth yield a strong and powerful spirit, and flores also for outward use in putrid wounds, to lay a good ground thereby for the healing.

A medicine out of Iron and Steel.

In the same manner you may proceed with iron and steel, and there will remain behind a good crocus of a great stipticity or astringency, especially out of iron or steel, and may with good success be mixed with ointments and plaisters.

Of Tin and Lead.

If Tin or Lead be dissolved therein, after the abstracting of part of the spirit, they will shoot into clear and sweet crystals. But Tin is not so easily dissolved as Lead; both may safely be used for medicines. Also there may be spirits and flores got out of them by distilling. The rehearsing of the Preparation is needless, for what for the preparing of silver hath been taught, is to be understood also of other metals.

The use of the Crystals of Lead and Tin.

The Crystals of Lead are admirably good to be used in the plague for to provoke sweating and expel the venome out of the body; they may also with credit be used in the bloody flux. Externally dissolved in water, and clothes dipt therein and applied, they excellently cool and quench all inflammations, in what part of the body soever they do befall. Likewise the spirit thereof used per se (and the flores mixed among ointments) do their part sufficiently.

But the crystals of Tin do not prove altogether so quick in operation, though they do act their part also, and they are more pleasant than those that are made of Lead; for in Tin there is found a pure sulphur of gold; but in Lead a white sulphur of silver, as is proved in my TREATISE OF THE GENERATION AND NATURE OF METALS.

Of Mercury.

When you dissolve common Mercury in rectified spirit of Nitre, and abstract the spirit from it again, then there will remain behind a fair red glistering precipitate; but when the spirit is not rectified, it will not be so fair, because that the impurity of the spirit remains with the Mercury and pollutes it. This calcined Mercury is called by some MERCURIUS PRAECIPITATUS, and by others TURBITH MINERALE, wherewith the Surgeons, and sometimes other unskillful Physicans do cure the Pox; they give at once 6, 8, 10 grains, (more or less) according to its preparation and force in operation to the patient; for if the spirit be not too much abstracted from it, it worketh much stronger, than by when a strong fire it is quite separated from it; for the spirits that remain with the Mercury make it quick and active, which else without the spirits would not be such.

The other metals also, if they be not first made soluble by salts or spirits, can perform either none of but very small operation, unless it be Zink or Iron, which being easily soluble, are able to work without any foregoing dissolution, as hath been shewn above, when we treated of the oil of vitriol, But that the sharp spirits are the cause of that operation, may hence be perceived, and made manifest that although you take 1/4 ounce of quick-silver, and pour it down into the stomach, yet it would run out again beneath, as above it was poured in. But if it be prepared with spirits of salt, then but few grains of it will work strongly, and the more it is made soluble, the stronger it worketh;

as you may see when it is sublimed from salt and vitriol, that it groweth so strong thereby, that one grain doth work more than eight or ten grains of Turbith Mineral, and three or four grains thereof would kill a man, by reason of its mighty strength. Also it worketh extremly, and much more than the sublimate, when It is dissolved In. spirit of Nitre and crystalized, so that you cannot well take it upon your tongue without danger: Which some perceiving, evaporate the AQUA FORTIS by a gentle heat from it, so that the MERCURIUS remained yellow, which in a smaller dose wrought more than the red, from which the spirits were quite evaporated. And they used it only externally, strewing it into impure sores, for to corrode or fret away the proud flesh, not without great pain to the patient: but also without distinction of young or old gave it inwardly for to purge; which is one of the most hurtful Purges that can be used. For this evil guest, however he be prepared, cannot leave his tricks, unless he be reduced Into such a substance, as that it never can be brought back to a running Mercury, for then much good can be done in. physick without any hurt or prejudice to the health of man, whereof perchance something more shall be said in another place.

I cannot omit for the benefit of young innocent Children, to discover a great abuse. For it is grown very common almost among all that deal in physick, that as soon as a little child is not well before they know whether it will be troubled with worms, or with any thing else, they presently fall upon Mercury, supposing that in regard it hath no taste, it is so much the better for to get the Children to take it for to kill the Worms.

But those men do not know the hurtful nature of it, which it doth shew against the sinews and Nerves: For some are of opinion, that if they know to prepare Mercury so, that it can be given in a greater dose (as Is to be seen in sublimed MERCURIUS DULCIS) that then it is excellently prepared: but they are in a great error, and it were much better, it were not so well prepared, that the less hurt might be done to Man, in regard that then they durst not give it in so great a dose. For if that which is prepared with AQUA FORTIS or spirit of salt nitre be used in the pox to men that are advanced in years, it cannot do so much hurt, because it is given in a small dose, and doth work with them, whereby nature gets help for to overcome and expel that hurtful venome, and its malignity is abated by the strong salivation, which provident nature hath planted in it, so that not so much mischief can come by it, as by MtJRCURIUS DULCIS, whereof is given to little weak Children from ten to thirty grains at once, which commonly (unless they be of a strong nature, and do grow out of it) doth cause a weakness and lameness in their limbs, so that (if they do not come to be quite lame at last) they have a long time to struggle withal, till they overcome it.

In like manner those also do err, which do ehake Mercury in water or beer so long, until the water come to be gray-coloured, and so give that water or beer to little children to drink for the Worms, pretending that they do not give the substance or body of Mercury; but only its virtue; but this gross Preparation is no better than if they had ministered the running Mercury it self. Neither have I ever seen that the use of MERCIJPIUS DULCIS, or of the grey coloured water was seconded with

good success in killing of the Worms. But it is credible, that it may be done by yellow or red precipitate, in regard of its strong operation. But who would be such an Enemy to his Child, as to plague and torture it with such a hurtful and murdering medicine, especially there being other medicines to be had, which do no harm to the children, as is to be found in iron or steel, and the sweet oil of vitriol.

And so much of the abuse of Mercury: I hope it will be good warning unto many, 60 that they will not so easily billet such a tyrannical guest in any ones house, thereby the ruin thereof of necessity must follow. And that cure deserveth no praise at all, thereby one member is cured with the hurt of two or three other members. As we see by the Pox, when one infected member is cured by Mercury, and that but half, and not firm at all, that all the rest of the body is endangered thereby for the future. And therefore it would be much better that such crude horse-physick might be severed from good medicaments, and such used instead of them, as may firmly, safely, and without prejudice to other parts perform the cure, of which kind several are taught in this book. But in case that you have Patients, which have been spoiled by such an ill-prepared Mercury, then there Is no better remedy to restore them, than by medicines made of metals, therewith Mercury hath great affinity, as of gold and silver: for when they are often used, they attract the Mercury out of the members, and carry it along with them out of the body, and so do rid the body thereof. But externally the precipitated Mercury may more safely be used, than internally, in case there be nothing else to be had, viz, to corrode or eat away the proud

flesh out of a wound. But if instead of it there should be used the corrosive oil of Antimony, Vitriol, Allome or common salt it would be better, and the cure much the speedier; and it would be better yet, that in the beginning good medicaments were used to fresh wounds, and not by carelessness to reduce them to that ill condition, that afterwards by painful corrosives they must be taken away. But such a Mercury would serve best of all for soulders, beggers, and children that go to school; for if it be strewed upon the head of children, or into their clothes, no louse will abide there any longer. In which case Mercury must by his preparation not be made red, but only yellow, and it must be used warily, and not be strewed on too thick, lest the flesh be corroded, which would be the occasion of great mischief.

Of Aqua fortis.

Out of Salt nitre and vitriol, taking of each a like quantity (for if the water is to be not altogether so strong) two parts of vitriol to one part of salt nitre, a water distilled Is good to dissolve metals therewith, and to separate them from one another; as gold from silver, and silver from gold, which is in the fourth part punctually shall be taught.

The AQUA FORTIS serveth also for many other Chymical operations to dissolve and fit metals thereby, that they may be reduced the easier into medicaments: but because the spirit of salt nitre and AQUA FORTIS are almost all one, and have like operations: for if the AQUA FORTIS

be dephlegmed and rectified, you may perform the same operations with it, which possibly may be performed with the spirit of salt nitre; and on the other side the spirit of salt nitre will do all that can be done with the AQUA FORTIS, whereof in the fourth part shall be spoken more at large.

Now I know well that ignorant laborators (which do all their work according to custom, without diving any further into the Nature of things, will count me an Heretick (because I teach, that the AQUA FORTIS made of vitriol and salt nitre is of the same nature and condition with the spirit of salt nitre, which is made without vitriol) saying that the AQUA FORTIS doth partake likewise of the spirit of vitriol, because vitriol also is used in the preparation of it. To which I answer, that although vitriol be used in the preparation of it, yet for all that in the distilling, nothing or but very little of its spirit comes over with the spirit of salt nitre, and that by so small a heat it cannot rise so high, as the spirit of salt nitre doth: and the vitriol is added only therefore unto the salt nitre that it may hinder Its melting together, and so the more facilitate its going into a spirit. And the more to be convinced of this truth, the unbelieving may add to such spirit of salt nitre, as is made by it self, a little of oil of vitriol likewise made by it self, and try to dissolve silver guilded with it, and he will find that his spirit of salt nitre by the spirit of vitriol is made unfit to make a seperation; for it preyeth notably upon the gold, which is not done by AQUA FORTIS.

Of the Sulphurised Spirit of Salt Nitre.

There may also be made a spirit of salt nitre with sulphur, which is still in use with many, viz, they take a strong earthen retort, which hath a pipe at the top, and fasten it into a furnace, and having put salt nitre into it, they let it melt, and then through the pipe they throw pieces of sulphur of the bigness of a pea, one after another, which being kindled, together with the nitre doth yield a spirit called by some spirit of salt nitre, and by others oil of sulphur, but falsely; for it is neither of both, in regard that metals cannot be dissolved therewith as they are done with other spirit of salt nitre or sulphur; neither is there any great use for it in physick, and if it were good for any Chymical operations, by the help of my distilling instrument might easily be made and in great quantity.

N. B. But if salt nitre be mixed with sulphur in. due proportion, and In. the first furnace be cast upon quick coals, then all will be burnt, and a strong spirit cometh over, whose virtue is needless here to describe; but more shall be mentioned Of it in another place.

Of the Clissus.

Among the Physicans of this latter age, there is mention made of another spirit, which they make of Antimony, Sulphur, and salt nitre, a like quantity taken of each, which they call CLISSUS, and which they have in high esteem, and not without cause, because it can do much good if it be well prepared.

The inventor, for the making thereof used a retort with a pipe, as was mentioned by the sulphurized spirit of salt nitre, through which pipe he threw in his mixture. And it is a good way if no better be known: but if the Author had known my invention and way of distilling, I doubt not but he would have set aside his, that bath a nose or pipe retort, and made use of mine.

The materials indeed are good, but not the weight or proportion; for to what purpose so great a quantity of sulphur, it being not able to burn away all with so small a quantity of salt nitre. And if it doth not burn away, but only sublime & stop the neck of the retort, whereby the distillation is hindered, how can it then yield any virtue? Therefore you ought to take not so much sulphur, but only such a quantity as will serve to kindle the salt nitre, viz, to 1. lb. of salt nitre four drama of sulphur: but because Antimony also is one of the ingredients, which hath likewise much sulphur (for there is no Antimony so pure, but it containeth much combustible sulphur, as in. the fourth part of this book shall be proved:) therefore it is needless to add so much sulphur unto Antimony, to make it burn, because it hath enough of it self. And therefore I will set down my composition, which I found to be better than the first.

Take Antimony 1. lb., salt nitre 1/2 lb., sulphur 3 ounces; the materials must be made into small powder and well mixed, and at once cast in 3 ounces thereof, and there will come over a sulphureous acid spirit of Antimony, which will mix it self with the water, which hath been put before in. the receiver; which after the distillation is finished

141.

must be taken out and kept close for its use. It is a very good diaphoretick (for sweat provoking) medicine especially in fevers, the plague, epilepsie, and all other diseases, whose cure must be performed by sweating. The CAPUT MORTUUM may be sublimed into flores in that furnace, which is described in. the first part.

Of the Tartarised spirit of nitre.

In the very same manner there may also be distilled a good sweat-provoking spirit out of salt nitre and Tartar, a like quantity taken of each, which is very good to be used in the plague and malignant fevers.

The CAPUT MOPTUUM is a good melting powder for to reduce the calxes of metals therewith; or else you may let it dissolve in a moist place to oil of Tartar.

Of the Tartarised spirit of Antimony.

A much better spirit yet may be made of Tartar, salt nitre, and Antimony, a like quantity being taken of each, and made into fine powder, and mixed well together, which though it be not so pleasant to take, is therefore not to be despised. For not only in the plague and fevers, but also in all obstructions and corruptions of blood it may be used with admiration of its speedy help.

The CAPUT MORTUUM may be taken out, and melted in a crucible, and it will yield a REGULUS, the use whereof is described in the fourth part.

142.

Out of the scoria or dross a red Tincture may be extracted with spirit of wine, which is very useful in many diseases. But before you extract with spirit of wine, you may get a red lixivium out of it with sweet water, which lixivium may be used externally for to mend the faults of the skin and to free it from scabbiness.

Upon this lixivium if you pour Vinegar or any other acid spirit, there will precipitate a red powder, which if it beedulcorated and dryed may be used in physick. It is called by some sulphur AURATUM DIAPHORETICUM: but it is no Diaphoretick, but maketh strong vomits, and so in case of necessity, when you have no better medicine at hand, it may be used for a vomitory from 6, 7, 9, 10, 15.

Also out of the scoria there may be extracted a fair Sulphur with the spirit of urine and distilled over the Limbeck, which is very good for all diseases of the lungs.

Of Stone-coles.

If you mix stone-coals with a like quantity of salt nitre, and distill them, you Will get an admirable spirit and good to be used outwardly; for it cleanseth and consolidateth wounds exceedingly, and there will also come over a metallical virtue in the form of a red powder, which must be separated from the spirit, and kept for its use. But if you cast in stone-coals alone by themselves, and distill them, there will come over not only a sharp spirit, but also a hot and blood red oil, which doth powerfully dry and heal all running ulcers; especially it

143.

will heal a scald head better than any other medicine, and it doth consume also all moist and spongiuous excrescencjes in the skin, where ever they be: but if you sublime stone-coles in the furnace described in the first part, there comes over an acid metallical spirit, and a great deal of black light flores, which suddenly stanch bleeding, and used in plaisters, are as good as other metallical flores.

Of the Sulphureous spirit of salt nitre or Aqua fortis.

If you take one part of sulphur, two parts of nitre, and three parts of vitriol, and distill them, you will get a graduating AQUA FORTIS, which smelleth strongly of sulphur; for the sulphur is made volatile by the salt nitre and vitriol. It is better for separating of metals, than the common AQUA FORTIS,

If silver be put in, it groweth black, but not fixed; some of it poured into a solution of silver a great deal of black calx will precipitate, but doth not abide the trial. You may also abstract a strong SULPHUREOUS volatile spIrit from it, which hath like virtue as well internally as externally for bathes, and may be used like unto a volatile spirit of Vitriol or Allome.

Of the Nitrous spirit of Arsenick.

If you take white Arsenick and pure salt nitre of each a like quantity ground into fine powder, and distill them, you will get a blue

144.

spirit, which is very strong, but no water must be put into the receiver, else it would turn white, for Arsenick, from which the blue cometh, is precipitated by the water. This spirit dissolveth and graduateth copper as white as silver, and maketh it malleable but not fixed. The remaining CAPUT MOPTUUM maketh the copper white, if it be cemented therewith, but very brittle and unmalleable, but how to get good silver out of Arsenick and with profit, you shall find in the fourth part. In physick the blue spirit serveth for all corroding cancerous sores, which if they be anointed therewith, will be killed thereby, and made fit for healing.

To make a spirit of Sulphur, crude Tartar and Salt nitre.

If you grind together one part of Sulphur, two parts of Crude Tartar, and four parts of salt nitre, and distill it Philosopher-like, you will get a most admirable spirit, which can play his part both in. Physick and Alchymy, I will not advise any body to distill it in a retort; for this mixture, if it groweth warm from beneath, it fulminateth like Gunpowder; but if it be kindled from above, it doth not fulminate, but only burneth away like a quick fire: metals may be melted and reduced thereby.

To make a spirit out of Salt of Tartar, Sulphur, and Salt-nitre.

If you take one part of Salt of Tartar, and one part and a half of

145.

Sulphur, with three parts of salt nitre, and grind them together, you will have a composition, which fulminateth like AURUM FulMINANS, and the same also (after the same manner as above hath been taught with gold) may be distilled into flores and spirits, which are not without special Virtue and Operation. For the corruption of one thing is the generation of another.

How to make a spirit of saw-dust, sulphur and salt nitre.

If you make a mixture of one part of Saw-dust made of Tilia or Linden-wood, and two parts of good sulphur, and nine parts of purified and well dried salt nitre, and cast it in. by little and little, there will come over an acid spirit, which may be used outwardly, for to cleanse wounds that are unclean. But if you mix with this composition minerals or metals made into fine powder, and then cast it in and distill it, there will come not only a powerful metallical spirit, but also a good quantity of flores, according to the nature of the mineral, which are of no small virtue: for the minerals and metals are by this quick fire destroyed and reduced to a better condition, whereof many things might be written: but it is not good to reveal all things. Consider this sentence of the Philosophers. IT IS IMPOSSIBLE TO DESTROY WITHOUT A FLAME, The COMBUSTIBLE SULPHUR OF THE CALX, WHICH THE DIGGED MINE DOTH DOE.

Also fusible minerals and metals may not only be melted, therewith, but also cupellated in a moment upon a Table in. the, band or in a nut-

146.

shell; whereby singular proofs of ores and metals may be made, and much better, than upon a Cupel, whereof further in. the fourth part of this book. Here is opened unto us a gate to high things; If entrance be granted unto us, we shall need no more books to look for the Art in them.

To make metallical spirits and flores by the help of salt-nitre and linnen cloth.

If metals be dissolved in their appropriated Menstruums, and in the solution (wherein a due proportion of salt nitre must be dissolved) fine linnen. rags be dipt and dried, you have a prepared metal, which may be kindled, and (as it was mentioned above concerning the saw-dust) through the burning away and consuming of their superfluous sulphur, the mercurial substance of the metal is manifested. And after the distillation is ended, you will find a singular purified calx, which by rubbing coloureth other metals, as that of gold doth guild silver, that of silver silvereth over copper, and copper calx maketh iron look like copper, & etc. which colouring though it cannot bring any great profit, yet at least for to shew, the possibility, I thought it not amiss to describe it; and perchance something more may be hid in it, which is not given to every one to know.

Of Gun-powder.

Of this mischievous composition and diabolical abuse of Gunpowder

much might be written: but because this present world taketh only delight in shedding innocent blood, and cannot endure that unrighteous things should be reprov'd, & good things praised, therefore it is best to be silent, and to let every one answer for himself, when the time cometh that we shall give an account of our stewardship, which perhaps is not far off; and then there will be made a separation of good and bad, by him that tryeth the heart, even as gold is refined in the fire from its dross. And then it will be seen what Christians we have been. We do all bear the name, but do not approve our selves to be such by our works; every one thinketh himself better than others, and for a words sake which one understandeth otherwise, or takes in another sense than the other (and though it be no point, whereon salvation doth depend.) one curseth and condemneth another and persecuteth one another unto death, which Christ never taught us to do, but rather did earnestly command us that we should love one another, reward evil with good, and not good with evil, as now a days every where they use to do; every one standeth upon his reputation, but the honor of God and his command are in no repute, but are trampled under foot, and Lucifers pride, vain ambition, and Pharisaical hypocrisie or shew of holiness; hath so far got the upper hand with the learned, that none will leave his contumacy or stubbornness, or recede a little from his opinion, although the whole world should be turned upside down thereby. Are not these fine Christians? By their fruit you shall know them, and not by their words. Wolves are now clothed with sheep skins, so that none of them almost are to be found, and yet the deeds and works of wolves are every where extant.

All good manners are turned into bad, women turn men, and men women in their fashion and behaviour, contrary to the institution and ordmace of God and Nature. In brief, the world goeth on crutches. If HERACLITUS and DEMOCRITUS should now behold this present world, they would find exceeding great cause for their lamenting and laughing at it. And therefore it is no marvel, that God sent such a terrible scourge as gun-powder is upon us; and it is credible, that if this do not cause our amendment, that a worse will follow, viz, thunder and lightning falling down from Heaven, whereby the world shall be turned upside down for to make an end of all pride, self-love, ambition, deceit and vanity. For which the whole Creation. doth wait, fervently desiring to be delivered from the bondage thereof.

Now this preparation, which is the most hurtful poison, a terror unto all the living, is nothing else but a FULMEN TERRESTRE denouncing unto us the wrath and coming of the Lord. For Christ to judge the world is to come with thundering and lightning: and this earthly thunder perchance is given us for to put us in mind and fear of that which is to come, but this is not so much as thought on by men, who prepare it only for to plague and destroy mankind therewith in a most cruel and abominable manner, as every one knoweth.

For none can deny but that there is no nimbler poison, than this gun-powder. It is written of the Basiliske, that he killeth man only by his look, which a man may avoid, and there are but few (if any at all) of them found: but this poison is now prepared and found every where.

How often doth it fall out, that a place wherein this powder is kept

is striken with thunder as with its like, in so much that all things above it are in a moment destroyed, and carried up into the air? Also in sieges, when an Ordnance is discharged, or Mines blown up, all whom it lays hold on, are suddenly killed, and most miserably destroyed. What nimbler poison then could there be invented? I believe there is none, who will not acknowledge it to be such.

And seeing that the ancient Philosophers and Chyniists were always of opinion, that the greater the poison is, the better medicine may be made of it, after it is freed from the poison, which with us their posterity is proved true by many experiences; as we see by Antimony, Arsenick, Mercury, and the like minerals, which without preparations are meer poison, but by due preparation may be turned into the best and most effectual medicaments, which though not every one can comprehend or believe, yet Chymists know it to be true, and the doing of it is no new thing to them. And because I treat in this second part of medicinal spirits, and other good medicaments, and finding that this which can be made out of gunpowder, is none of the least, I would not omit in some measure, and as far as lawfully may be done, to set down its preparations: which is thus performed.

How to make a spirit of Gunpowder.

Your distilling vessel being made warm, and a great receiver with sweet water in it, being applied to it without luting, put a dish with gunpowder, containing about 12 or 15 grains a piece, one after another

into it; in the same manner as above was taught to do with gold. For if you should put in too much of it at once, it would cause too much wind and break the receiver.

As soon as you have conveyed it into the vessel, shut the door, and the gunpowder will kindle, and give a blast that it maketh the receiver stir, and a white mist or steam will come over into the receiver. As soon as the powder is burnt, you may cast in more before the mist is settled, because else the distilling of it would cost too much time, and so you may continue to do until you have spirit enough. Then let the fire go out, and the furnace grow cool, and then. take off the receiver, pour the spirit with the water that was poured in before (the flores being first every where washed off with it) out of the receiver into a glass body, and rectifie it in a B. through a limbeck, and there will come over a muddy water, tasting and smelling of sulphur: which you must keep. In the glass body you will find a white salt, which you are to keep likewise. Take out the CAPUT MORTUUM, which remained in the distilling vessel, and looks like gray-salt, calcine it in a covered crucible, that it turn white, but not that it melt; and upon this burnt or calcined salt, pour your stinking water, which came over through the Limbeck, and dissolve the calcined white salt with it, and the feces which will not dissolve cast away. Filtre the solution, and pour it upon the white salt, which remained in the glass body, from which the sulphureous spirit was abstracted before, and put the glass body (with a limbeck luted upon it) into sand, and abstract the sulphureous water from it, which will be yellowish, and smell more of sulphur

than it did before. This water if it be abstracted from the salt several times, will turn white, almost like unto milk, and taste no more of sulphur, but be pleasant and sweet. It is very good for the diseases of the lungs. Also it doth guild silver, being anointed therewith, although not firmly, and by digestion it may be ripened and reduced into a better medicine.

The salt which remained in the glass body, urge with a strong fire, such as will make the sand, wherein the glass standeth red hot, and there will sublime a white salt into the limbeck, in taste almost like unto salt Armomiack, but in the midst of the glass body, you will find another, which is yellowish, of a mineral taste and very hot upon the tongue.

The sublimed salts, as well the white which did ascend into the limbeck, as the yellow, which remained in the glass body are good to be used in the plague, malignant fevers and other diseases, where sweating is required; for they do mightily provoke sweating, they comfort and do cleanse the stomach, and cause sometimes gentle stools.

But what further may be done in Physick with it, I do not know yet.

In Alchymy it is also of use, which doth not belong to this place. Upon the remaining salt which did not sublime you may pour rain water, and dissolve it there in the glass body, (if it be whole still) else if it be broken, you may take out the salt dry, and dissolve and filtre and coagulate it again, and there will be separated a great deal of feces. This purified salt, which will look yellowish, melt in a covered crucible, and it will turn quite blood red, and as hot as fire upon the

tongue, which with fresh water you must dissolve again, and then filtre and coagulate; by which operation it will be made pure and clear, and the solution is quite green before it be coagulated, and as fiery as the red salt was before its dissolution.

This grass green solution being coagulated again into a red fiery salt, may be melted again in a clean and strong crucible, and it will be much more red and fiery.

N. B. And it is to be admired that in the melting of it many fire sparks do fly from it, which do not kindle or take fire, as other sparks of coals or wood use to do. This well purified red salt being laid in a cold and moist place, will dissolve into a blood red oil, which in. digestion dissolveth gold and leaveth the silver: this solution may be coagulated, and kept for use in Alchemy.

There may be also a precious Tincture be extracted out of it with alcolized spirit of wine, which Tincture guildeth silver, but not firmly.

And as for use in Physick, it ought to be kept as a great Treasure. But if the red fiery salt be extracted with spirit of wine before gold be dissolved therewith, it will yield likewise a fair red Tincture, but not so effectual in. Physick as that unto which gold is joined. And this Tincture can also further be used in Alchemy, which belongeth not hither, because we only speak of medicaments.

Of the use of the Medicine or Tincture made of Gunpowder.

This Tincture whether with or without gold, made out of the red salt,

is one of the chiefest that I know to make, If you go but rightly to work, and prepare it well; for it purifieth and cleanseth the blood mightily, and provoketh also powerfully sweat and urine; so that it may safely and with great benefit be used in the Plague, Fevers, Epilepsy, Scurvy, in MELANCHOLIA HYPOCHONDRIACA, in the Gout, Stone, and the several kinds of them; as also in all obstructions of the Spleen and Liver, and all diseases of the Lungs, and it is to be admired that of such a hurtful thing such a good medicine can be prepared. Therefore it would be much better to prepare good medicaments of it, to restore the poor diseased to health therewith, than to destroy with it those that are whole and sound.

I know a Chymist, that spent much time and cost to search this poisonous dragon, thinking to make the universal medicine or stone of the ancient Philosophers out of it. Especially because he saw, that so many strange changes of colours appeared, whereof mention is made by the Philosophers when they describe their medicine and the preparation thereof.

The Dragons blood, Virgins milk, Green. and Red Lion, Black blacker than. Black, White whiter than White and the like, more needless here to relate, which easily may perswade a credulous man as it happened also unto him, But afterward he found, that this subject in which he put so much confidence, was leprous and not pure enough, and that it is impossible to make that tingent stone of it, for to exalt men and metals, and so was glad to be contented with a good particular medicine and to commit the rest unto God.

And so much of that poisonous dragon, gunpowder: but that there is another and more purer dragon, whereof the Philosophers so often made mention, I do not deny; for nature is mighty rich, and could reveal to us many arcana by Gods permission: But because we look only for great honour and riches, and neglect the poor, there is good reason why such things remain hidden from wicked and ungodly men.

To make spirits and flores of Nitre and Coals.

If you distill Nitre (well purified from its superfluous salt) mixed with good coals, the Egyptian Sun bird doth burn away, and out of it doth sweat a singular water, useful for men and metals. Its burnt ashes are like unto calcined Tartar, and for the purging of metals not to be despised.

To make flores and spirits of flints, crystals or sand, by adding of coals and salt nitre to them.

Take one part of flints or sand, and three parts of Linden coals, with six parts of good salt nitre mixed well together, and cast of it in., and the combustible sulphur of the flints will be kindled by the piercing and vehement fire of the salt nitre, and maketh a separation, carrying over with it part thereof, which it turneth into spirits and flores, which must be separated by filtering. The spirit tasteth as if it had been made of the salt of Tartar and flints, and is of the

same nature and condition.; and the remaining CAPUT MOPTUUM also yieldeth such an oil or liquor in all like unto that, and therefore its condition is not described here, but you may find it where I shall treat of the spirit made of salt of tartar by adding of flints.

To make a spirit and Oil out of Talck with salt nitre.

Take one part of Talck made into fine powder, and three parts of Linden-coals, mixe them with five, or six parts of good salt nitre, cast in of that mixture one spoonful after another, and there will come over a spirit and a few flores, which must be separated as hath been taught above concerning flints.

The spirit is not unlike unto the spirit of sand: the CAPUT MOPTUUM, which looks greyish, must be well calcined in a crucible, so that it melt, and then pour it out, and it will yield a white transparent mass, like as flints and crystals do, which in a cold moist celler will turn to a thick liquor, fatter in the handling than the oil of sand. It is something sharp like unto oil of Tartar; it cleanseth the Skin, Hair and Nails, and makes them white; the spirit may be used inwardly for to provoke sweat and urine: externally used, it cleanseth wounds, and healeth all manner of scabs in the body out of hand. What further may be done with it, I do not know yet: But how to bring Taick, pebbles, and the like stony things to that pass, that they may be dissolved with spirit of wine and reduced into good medicaments shall be taught in the fourth part.

156.

To make a spirit, flores, and oil out of Tin.

If you mix two parts of the filings of Tin, with one part of good salt nitre, and cast it in, as you were taught to do with other things, then the sulphur of Tin will kindle the salt nitre, and make a flame, as if it were done with common sulphur; whereby a separation is made, so that one part of the Tin cometh over in flores and spirit, and the rest stayeth behind, which if it be taken out, some of it in a moist place will turn into a liquor or oil, which externally may be used with good success in all ulcers for to cleanse them. It hath also the virtue, if it be pertinently applyed to graduate and exalt wonderfully all the colours of vegetables and animals, which would be useful for dyers. The spirit of it nightly provoketh sweating: the flores being edulcorated and used in plasters, do dry and heal very speedily.

To make a spirit, flares and a liquor out of Zinck.

In like manner as hath been taught with Tin, you may also proceed with Zinck, and it will yield a good quantity of flores, and also a spirit and oil, almost of the same virtues with those made of Tin: and these flares corrected with salt nitre, are better than those which are taught to be made by themselves in. the first part of the book.

To make a spirit, flores and oil of Lapis Calaminaris,

Mix two parts of salt nitre with one part of LAPIS CALAMINARIS and cast it in, and it will yield a sharp spirit very useful for separating of metals, and there will come over also a few yellow flores. The rest remaining behind is a dark green Mass very fiery upon the tongue, like salt of Tartar, and if it be dissolved with rain water, yeldeth a grass green solution, which being not presently coagulated into salt, the green separateth it self from the fixed salt nitre, and there falleth to the bottom a fine red powder, and if it beedulcorated and dried, and given from one grain to ten or twelve it causeth gentle stools and easy vomits, better than prepared Antimony; for LAPIS CALANINARIS and Zinck are of the nature of Gold, as in the fourth part shall be proved: the white LIXIVIIJM or lye, from which the green is precipitated, may be coagulated into white salt, like unto salt of Tartar; but if you coagulate the green solution, before the green be separated from the salt nitre, then. you will get a very fair green salt, high in colour and much more fiery than salt of Tartar, whereby special things may be done in. Alchemy, which doth not belong hither. And if you desire to make such a green salt for to use in Alchemy, you need not take so much pains, as first to distil a spirit out of the mixture, but take three or four parts of good salt nitre, and mix it with one part of LAPIS CALAMINARIS, and let this mixture boil together in a wind furnace, till the salt nitre be coloured green by the LAPIS CALAMINARIS, then pour it out and separate the green goldish salt from it, and make such good use of it as you think fit.

158.

But if you will extract a good Tincture and medicine, make it into powder, and extract it with spirit of wine, and it will yield a blood red Tincture, both in Physick and Alchemy of good use.

Further you are to take notice, that among all metals and minerals, which I know (except gold and silver) there is none found, out of which can be extracted a greenness which is of fire-proof, but only out of LAPIS CALAMINARIS, which deserves to be well considered and further thought upon..

To make a spirit of salt nitre, sulphur and common salt.

Take one part of salt, two parts of sulphur, and four parts of salt nitre, grind all together, and cast in one spoonful after another to distil, and it will yield a sharp yellow spirit, which if it be put among common water, so that the water be not made too sharp of it, it is a good bath, good for many diseases; especially it healeth all scabs very suddenly. The CAPUT MORTUUM may also be dissolved in water and used among bathes, and it is good likewise, but the spirit is penetrating, and doth operate suddenly in. shrinkings and other defects of the nerves; of such kind of bathes there shall be spoken more in the third part. Also the remaining fixed yellow salt is good to be used in Alchemy; for it graduateth silver by cementing.

159.

To make a spirit, flores and oil out of salt nitre and Regulus Martis.

Take one part of REGULUS MARTIS STELLATUS (made of one part Iron or Steel, and three parts of Antimony, whose preparation is described in the fourth part) and three parts of pure salt nitre, mix and grind all together, and cast it in by little and little to distil, and there will come over a spirit together with a white sublimate, which must be separated with water, as hath been taught above with other flores, and both the spirit and the flores are good to provoke sweat. The remaining CAPUT MORTUUM, (as they usually call it) is not dead, but full of life and virtue, whereby much good may be done both in Physick and Alchmey, as followeth. The remaining Mass, which looks white, and is very sharp, and fiery (if the REGULUS have been pure, if not, then it will look yellowish) may be edulcorated with fresh water, and it will yield a LIXIVIUM or lye in. all things like unto calcined Tartar, but sharper and purer, and may be used almost in all operations instead of salt of Tartar (but first the REGULUS ANTIMONIS must be precipitated from it by the help of water) and afterward it may be coagulated into salt and kept for its use; the edulcorated, as also that which was precipitated with water is a white and fine powder, useful in the plague, fevers, and other diseases to provoke sweating thereby, and may very safely be used, and although if it be given in a greater quantity than. usual, it causes some vomits also, yet for all that it doth no hurt. It is easily taken because it hath no taste. It is given to children from 3, 4, to 12 grains: to elder folks from 1/48 to 1/16 of an ounce; they work

successfully in all diseases, where sweating is needful. This ANTIMONIUM DIAPHORITICUM, may also be melted into glass, and so extracted and dissolved with spirit of salt, and it may be prepared into several good medicaments: and if all that which may be done with it, should be described at large, it would require too much time. The LIXIVIUM, if it be coagulated, hath wonderful virtues, so that if one should describe them, he would hardly be credited by any body, because it is not made of costly things; and truly the life of man is too short to find out by experience all that lies hid in it: and it would be but a laughing matter to a proud fool, if one should reveal it: therefore it is better to keep counsel, than to sow strife. BASILIUS VALENTINUS in his Triumphant Chariot of Antimony, where he writeth of the signed star, hinted it sufficiently, but very few take notice of it. PARACELSUS also, here and there in his books under an unknown name, makes frequent mention of it; but its true preparation and use, by reason of the unthankful was never described by the Philosophers, which for instruction of Good Honest Men. we do here mention.

Before you edulcorate the REGULUS (made by fulmination) you may extract of it a good medicinal Tincture with spirit of wine, and if you dissolve it with spirit of salt, there will shoot a white foliated Talck in all things like unto the Mineral Talck: wherefore a liquor may be made, which coloureth the skin very white, but if this calx of Antimony, before it be extracted with spirit of wine or dissolved with spirit of salt be made into fine powder, and exposed to the moist air, it will dissolve into a fat liquor, which though it be something sharp, yet

doth no hurt to the skin., if it be used with discretion, but rather cleanseth it more then any other thing, and so it doth likewise to the hair and nails; but as soon as the liquor hath been applyed for that purpose, it must be washed off again with water, lest it do not only take away the gross and unclean skin, but also work upon the tender white skin and do hurt, and therefore I give warning, that you use it discreetly: for according to the old proverb, you may misuse even that which else is good in it self. If you put some of it into warm water and bathe yourself in. it, the gross skin will peel off the body, so that you will almost seem to be another body. And this bath also is good for many diseases: for it openeth the pores mightily, and cleanseth all the blood in the body, by drawing many ill humors out of it, which maketh a man light and strong, especially if he be purged first, before he useth the bath. It is also good for Melancholy, scurvy and leprosie, especially when the red Tincture drawn out of it with spirit of wine, be used besides. It is also good to be used in a foot bath for those that are troubled with corns and other excrescencies upon their feet, or with nails that cut the flesh; for it softeneth them and makes them fit for cutting, and as tractable as wax. For there is nothing known under the Sun, which softeneth more a hard skin, hair, nails and other excrescencies, than this oil. And this I did set down therefore, because I know, that many are so tormented therewith, that they cannot well endure their shoes upon their feet. But if you coagulate this oil into salt, and melt it in a crucible, and pour it out into a flat brass bason, that it flow at large and may be broken, then you

have the best Causticum, to open the skin withal where is need. If you dissolve crude Tartar with it and coagulate it again, you will get a salt which is used in many Chymical operations; and there may be extracted out of it a blood red Tincture with spirit of wine, which proveth very effectual against all obstructions.

Also every combustibile sulphur may be easily dissolved with it, and used among bathes, it acteth his part admirably. If any oil of spices be boiled therewith, then the oil will dissolve in. it, and they turn together to a balsome, which doth mingle it self with water, and is good to be taken inwardly for some infirmities: but women with child must not meddle with it, because it makes them miscarry. But after their delivery, it is good to expel after burthen and other reliques. But if you boil OLEUM with this liquor and rose water so long till the oil do incorporate with the liquor and waters and then separate the watery substance from it, you will get a soap as white as snow, which may be used for to wash the hands with it, and it doth smell very well. You may also wash the head with it; for it strengtheneth the brain and cleanseth the head and hair. This soap may be distilled, and it will yield a penetrating oil, very good for the sinews and nerves.

Now as this liquor of REGULUS ANTIMONII softeneth the skin, nails, hair, feathers, horns, and the like, and dissolveth them more than any thing in the world: In the like manner also it hath power to dissolve not only metals, but also the hardest stones, but not in that manner which is done by boiling, as was mentioned of sulphur, but after another way, which is not proper for this place. It sufficeth that I hinted it.

163.

The fiery fixed salt nitre may be dissolved with spirit of salt or vinegar, and sublimed into a TERRA FOLIATA. What further can be effected with it, doth not belong to this place, and perchance some where else more shall be spoken of it.

To distil a Butrum out of Antimony, Salt and Vitriol, like unto that, which is made out of Antimony and Mercury Sublimate.

Take onepart of crude Antimony, two parts of common salt, and four parts of vitriol calcined white, beat all to powder and mix them well, and so cast it in as you were taught to do with other materials, and there will come over a thick oil of Antimony like butter, which may be rectified like any other oil, that is made after the common way with Mercury sublimate, and is also the same with it in use, which use you may see in the first part: the same also may be made better and in a greater quantity in the furnace described in the first part, and also with less coals and time by the help of the open fire, because it endureth greater heat than in the second furnace.

To distil Butrum of Arsenick and Orpiment.

After the same manner as was taught with Antimony, there may also out of Arsenick and Auripigment together with salt and vitriol a thick oil be distilled, which not only outwardly but also inwardly is safe to be used, and may be so corrected, that it shall be nothing at all

inferior in virtue unto the BUTYRUM ANTIMONII, but rather go beyond it: which perchance will seem impossible to many. But he that knows the nature and condition of minerals, will not be astonished at my words, but they will be to him as a light in a dark place.

To make a rare Spirit of Vitriol.

If common vitriol be dissolved in water, and you boil granulated Zinck in it, all the metal and sulphur contained in the vitriol will precipitate on the Zinck, and the solution will turn white, the precipitated matter is nothing else, but iron, copper, and sulphur, which the salt of vitriol did contain, and now is drawn from it by the Zinck.

The reason why the metal precipitates out of the salt upon the Zinck, belongeth to the fourth part, where you will find it sufficiently explained; The white solution, from which the metallical matter is separated, must be coagulated to the dryness of salt, and so by it self a spirit distilled of it, which riseth easily, and is in taste and virtue not unlike unto common oil of vitriol, but only that this is a little purer than the common.

Here perchance many may object: you take the green from the vitriol, which PARACELSUS doth not teach, but bids us to keep it. To which I answer, that I do not teach here to make the sweet red oil of vitriol, whereof PARACELSUS hath written, but the white acid oil; which is as good, or rather much better, than common oil, which is made of the common impure vitriol. To what purpose Is It, that you take green vitriol

to distil, whereas the green doth not come over, and although that green should come over, why should that oil be better than the white? For the green in the common vitriol is nothing else but copper and iron, which the salt water running through the passages of Metals did dissolve and take into it self, and as soon as such a green vitriol feeleth the fire, the green turneth into red, which is nothing else but a calcined iron or copper, which In. the reducing by a strong fire and by melting is made manifest.

PARACELSUS hath not taught us, that we should drive over the green by the force of the fire into a red and sweet oil, but he hath shewed us an other way, which is found out by few men, whereof in the beginning of the second part already hath been made mention.

This spirit or acid oil distilled out of the purified vitriol, is of a pleasant sowness, and serveth for all those uses, which above by the vitriol were described. And this process is set down only for that end, that we may see, that when the vitriol is purified, that then it is easier distilled, and yieldeth a more pleasant spirit, than if it be yet crude and impure.

And that such a purifying of the vitriol Is nothing else but a precipitating of the metal, which the water (as before said) running through the veins thereof hath assumed, is thus to be proved; dissolve any metal in its appropriate Menstruum, whether it be done with distilled acid spirits or sharp salts, adding common water to them, or else dry by the fire in a crucible, according as you please, and then put into that solution another metal, such as the dissolvent doth sooner seize on, then

166.

upon that which it bath assumed, and then you will find, that the dissolvent doth let fall the assumed metal or mineral, and falls upon the other, which it doth sooner seize on, and dissolveth it as being more friendly to it; of which precipitation in the fourth Part shall be spoken more at large.

This one thing more is worthy your there is none more soluble than Ziuck, (as well in the dry as in the wet way) reduced into light caixes, in so much precipitated in this manner (if so be splendor or gloss, and is like a fine out of a pen.

To make a subtile spirit and pleasant oil of Zinck.

Because I made mention here of Zinck, I thought good not to omit, that there may be made a penetrating spirit and !holesome oil out of it by the help of vinegar, which is thus to be done. Take of the flores (which were taught to be made in the first part) one part, put them into a glass (fit for digestion) and pour upon them 8, or 10 parts of good sharp vinegar made of honey; or in want thereof take wine vinegar, and set the glass with the flores and vinegar in a warm place to dissolve, and the solution. being performed, pour off the clear, which will look yellow and after you have filtered it abstract the phlegm, and there will remain a red liquor or balsome, to which you must add pure sand,

167.

well calcined, and distill it, and first there will come over an unsavory phlegme, afterward a subtle spirit, and at last a yellow and red oil which are to be kept by themselves separated from the spirit, as a treasure for to heal all wounds very speedily. The spirit is not inferior unto the oil, not only for inward use to provoke sweat thereby, but also externally for the quenching of all inflammations, and doubtless this spirit and oil is good for more diseases but because its further use is not known to me yet, I will not write of it, but leave the further trial to others.

To distil a spirit and oil out of Lead.

In the same manner as was taught of Zinck, there may be out of lead also distilled a subtle spirit and a sweet oil, and it is done thus: Pour strong vinegar upon MINIUM, or any other calx of lead, which is made per se, and not with sulphur, let it digest and dissolve in sand or warm ashes, so long till the vinegar be coloured yellow by the lead, and turned quite sweet. Then pour off the clear solution, and pour on. other vinegar, and let this likewise dissolve, and this repeat so often. till the vinegar will dissolve no more, nor grow sweet; then take all these solutions, and evaporate all the moisture, and there will remain a thick sweet yellow liquor, like unto honey, if the vinegar was not distilled and made clear, then no liquor remaineth, but only a white sweet salt. This liquor or salt may be distilled after the same manner as was taught with the Zinck, and there will come over not only a

penetrating subtle spirit, but also a yellow oil, which will not be much, but very effectual, in all the same uses, as of the spirit, and oil of Zinck was taught.

N. B. This is to be observed, that for to make this spirit and oil, you need no distilled spirit, but that it may be done as well with undistilled vinegar, and the undistilled yields more spirit than the distilled. But if you look for a white and clear salt, then the vinegar must be distilled, else it doth not shoot into crystals, but remain- eth a yellow liquor like unto honey, and it is also needless to make the solution in. glasses, and by digestion continued for a long time, but it may as well be done in a glazed pot, viz, pouring the vinegar upon the Mineum in the pot, and boiling it on a coal fire; for you need not fear that any thing of the vinegar will evaporate, in regard that the lead keeps all the spirits, and lets only go an unsavory phlegm. You must also continually stir the lead about with a wooden spatulla, else it would turn to a hard atone, and would not dissolve: the same must be done also when the solution is done in glasses; and the solution after this way may be done in three or four hours: and when both kind of solutions are done, there will be no difference betwixt them, and I think it providently done not to spend a whole day about that which may be done in a hour.

And if you will have this spirit and oil better and more effectual, you may mix 1 ounce of crude Tartar made into powder with 1 lb. of dissolved and purified lead, and so distil it after the same manner as you did distil it by it self, and you will get a much subtler spirit and a better oil than if it were made alone by it self.

To distil a subtile spirit and oil out of crude Tartar.

Many think it to be but a small matter to make the spirit of Tartar; for they suppose, that if they do but only put Tartar into a retort, and apply a receiver, and by a strong fire force over a water, they have obtained their desire: and they do not observe, that in stead of a pleasant subtile spirit, they get but a stinking vinegar or phlegm; the pleasant spirit being gone, Which some careful operators perceiving, they caused great receivers to be made, supposing by that means to get the spirit. Now when the distillation was done, weighing their spirits together with the remainder, they found, that they had suffered great loss, wherefore they supposed it to be an impossible thing, to get all the spirits, and to lose none, and indeed it is hardly possible to be done otherwise by a retort: for although you apply a great receiver to a small retort, and that there be also but a little Tartar in it, and the joints being well luted, so that nothing can pass through, and though you make also the fire never so gentle, hoping to get the spirit by that way, yet for all that you cannot avoid danger and loss. For at last the retort beginning to be red hot, and the black oil going, then and but then the subtilst spirits will come forth, which either steal through the joints, or else do break the retort or receiver, because they come in abundance and with great force, and do not settle easily: wherefore I will set down my way of making this most profitable, and excellent spirit.

The preparation and use of the spirit of Tartar.

Take good and pure crude Tartar, whether it be red or white, it matters not, make it into fine powder, and when the distilling vessel is red hot, then cast in with a ladle half an ounce and no more at once, and so soon as the spirits are gone forth and settled, cast in another half ounce and this continue, till you have spirit enough, then take out the remainder, which will look black, and calcine it well in a crucible, and put it in a glass retort, and pour the spirit that came over together with the black oil, upon it, drive it in sand at first gently, and the subtilst spirits will come over, and after them phlegme, at last a sovre vinegar together with the oil, whereof you must get each by it self, But if you desire to have the subtle spirit which came over first, more penetrating yet, then you must take the CAPUT MORTUUM that staid in. the retort, and make it red hot in. a crucible, and abstract the spirit once more from it, and the calcined Tartar will keep the remaining moistness or phlegm, and only the subtilst spirit will come over, which is of a most penetrating quality, whereof from half a dram to an ounce taken in wine or any other liquor provoketh a quick and strong sweat, and it is a powerful medicine in all obstructions, and most approved and often tried in the plague, malignant fevers, scurvy, MELANCHOLIA HYPOCANDRIACA, collick, contracture, epilepsy and the like diseases. And not only these mentioned diseases, but also many others more, which proceed from corrupt blood under God may successfully be cured with it.

The phlegm is to be cast away, as unprofitable: the vinegar clean-seth wounds: the oil allayeth swelling and pains, and doth cure scabs, and disperseth knobs that are risen upon the skin, as also other excrescencies of the same, if it be used timely, and the use thereof be continued.

N. B. If the black stinking oil be rectified from the calcined CAPUT MORTUUM, it will be clear and subtle, and it will not only assuage very speedily all pains of the gout, but also dissolve and expel the conglob- ated gravel in the reins, applyed as a plaister or unguent. In like manner it will dissolve and extract the coagulated Tartar in the hands, knees and feet, so that the place affected will be freed and made whole thereby: because in such a despicable oil there lyes hid a volatile salt which is of great virtue. But if you desire experimentally to know whether it be so, then pour upon this black stinking oil and acid spirit, as the spirit of common salt, or of vitriol or salt nitre, or only distilled vinegar, and the oil will grow warm and make a noise and rise, as if AQUA FORTIS had been poured upon salt of Tartar, and the acid spirit will be mortified thereby, and turn to salt. And this well purified oil doth dissolve and extract the Tartar out of the joints (unless it be grown to a hard stony substance) even as soap scoures the uncleanness out of cloaths, or to compare it better, even as like re- ceiveth its like, and is easily mixed with it; and doth love it; but on the contrary, nothing will mix itself with that wherewith it hath no affinity at all. As if you would take pitch out of cloath by washing it in water, which never will be done by reason of the contrary nature;

for common water hath no affinity with pitch or other fat things, nor will it ever be taken out therewith without a mediator, partaking of both natures, viz, of the nature of pitch and that of the water, and such are sulphureous salts, and nitrous salts, whether they be fixed or volatile. As you may see at the soap boilers, who incorporate common water by the help of sulphureous salts with, fat things, as tallow and oil. But if you take warm oil or any thin fat substance, and put it upon the pitch or rozin, then the oil easily accepteth of and lays hold on its like, and so the pitch is dissolved and gone out of the cloth, and the remaining fatness of the oil may be fetched, out of the cloth with lye and common water or soap, and so the cloth recovereth its former beauty and pureness. And as it falleth out with sulphureous things, so it doth likewise with Mercurial. For example, if you would take the salt out of powdered flesh or pickled fish with a lixivium it would not succeed, because that the nitrous and acid salts are of contrary natures.

But if upon the powdered flesh or pickled fish you pour on water wherein some of the same salt (wherewithall the flesh was powdered) is dissolved, that salt water will extract the salt out of the flesh, as being its like, much more than common water, wherein there is no salt.

In this manner the hardest things also, as stones and metals, may be joined or united with water, whereof more in my other books are extant; it is needless here therefore to relate. I gave a hint of it, only for to shew, that always like with like must be extracted. True it is that one Contrary can mortifie another, and take the corrosiveness

from it, whereby the pains for a time are asswaged, but whether the cause of the disease it self be eradicated thereby, is a question.

Here may be objected, that I make a difference between the sulphur- eous and Mercurial salts, whereas neither Mercury nor sulphur apparently is to be seen in either. It is true, he that doth not understand nor know the nature of salts, is not able to apprehend it. And I have not time now to demonstrate it, but the same is shewed at large in my book DE NATURA SALIUM, that some of them are sulphureous, and some Mercurial: but he that looks for a further direction yet, let him read my book DE SYMPATHIA & ANTIPATHIA VEPUM, wherein he shall find it demonstrated that from the Creation of the World to the time present, there were always two contrary natures fighting one against the other, which fight will continue so long till the Mediator betwixt God and Man, the Lord Jesus Christ shall put an end unto this strife, when he shall come to separate the good from the bad, by whose lightning and fire flame the proud and hurtful superfluous sulphur shall be kindled and consumed: the pure Mercurial being left in the center.

How to make precious spirits and oils out of Tartar joined with minerals and metals.

Take any metal or mineral, dissolve it in a fit menstruum, mix it with a due proportion of crude Tartar, so that the crude Tartar being made into powder together with the solution make up a pap as it were; then at once cast in one spoonful of it, and distil it into a spirit

and oil, which after the distillation must be separated by rectification, for to keep each by its self for its proper use.

The use of the metallized spirit and oil of Tartar.

This Tartarized spirit of metals is of such a condition, that it readily performeth its operation according to the strength of the spirit, and the nature of the metal or mineral, whereof it is made. For the spirit and oil of Gold and Tartar is good for to corroborate the heart, and to keep out its enemies: the spirit of silver and tartar doth serve for the brain; that of Mercury and Tartar, for the liver: of lead and tin, for the spleen and lungs: of iron and copper for the reins and seminary vessels: that of antimony and tartar for all accidents and infirmities of the whole body; and these metallical spirits made with Tartar, provoke sweat exceedingly, whereby many malignities are expelled out of the body. Likewise also the oil bath its operation, though this of several metals, as of Mercury and Copper, is not well to be used inwardly, because it causeth salivations and strong vomits. But externally they are very good for to cleanse all putrid ulcers, and to lay a good and firm ground for healing them.

The remainder, whereof the spirit and oil is distilled, you may take out, and reduce it in a crucible into a metal, so that what is not come over, may not be lost, but made to serve again.

And as you were taught to distil spirits and oils out of dissolved metals and crude Tartar; so you may get them likewise out of common

vitriol and Tartar, viz, thus, take one part of Tartar made into powder, two parts of good pure vitriol, mix them well together, and distil a spirit of them, which though it be unpleasant to take, for all that in all obstructions and corruption of blood whatsoever it is not to be despised, but very successfully performeth its operation; especially when it is rectified from its CAPUT MOPTUUM, and so freed from its phlegm; and its best virtue, which consisteth in. the volatility, be not lost in the distilling.

N. B. But if you will have this spirit more effectual, then you may join Tartar and vitriol by boiling them together in common. water, and crystallizing; and then. Cast it in, and distil it, and there will come over a much purer and more penetrating spirit; because that is the solution. and coagulation of both, many feces were separated: but if one part of vitriol you take two parts of Tartar, and dissolve it together, and so filter and coagulate it, then the Tartar with the vitriol will shoot no more, but there remaineth a thick liquor like unto honey, out of which with spirit of wine there may be extracted a good tincture against obstructions, This liquor taken from 1/24 to 1/8 ounce doth purge very gently, and sometimes it causeth a vomit, especially if the vitriol was not pure and good: and it may be also distilled into a spirit not inferour unto the former in virtue. Besides the way taught above, there is yet (for to distil a metallized spirit of Tartar) another way, whereby several metals and minerals may be reduced into pleasant spirits and oils, and of more virtue, and it is done in this manner.

Take of the Tartar of white Rhenish wine made into powder, pour

176.

upon it sweet rain or running water, so that to 1 lb. of tartar there be 10 lb. or 12 lb. of water, or so much that the tartar may be dissolved by it in. the boiling, and then boil the mixture with the water in a tinned kettle, or which is better, in a glazed pot, until it be quite dissolved, and in. the meanwhile take off the skum (with a wooden skimmer) still as it riseth in the boiling: and when no more skum riseth, and all the tartar is dissolved, then pour the solution thus hot through a linnen cloth, tyed stright on an earthen glazed vessel, that the remaining sliminess may be separated. The tartar water being strained, let it stand for 24 or 30 hours without stiring, and there will stick a crystallized tartar to the sides of the vessel, which after the water is poured off may be taken out, and washed with cold water, and then dried. This purified tartar keep, until I shall teach you, what further is to be done with it; and this tartar is pure enough for the above said purpose, viz, to reduce metals into oil with it, as shall follow anon. It is also good taken of it self for an absersive to make the body soluble. But if you desire to have it yet whiter and fairer and in great Crystals, you must proceed thus.

You must know this that all salts, if they shall shoot into great crystals, there must be a great quantity of them, for of little there comes but little, And if you will make great and fair white crystals of tartar, which will be no better than the former, but only pleasant to the eye, then you must proceed in this manner.

Take of white tartar made into powder, about ten or thirty lb. pour so much water upon it, as is needful for to dissolve it, and boil it

by a strong fire in a tinned kettle, until all the tartar be dissolved, which you may know by stirring it with a wooden ladle, and skim off diligently all the filth rising on the water; and you must take heed, that you take neither too much nor too little water to it; for if you take too little, part of the tartar will remain undissolved, and so will be cast away and lost among the slime: but if you take too much of it, then the tartar is too much dispersed in the water, and cannot shoot well, and so will likewise be lost, being cast away afterwards with the water, for I have heard many a one complain, that they could get but little of a pound, and therefore supposed the tartar to have been naught, whereas the fault was not in the tartar, but in the workman, that managed not well his work, pouring away one half which did not shoot with the water: but if you proceed well, then four pound of common tartar will yield 3 lb. of pure white crystals. The solution being well made, and no skum more rising at the top, cover the kettle, and let it cool without removing from the warm place it stands in, which will be done within three or four days, if the kettle be big. But the fire must be taken away from under the kettle, and so let it stand for the time mentioned, In the mean time while the Tartar will crystallize to the sides of the kettle, which crystals after the time is expired, and the water poured off, are to be taken out and washed and boiled again with fresh water, and so skimmed and crystallized; and this proceeding must be still reiterated, until (which is done the third or fourth time) the crystals are white enough: then take them out, dry and keep them for use; whereof from 1/8 to 1 ounce made into powder, and taken

in wine, beer, warm broth or other liquor, will give some gentle stools, and serveth for those, which cannot endure strong-physicsick, This tartar may be sharpned with Diagridium or any other purging drug, that so you need not take it in so great a quantity at once, but a lesser dose may serve turn. But if you do not look for great crystals, but only for Tartar well purified, then you may use this following manual, and you will get exceeding fair and glistering crystals, which need no beating into powder, but by the working come to be so pure and fine, as if they had been ground upon a stone, and looking not like a dead powder, but having a gloss, like unto small glisterin.g snow that fell in. very cold weather, and it is done thus: when the crystals are come to be pure enough by often dissolving and coagulating, then dissolve them once again in pure water, and pour the solution into a clean vessel of wood, copper, or earth being glazed; and let it not stand still (as above taught with the crystals) but as soon as it is poured in, with a clean wooden stick stir about continually without ceasing, till all be cold, which will be done in half an hour. In this stirring the Tartar hath no time to shoot into crystals, but doth coagulate into the smallest glistering powder, pleasant to behold, and like unto frozen snow settleth at the bottom of the vessel, then pour off the water, and dry the powder, and keep it for use. The waters which you poured off, in regard that they contain yet some Tartar, ought not to be cast away (as others do) but evaporated, and the Tartar contained in them will be saved, and so nothing will be lost, and in this manner not only white Tartar may be reduced into clear crystals, but also the red being several times

dissolved and crystallized, loseth its redness, and turneth white and clear. Besides the aforesaid, there is another way to reduce the Tartar into great white crystals at once by precipitation; but these being good enough for our purpose, viz, to make good medicines out of metals, I hold it needless to loose more time by the relation of it, and so I will acquiesce.

Another way to make a metallised spirit of Tartar.

Take of purified Tartar dissolved and coagulated but once, as much as you please, pour so much rain or other sweet water to it as will serve to dissolve it; in which solution you must boil plates of metals, until the Tartar have dissolved enough of it, so that it will dissolve no more; the sign whereof is, when the solution is deep coloured of the metal, and during your boiling you must often supply the evaporated water with pouring on. of other, lest the Tartar come to be too dry and burn; and this solution may be done best of all in a metallical vessel; as when you will make the solution of iron, you may do it in an iron pot; and for copper you may take a copper kettle, and so forth for other metals, a vessel made of the same is to be taken, But you must know that gold, silver, and crude Mercury, unless they be first prepared cannot be dissolved like iron and copper, but when they are prepared first for the purpose, then. they will also be dissolved, In. like manner some minerals also must be first prepared, before they can be dissolved with Tartar and water. But if you can have good glasses or glazed

180.

vessels of earth, you may use them for all metals and minerals for to dissolve them therein, and the solution you may not only use of it self for a medicine, but also distil it, and make a very effectual spirit and oil of it as followeth.

To distil the spirit and oil of Lead and Tin..

Take the filings of Lead and Tin, and boil them with the water or solution of Tartar in a leaden or tin vessel, until the Tartar be sweetned by the water, so that it will dissolve no more, to which pass it will be brought within twenty four hours, for both these metals will be dissolved but slowley, but if you would perform this solution sooner, then you must reduce the metals first into a soluble calx, and then they may be dissolved in less time than an hour. The solution being done, you must filtre it, and in. B. abstract all the moisture to the thickness or consistency of honey, and there will remain a pleasant sweet liquor, which of it self with out further preparation may safely be used inwardly for all such diseases, for which other medicaments, made of these metals are useful. Especially the sweet liquor of lead and tin doeth much good in. the Plague, not only by driving the poison from the heart by sweating, but also by breaking or allaying the intolerable heat, so that a happy cure doth follow upon it: but externally the liquor of lead may be used successfully in. all inflammations, and it health very suddenly, not only fresh wounds, but also old ulcers turned to fistulaes; for the Tartar cleanseth, and lead consolidates.

The liquor of tin is better for inward use than for outward whose operations is not so fully known yet, as that of lead. But if you will distil a spirit thereof, then cast it in with a ladle by little and little, as above in other distillations oftentimes was mentioned, and there will come over a subtle spirit of tartar, carrying along the virtue and best essence of the metal, and therefore doth also prove much more effectual than the common spirit of tartar, which is made alone by itself, and this spirit as well that which is made of tin, as that of lead, if it be well dephlegmed first, may be used and held for a great treasure in all obstructions, especially of the Spleen; and few other medicines will go beyond them; but besides there must not be neglected the use of good purgiag medicines, if need require them. With the spirit there cometh over also an oil, which is of a quick operation, especially in wounds and sores of the eye, where other ointments and plasters may not so fitly be used, for it doth not only allay the heat and inflamxnation, a common symptom of the eye wounds, but also doth hinder and keep back all other symptoms which few other medicaments, are able to do; and for the residue, if it be driven further by the strongest fire, then there will come over a sublimate, which in the air dissolveth into oil, which is also of a powerful operation, not only in physick, but also in Alchemy.

And the lead runeth together into a fair white REGULUS, which is much whiter, purer and fairer than other common lead: but the tartar retains the blackness, and raiseth itself to the top as a fusible dross, which is impregnated with the sulphur of lead, wherewith you may colour

182.

hair, bones, feathers and the like, and make them to be, and remain brown and black.

I made trial once of such a distillation in an iron vessel, whereby the same in the inside was so whitened by the purified lead, that it was like unto fine silver in brightness; which afterwards trying again, it would not fall so fair as at first; whereat none ought to wonder, for I could write something more (if it were fit) of tartar, knowing well what ay be effected with it, if I did not stand in fear of scoff-ers, which vilify all what they do not understand. I duret presume to call tartar the Sope of the Philosophers; for in the cleansing of some metals, by long experience I found it of admirable virtue; though I would not be understood thus, as if I did count it to be the true AZOTH UNIVERSALIS PHILOSOPHORUM, whereby they wash their Laton: but I Cannot deny, but that it is of particular use for the washing and cleansing of several metals; for it is indued with admirable virtues for the use of metals, whereof in other places more shall be said hereafter.

How to make a Tartarised spirit and oil out of Iron or Steel and Copper.

If you intend to make a good medicine out of iron or steel or copper Joined with tartar, then for the iron or steel take an iron pot, and for copper a kettel of copper, make them very clean and put in it the filings of iron, or steel, or copper, which you please, and twice as much of pure tartar made into powder, and so much water, that the tartar may be dissolved well by it in the boiling, and so boil the metal with

the tartar-water so long, till it be deeply coloured by the metal, as red by the iron, and deep green by the copper; and when the water in the boiling doth waste, you must still supply it with other, that the tartar may not burn; for there must be always so much water, that no skin of the tartar may rise at the top, but that it remain always open, and there must not be too much water neither, lest it be too sweet, and not able, to dissolve the metal. The solution of iron or steel being come to be red and sweet, and in taste like unto vitriol, but green and bitter of copper, pour it off warm by inclination into an other clean vessel, and let it stand so long again in a very gentle heat of coals, till almost all the water be evaporated, and the dissolved metal with the tartar remain in the consistency of honey.

Which metallical liquor may be used inwardly and outwardly (especially that of iron) which doth purge gently, and openeth the obstructions of the Liver and Spleen: cleanseth the Stomach, and killeth Worms: externally used it is a good wound balsome, and goes far beyond all such as are made of vegetables. It is singular treasure, not only for to cure new wounds; but also for to cleanse and heal old corrupt exulcerated sores, turned to fistulaes; but the liquor of copper is not safe for to be used inwardly, for it is not only very unpleasant in taste, but also causeth vehement vomits: and therefore I would not advise any one to be forward to use it, unless it be for strong folks and for to kill worms in them, for which purpose it is excellent good and surpasseth all other medicines whatsoever; but to little children it ought not to be given at all, in regard that it is of far too strong an operation for them.

N. B. And if you will use it to strong bodies against the worms or stomach-agues, you must observe that the patient (in case that he cannot get it up) thrust his finger into the throat to further the vomiting, that it may not stay behind, but come forth again out of the body, which is done health followeth upon it; but if it remain in the body, it causeth a loathsomeness to use it any more. And therefore you must take heed to use it warily: and in regard that this liquor is very bitter, you may mix it with some sugar, to facilitate the taking thereof, but that of iron needeth no such correction, it being sweet enough of it self, and therefore I commend and prefer it before the other: but if you will needs have that of copper (because it worketh so strongly) then the Patient must keep in from the cold air, and not presently after the operation load the stomach with strong drink and superfluity of meat, contenting himself with some warm broth and a little cup of wine or beer, and the next day his meat and drink will taste the better with him, and do him so much the more good.

But externally, this liquor is of the same use with that of iron or steel, yea, proveth more effectual and speedier in healing. It would be good that Surgeons knew how to prepare it, and would use it instead of their salves, wherewith many fresh wounds are spoiled and turned into horrid ulcers, especially It requiring so little cost and pains to make it. And. if you would have these liquors purer yet, you must pour spirit of wine, and extract them, and they will easily yield their tincture, and leave many faeces behind which are good for nothing: but the tincture will be so much the better., purer, and more effectual, so that you need

use but four or five drops for purging, whereas of the gross liquor you must have from Li, 6, 8, to 12 or 16 drops: and this extracted tincture worketh also much better externally, and keepeth longer than the balsome or liquor; which in time is corrupted, but the extraction is never spoiled. But if you will distil the liquor or balsome, it is needless that it be extracted first, but may be distilled as the boiling made it, after the same manner, as above was taught for Lead, and there will come over a yellow spirit and oil from iron or steel, and from copper a greenish spirit and oil.

The spirit and oil of iron may safely be used in the plague, fevers, obstructions, and corruptions of the blood, from 1/8 to 1 ounce. It is much better to provoke sweat, than that which is made of crude Tartar, without addition of a metal: the like doth that also which is made of copper and more effectually yet, and sometimes causeth a vomit, if it be used in a greater quantity, than is fitting.

N. B. Although the Chymists do prefer copper before iron, as a more firm and ripe metal, neverthe less, it is found by experience, that iron or steel by reason of Its sweetness is better to be used for an inward Eedicine than copper. But for external use, copper (if it be well prepared) hath the preheminance, being an appropriate medicine for all ulcers and open sores, in all parts of the body, if the same inwardly be kept clean by fitting purges. For not only the now described medicine, but also many more besides, are taught to be made out of copper in other places of my books.

A Country-physick and purge I will teach for those, which either

live far from Apothecary-shops, or have no money to spare for physick; and it is made out of iron and copper, whereby they may cleanse their slimy stomachs, spoiled by a disorderly diet, whence head-aches, worms, agues, and other diseases are occasioned, warning withal those that are either too old or too young, or else decayed and weak, and so not strong enough for such powerful physick, that they will forbear to use it, lest besides the worms, they kill and expel life it self also; but those that are of a strong constitution, and a middle age, and of a sound heart, may safely use this purge, whereby stoiaach-agues, belly-worms, and many other occult diseases may be cured with good success. The preparation is done thus: Take 1 ounce of pure tartar made into powder, & 1 ounce or 1/2 ounce of sugar or honey, and 5 ounces or 6 ounces of spring water or rain, water, put all into a clean copper vessel which is not greasy, and boil it upon a coal fire as long or somewhat longer than you use to boil an egg, or at the furthest half a quarter of an hour; take off the skum in boiling, let it stand till it be milk-warm, so that it may be drunk. This potion tasting almost like warm wine sweetened with sugar, give unto the patient to drink, and let him fast upon it, and within half an hour it will begin to work upwards and downwards; whereat you need not be amazed, but only keep the body warm, and within an hour it will have done working. But if you will drive out worms from little children by purging, then instead of the copper-vess⁴, take a clean iron-vessel, and put in a less quantity of tartar, sugar and water, and boil it as abovesaid, and give it to them, and it will purge only downwards, but sometimes it will also give

187.

a gentle vomit, which will do them no hurt, but rather will cleanse the stomach the better. But if the drink be too weak, so that it doth not work, it may be used again the next day (but you must take more of the ingredients, or else let them boil longer) there is no danger in it at all, if you proceed. aright, and it is much pleasanter to take, than the bitter worm-seed, wherewith they usually torment children.

The reason why this decoction works in this manner is, that the tartar and sugar being boiled in metallical vessels with water, work upon the metal, and extract virtue out of it, which causeth vomiting and purging (the Tartar also being helpful to it.)

How to make a Tartarised spirit of Mercury.

Vulgar Mercury cannot be dissolved like the former metals with tartar and water, without any foregoing preparation; but must be sublimed first with salt and vitriol, or crystallised with AQUA FORTIS, and then it may be dissolved by boiling with tartar and water, and reduàed into a balsome, like other metals, but is not to be used inwardly, unless it be digested a sufficient time, so that its fierceness be allayed; Externally it may safely be used in all desperate, especially venereal sores, and it is very effectual and profitable medicine for them. But most of all it doth serve for Alchemy, although few do know this gwest, because he will not be seen by every one. The spirit which comes over from it by distillation, is an admirable thing not only in physick, but also in Alchemy: yet you must take heed, that instead of a friend, you

188.

do not harbor a great enemy; for its force and virtue is very great and powerful.

How to make a Tartarised spirit of Gold and Silver.

Gold and silver also can by no means be dissolved with tartar in a wet way: but in a dry way adding its helper to it, it will easily dissolve, which doth not belong hither; but if you will draw a spirit of it, then the gold and silver must be first by dissolving and coagulating be reduced to crystals, and dissolved with purified tartar and water, and of Gold you will get a yellow solution, and of silver a white inclining unto green, which being reduced to the consistency of honey, may be used safely and without fear. The solution of Gold doth loosen and keep the body open; it effectually strengtheneth the stomach, heart, lungs, and liver, and other principal members: and that of silver purgeth very forcibly, according to the quantity given, like another purge, but without harm or danger, so that in all diseases where purging is necessary, it may be used safely from $\frac{1}{2}$ k to $\frac{1}{8}$ ounce but that of gold is used in a smaller quantity: and both the liquor of gold and of silver may very successfully be used externally: but because for external uses inferour metals will serve the turn, it is needless to use costly things thereto.

The spirit which is forced from it by distillation, is endued with great virtue: for the volatile part of the metal cometh over Joined with the spirit of tartar, the remainder may be reduced, so as it was taught

of other metals. This spirit, especially that of Gold, is exceeding good in the plague and other diseases, where sweating is necessary: for it driveth not only by sweating, all Malignities from the Heart, but also doth strengthen the same, and preserveth it from all hurtful symptoms. Like wise also that of silver is very commendable, especially it if be first dephlegmed from its CAPUT MORTUUM, as above was taught in the preparation of the common spirit of tartar. For any Physican expert in Chymistry may easily guess what the spirit of tartar well rectified and impregnated with the virtues of gold may effect, and therefore it is needless to make any further mention of it, but it shall be left to the trial thereof.

To make a Tartarised spirit of Antimony.

Crude Antimony cannot be dissolved in such a manner as above hath been taught: but if it be first prepared into flores, or a VITRUM, it yieldeth easily its virtue in boiling, and it is done thus: Take to one part of the flores or of small ground VITRUM ANTIMONII made PER SE, three parts of pure tartar, and 12, or 15 parts of clean water, boil the Antimony with the tartar and water in a glazed pot for three or four hours, and the evaporated water must be still supplied with other that the tartar may not burn for want of water, and the VITRUM must be sometimes stirred about with a wooden spatula (which the flores being light do not need): Thus done, the tartar water will be deep coloured by the Antimony, and leave the remaining Antimony settled in the bottom,

from which pour off the solution, and after having filtered it, evaporate the water from it, and then extract it once more with spirit of wine, and you will get a blood red EXTRACTION, whereof 1, 2, 3 to 10 or 12 drops given at once, causeth gentle vomits, and stools, which may be safely used by old and young in all diseases that have need of purging, and you need not fear any danger at all: For I know no vomit, which purgeth more gently than this, and if you please, you may make it work only (PER INFEPSOPIA) downward, so that it shall cause no vomits at all: and you need do nothing else but make a toast of brown bread, and hold it hot to your nose and mouth, and when this is almost cold, have another hot in readiness, and so use one after another by turns, till you feel no more loathing, and that the virtue of Antimony hath begun to work downward: This is a good secret for those that would use Antimonial physick, but that they are afraid of vomiting, which they are not able to endure. But if you will not spend so much pains, as to make such an Extract, then do as you was taught above to do with the copper, and take ten or twelve grains of prepared Antimony for an old body, but for a young one 5, 6 grains or more or less according to the condition of the person, and 1 ounce or 1/8 ounce of pure tartar, and together with 4 ounces of water put it in a little pipkin, and boil it a quarter of an hour, then pour the solution only into a cup, and dissolve a little sugar in it, whereby the acidity of the Tartar will be somewhat qualified. The DECOCTION drink warm, and keep your self as it is fit, and it will work much better, than if it had been steeped over night in wine, which not every one can abide to take fasting; but this DECOCTION,

because it tasteth like warm and sweet wine, is much pleasanter to take.

N. B. It is to be admired, that well prepared Antimony is never taken in vain: for although it be given in a very small quantity, so that it cannot cause either stools or vomits, yet it worketh insensibly, viz, it cleanseth the blood, and expelleth malignities by sweat, so that mighty diseases may be rooted out thereby without any great sensible operation. Which many times happened unto me, and gave me occasion to think further of it; and therefore I sought how to prepare Anti-many so, that it might be used daily without causing of vomits or stools, which I put in execution accordingly, and found it good, as afterward shall follow.

Of the solution above described, viz, of the flores of Antimony with tartar make a good quantity, and after the evaporation of the water distil a spirit of it, and there sill also come over a black oil, which must be separated from the spirit, and rectified PER SE, and externally applied it will not only do the same wonderful operations, which above have been ascribed to the simple oil of tartar, but it goeth also far beyond it, for the best essence of Antimony hath Joined it self there- unto in the distilling and so doubled the virtue of the oil of Tartar, and this oil may with credit be used not only for all podagrical tumors to allay them very readily, but also by reason of its dryness it doth consume all other tumors in the whole body, whether they be caused by wind or water: for the volatile salt by reason of its subtilty, conveyeth the virtue of Antimony into the innermost parts of the body in a marvellous and incredible way, whereby much good can be performed in Chyrurgery.

As for the spirit, you may not only use it very successfully, in the Plague, Pox, Scurvy, MELANCHOLIA HYPOCONDRIACA, Fevers, and other obstructions and corruptions of blood, but also if you put some of it into new wine or beer, and let it work with it, the wine or beer comes to be so virtuous thereby, that if it be daily used, it doth stay and keep off all diseases proceeding from superfluous humors and corrupted blood, so that neither Plague, Scurvy, MELANCHOLIA HYPOCONDRIACA, or any other disease of that kind can take root in those that daily use it, wherein no metal or mineral (except gold) can be paralleled with it: but in case you have no conveniency to make that spirit, and yet you would willingly have such a medicinal drink made of Antimony, then take but of the solution made with tartar, before it be distilled, and put 1 lb. or 1/2 lb. of it into 18 or 20 gallons of new wine or beer, and let it work together, and the virtue of the Antimony by the fermentation of the wine will grow the more volatile and efficacious to work. And if you cannot have new wine (in regard that it doth not grow every where) you may make an artificial wine of Honey, Sugar, Pears, Figs, Cherries or the like fruit, as in the following third part shall be taught, which may stand in stead of natural Wine.

These medicinal wines serve for a sure and safe preservative, not only to prevent many diseases, but also if they have possessed the body already, effectually to oppose and expel them. Also all external open sores (which by daubing and plastering could not be remedied) by daily drinking thereof may be perfectly cured. For not only BASILIUS VALENTINUS, and THEOPHRASTUS PARACELSUS, but many more before and after them

knew it very well, and have written many good things of it, which few did entertain, and (because their description was somewhat dark) most despised and defamed them for untruths.

In like manner, and much more may this my writing be lightly esteemed of, because I do not set down long and costly processes, but only according to truth, and in simplicity do labour to serve my neighbour, which doth not sound well in the ears of the proud world, which rather tickle and load themselves with vain, and unprofitable processes, than harken unto the truth; and it is no wonder, that God suffereth such men, which only look after high things, and despise small things, to be held in Error.

Why do we look to get our Medicines by troubling our brains, & by subtle and tedious works, whereas God through simple nature doth teach us otherwise. were it not better to let simple nature instruct us? Surely if we would be in love with small things, we should find great ones. But because all men do strive only for great and high things, therefore the small also are kept from them; and therefore it would be well, that we could fancy this maxim, that also things of small account can do something, as we may see by Tartar and despicable Antimony, and not only so many coals, glasses, materials, and the like, but also the precious time would not be wasted so much in preparing of medicaments: for all is not gold that glitters, but oftentimes under a homely coat some glorious thing is hid; which ought to be taken notice of.

Some may object why do I teach to Join the Antimony first with the Tartar by the help of common water before its fermentation with the

wine: whether it would not be as good to put it in of it self in powder, or to dissolve it with spirit of salt (which would be easier to do than with Tartar) and so let it work? To which I answer, that the working wine or drink, receiveth no metallical caix or solution, unless it be first prepared with tartar or spirit of wine. For although you dissolve Antimony, or any other metal or mineral in spirit of salt, or of vitriol, or of salt nitre, or any other acid spirit, and then think to let it work with wine or any other drink., you will find that it doth not succeed; for the acid spirit will hinder the fermentation, and let fall the dissolved metals, and so spoil the work; and besides, Tartar may be used among all drinks, and doth more agree with ones taste and stomach, than any corrosive spirit.

In the same manner as was taught of Antimony, other minerals and metals also may be fitly Joined with wine or other drink, and the use of such Antimonial wine is this, viz. that it be drank at meals and betwixt meals like other ordinary drink to quench thirst, but for all that, it must not be drank in a greater quantity, than that Nature be able to bear it. For if you would drink of it immoderately, it would excite vomits, which ought not to be, for it is but only to work in an insensible way, which if it be done, it preserveth not only the body from all diseases proceeding from corrupted impure blood, as the Plague, Leprosie, Pox, Scurvy, and the like, but by reason of its hidden heat, whereby it doth consume and expel all evil and salt humors (as the Sun dryeth up a pool,) by sweat and urine, and so doth unburthen the blood from all such sharp and hurtful humors, & etc. It doth not only cure

the abovesaid diseases, but also all open sores, ulcers, fistulaes, which by reason of the superfluity of salt humors can admit of no healing, and it doth dispatch them in a short time in a wonderful manner, and so firmly that there is no relapse to be feared.

This drink is not only good for the sick, but also for the whole (though in a smaller quantity) because that it wonderfully cleanseth the whole body, and you need not fear the least hurt either in young or old, sick or healthy. And let no man stumble at it, that many ignorant men do defame Antimony and hold it to be poison, and forbid it to be used, for if they knew it well, they would not do it; but because such men know no more, than what they get by reading, or by hear-say, they pronounce a false sentence; and it might be replied unto them, as APOLIES did to the Shoe maker; NE SUTOR ULTRA CREPIDAN: but what shall we say? NON OMNIS FERRE OMNIA TELLUS. When an Ass after his death doth rot, out of the carcass groweth Beetles, which can fly higher than the Ass from whence they came; in the like manner we wish it may fare with the haters of royal Antimony, viz, that their posterity may get seeing eyes, and what they know not, they may forbear to despise and scoff at.

I must confess, that if Antimony be not well prepared, and besides, be indiscreetly used by the unskillful, that it may prejudice a man in his health, which even the vegetables also may do. But to reject it by reason of the abuse, would be a very unwise act: if perchance a child should get into his hand a sharp-edged knife, and hurt himself or others, because it doth not understand how to use a knife, should therefore the use of a knife be rejected and forbidden to those that are grown

up and know how to use it? Good sharp tools make a good workman; so good quick working and powerful medicines make a good physican; and and the sharper the tool is, the sooner a stone-carver or other craftsman may spoil his work by one cut which he doth amiss: which also must be understood of powerful medicines, for if they be used pertinently, in a short time more good may be done with them, than with weak medicaments in a long time. Now as a sharp tool is not to be handled but by a good workman, so likewise a powerful medicine ought to be managed by an understanding and conscientious physican, who according to the conditions of the person, and the disease, knows to increase or abate the strength of the medicine, and not by such a one, as doth minister it ignorantly without making any difference at all.

Let no man marvel, that I ascribe such great virtues unto Antimony, it being abundantly enriched with the PRIMUM ENS of gold. If I should say ten times as much more of it, I should not lie. Its praise is not to be expressed by any mans tongue; for purifying of the blood, there is no mineral like unto it; for it cleanseth and purifieth the whole man in the highest degree, if it be well prepared first, and then discreetly used. It is the best and next friend to gold, which by the same also is freed and purified from all addition and filth, as we said even now, of man. Every Antimony for the most part agreeth with gold and its medicine; for out of Antimony, by the cleansing Art may be made firm gold, as in the fourth part shall be taught, and which is more, by a long digestion a good part of, the same is changed into gold. Whereby it is evident, that it bath the nature and property of gold, and it

is better to be used for a medicine, than gold it self, because the golden virtue is as yet volatile in this, but in the other is grown fixed and compacted, and may be compared to a young child in respect of an old man. Therefore it is my advice, that in Antimony medicine should be sought, and not to trifle away time and cost in vain and useless things.

Further note, That if you desire to contract nearer together the virtue of Antimony or any other mineral or metal, as above was taught to be done with the Tartar, you must by exhalation of the superfluous moisture in Balneo, reduce the solution to a honey thick liquor, and pour spirit of wine upon it. for to extract, and within few days it will be very red; then pour it off and pour on other, and let this likewise extract: continue this proceeding with shifting the spirit of wine, till the spirit of wine can get no more Tincture; then put all the coloured spirit of wine together into a glass with a long neck, and digest it so long in a warm Balneum, till the colour or best essence of Antimony be separated from the spirit of wine, and settled to the bottom like a blood red thick fat oil, so that the spirit of wine is turned white again; which is to be separated from the fair and pleasant oil of Antimony, which is made without any corrosive, and is to be kept as a great treasure in physick. The spirit of wine retains somewhat of the virtue of Antimony, and may be used with success of it self both inwardly and outwardly. But the Tincture as a Panacea in all diseases acteth its part with admiration, and as here mentioned of Antimony, so in the same manner all metals by the help of Tartar and spirit of wine may without

distilling be reduced into pleasant and sweet oils, which are none of the meanest in Physick: for every knowing and skillful Chymist will easily grant, that such a metallical oil, as without all corrosives out of the gross metals Is reduced into a pleasant essence, cannot be without great and singular virtue.

How to make good spirit and oils out of Pearls, Corals, Crabs-eyes, and other light solable stones of beasts and fishes.

Take to one part of pearls or corals (made into fine powder three or four parts of pure Tartar, and so much water as will dissolve the Tartar by boiling; put the corals, Tartar and water together into a glass body, which must stand In sand, and give it so strong a fire, that the water boil in the glass body with the Tartar, and may dissolve the corals. (This solution may be done also in a clean earthen pot that is glazed, and the evaporated water must be supplied with other, as above was taught to be done with the metals.) The corals being dissolved, let them cool, filtrate the solution, and abstract all the moisture from it in Balneo, and there will remain a pleasant honey-thick liquor, which may be used in Physick either of it self, or else once more extracted with spirit of wine and purified, or else distilled, as you please.

The extract or Tincture is better than the liquor, and the spirit is better than the extract or tincture: and all three may well and safely be used; they strengthen the heart and brain; especially those which are made of pearls and corals, they expel the urine and keep the body

soluble. Those of crabs eyes and of perches and other fishes open and dense the passages of the urine from all slime and impurity, and they powerfully expel the stone and gravel In the reins and bladder.

N. B. The distilled spirit of corals being well rectified, is good for the Epilepsy, Melancholy, and Apoplexy, It expelleth and driveth out all poison by sweating, because it is of a golden nature and quality, whereof in another place more shall be said.

To distil a spirit out of Salt of Tartar and crude Tartar.

If you take a like quantity of crude Tartar and of salt of Tartar, and dissolve it with clean water, and evaporate the water still skimming it, till no skin more do rise, and then let it cool, there will shoot white crystals, which being distilled as common Tartar, they will yield a purer subtler and pleasanter spirit, than the crude Tartar doth, in all to be used as above hath been taught of the simple spirit of Tartar: therefore It is needless here to describe its use. Before you distil a spirit thereof, you may use them in stead of TARTARUS VITRIOLATUS for purging, they will cause gentle stools, and drive also the urine and stone, and are not unpleasant to take. The dose is from 1/2k to 1 ounce in waters fit for your purpose. This salt dissolved with water purifieth metals (if they be boiled therein) and maketh them fairer then common Tartar doeth.

How to get a powerful spirit out of the salt of Tartar, by the help of pure sand or pebble-stones.

In the first part of this book I taught how to make such a spirit, but because the materials, which are to be distilled in that furnace must be cast upon quick coals, whereby the remainder is lost, and that also not every one hath the conveniency to set up a furnace that requireth more room than this here doth: therefore I will set down how it may be got with ease in this our present furnace, without the loss of remainder, which is not inferour to the spirit it self. And it is done thus:

Make a fair white salt of calcined Tartar by dissolution, filtration and coagulation, pulverise that salt in a warmed mortar, and add to it a fourth part of small pulverised crystal or flints or only Of fine sand, washed clean, mix it well, and cast one spoonful thereof at once into your red-hot vessel (which must be made of earth) and so cover it, and the mixture as soon as it is red hot, will rise and boil (as common Allome doth, when it cometh to a sudden beat) and yield a thick white heavy spirit; and when it ceaseth to come forth, then cast in another spoonful, and stay out the time of its settling, and then another part again, till all your mixture be cast in. When no more spirit goeth forth, then take off the lid from the distilling vessel, and with an iron ladle take out that which stayed behind, whilst it is yet red-hot and soft, and it will look like unto a transparent clear white fusible glass, which you must keep from the air, for it will dissolve in it, till I teach you what you are to do with it.

The spirit which came over, may either be kept as it is, or else rectified PER ARENA) in a glass retort, and used in Physick; it is clean of another taste than the spirit of common salt or vitriol, for it is not so sharp; it smelleth of the flints after a sulphureous manner, and tasteth urine-like, and it is very good for those that are troubled with the gout, stone and Tisick: for it provoketh urine and sweat mightily, and (because it cleanseth and strengtheneth the stomach) it also maketh one have a good appetite to his Victuals. What it can do else is unknown to me as yet, but it is credible that it may act its part in many other diseases, which is left free for every one to try. In my opinion (since the spirit of the salt of Tartar is good to be used of it self for the stone, and that here it is strengthened by the sand, which have the signature of the stone of the Microcosme) there is hardly any particular medicine, which can go beyond it, but I leave every one to his own opinion and experience. Externally used, it quincheth inflammations and maketh a pure skin, & etc. The remainder, which I bid you keep, and looks like a transparent clear glass, is nothing else but the most fixt part of the salt of Tartar and flints, which joined themselves thus in the heat, and turned to a soluble glass, wherein lyes hid a great heat and fire. As long as it is kept dry from the air, it cannot be perceived in it: but if you pour water upon it, then its secret heat will discover it self. If you make it to fine powder in a warm mortar, and lay it in a moist air, it will dissolve and melt into a thick fat oil, and leave some faeces behind. This fat liquor or oil of flints, sand or crystal may not only be used inwardly of it self,

but also serveth to prepare minerals and metals into good medicines, or to change them into better by Chymical art. For many great secrets are hid in the contemptible pebble or sand; which an ignorant and un-expert man (if they were disclosed to him) would hardly believe: for this present world is by the devils craft so far possessed with cursed filthy avarice, that they seek for nothing but money, but honest and ingenious sciences are not regarded at all; and therefore God doth close our eyes that we cannot see what lyeth before them, and we trample upon with our feet. That worthy man PARACELSUS hath given it us sufficiently to understand, when he saith in his book (containing the vexations of Alchyristis) that many times a despicable flint cast at a Cow is more worth than the Cow; not only because that gold may be melted out of it, but also that other inferior metals may be purified thereby, so that they are like unto the best gold and silver in all trials; and although I never got any great profit by the doing of it, yet it doth suffice me that I have seen several times the possibility and truth thereof, which in its proper place likewise shall be taught.

This liquor of flints is of that nature toward the metals, that it maketh them exceeding fair, but not so, as women do scowre their vessels of tin., copper, iron, & etc. with lye and small sand, till all filth be scoured off, and that they get a bright and fair gloss: but the metals must be dissolved therein by Chymical art, and then either after the wet or dry way digested in it for its due time; which PARACELSUS calleth to go into the mothers womb, and be born again: if this be done rightly, then the mother will bring forth a pure child. All metals are engendered

in sand or stone, and therefore they may well be called the mother of metals, and the purer the mother is, the purer and sounder child she will bear, and among all stones there is none found purer than the pebble, crystal or sand, which are of one nature (if they be simple and not impregnated with metals:) And therefore the pebble or sand is found to be the fittest bath to wash the metal withal. But he that would take this bath to be the Philosophers secret Menstruum, whereby they exalt the King unto the highest purity, would be mistaken; for their Balneum is more friendly to gold by reason of its affinity with it than with other metals, but this doth easier dissolve other metals than gold. Whereby it is evident, that it cannot be BENARD his fountain (BERNHARDI FONTINA) but must be held only to be a particular cleanser of metals. But omitting this, and leaving it to the further practise and trial of those that want no time nor conveniency for to search what may be done with it, let us take notice of the use of this liquor in physick, for which uses sake this book is written. That which hath been said, was only done to that end, that we may observe, that we must not always look upon dear and costly things, but that many times even in mean and contemptible things (as sand & pebbles) much good is to be found.

How to extract a blood-red Tincture with spirit of wine out of the liquor of pebble-stones.

If you extract a tincture out of pebble-stones, for use in Physick or in Alchemy, then in stead of the white take a fair yellow, green or

blue pebble or flint, whether it hold fixed or volatile gold, and first with salt of tartar distil the spirit thereof; or if you do not care for the spirit, then melt the mixture in a covered crucible into a transparent, soluble and fusible glass, and in a warm mortar make it into fine powder; put this powder in a long necked glass, and pour upon it rectified spirit of wine (it needeth not to be dephlegmed, it matters not if it be but pure) let it remain upon it in a gentle warmth, till it be turned red (the glass with the prepared pebble or flints must be often stirred about, that the pebble be divided, and the spirit of wine may be able to work upon it) then pour off the coloured spirit of wine, and pour on other, and let this likewise turn red: this pouring off and on must be iterated so often, till the spirit of wine get no more colour out of it. All the Tinctured spirit, of wine put together, & abstract in a Balneum through a Lixnbeck from the Tincture which will remain in the bottom of the glass body like a red juice, which you must take out and keep for its use.

The use of the Tincture of pebbles or flints in Physick.

This Tincture if it be made of gold, pebbles or sand, is to be held for none of the least medicines, for it doth powerfully resist all soluble Tartareous coagulations, in the hands, knees, feet, reins, and bladder; and although in want of those that hold gold, it be extracted but only out of common white pebble, it doth act its part however, though not altogether so well as the first. Let no man marvel, that sand or

pebbles made potable, have so great virtue; for not all things are known to all; and this Tincture is more powerful yet, if first gold have been dissolved with the liquor of pebbles before the extraction. And let no man imagine that this Tincture comes from the salt of Tartar (which is taken to the preparing of the oil of sand) because that of it self also doth colour the spirit of wine, for there is a great difference betwixt this Tincture and that, which is extracted out of the salt of Tartar: for if you distil that of the salt of tartar in a little glass body or retort, there will come first a clear spirit of wine, then an unsavory phlegm, and a salt will remain behind, in all like unto common salt of tartar, wherein after its calcining not the least colour appear- eth, and because none came. over neither, it might be questioned where it remained then?

To which I answer, that it was not a true tincture, but only that sulphur in the spirit of wine was exalted or graduated by the corporeal salt of tartar, and so got a red colour, which it loseth as soon as the salt of tartar is taken from it, and reassunieth its former white colour: even as it happeneth also, when the salt of urine, or of harts-horn or soot, or any other like urineous salt is digested with spirit of wine, that the spirit turneth red of it, but not lastingly, but just so as it falls out with the salt of tartar, for if by rectification it be separated again from the spirit of wine, each (viz, both the salt and also the spirit of wine) doth recover again it former colour, whereby it appeareth, that (as above said) it was not a true tincture. He that will not believe it, let him dissolve but 1 ounce of common white salt

of tartar in 1 lb. of spirit of wine, and the spirit will turn as red of it, as if it had stood a long time upon several pounds of blue or green calcined salt of tartar; and if I had not tried it my self several times, I should have also been of that opinion: but because I found it to be otherwise, therefore .1 would not omit to set down my opinion:

though I know I shall deserve small thanks of some, especially of those which rather will err with the greater number, than to know and confess the truth with the less number. However, I do not, say, that the supposed tincture of the salt of Tartar is of no virtue. or useless; for I know well enough that it is found very effectual in many diseases: for the purest part of the salt of Tartar hath been dissolved by the spirit of wine, it being thus coloured thereby, and therefore that tinctured spirit of wine may very fitly be used. But as for the Tincture, which is extracted out of the prepared pebbles, it is clean of another condition: for if you abstract the spirit of wine from it, though it also cometh over white, yet there remaineth a deep tinctured salt, whose colour is lasting in the strongest fire, and therefore may be counted a true Tincture.

How by the help of this liquor out of Gold its red colour may be extracted so that it remains white.

This, oil or liquor of pebbles is of such a condition, that it doth precipitate all metals which are dissolved by corrosives, but not after that manner as the salt of Tartar doth; for the caix of metals which is

207.

precipitated by this liquor; (because that the pebbles do mingle themselves therewith) is grown much heavier thereby, than if it had been only precipitated with salt of Tartar.

For example, dissolve in AQUA REGIA as much Gold as you please, and pour of this liquor upon it, till all the Gold fall to the bottom like a yellow powder, and the solution turn white and clear, which you must pour off, and edulcorate the precipitated Gold with sweet water, and then dry it (as you was taught to do with the AURUM FULMINANS) and you need not fear that it will kindle and fulminate in the drying, as it used to do, when it is precipitated with salt of Tartar or spirit of urine, but you may boldly dry it by the fire, and it will look like yellow earth, and will weigh as heavy again as the Gold did weigh before the solution; the cause of which weight is, the pebble stones, which did precipitate themselves together with the Gold. For the AQUA REGIA by its acidity bath mortified the salt of Tartar, and robbed It of its virtues so, that it could not choose but let fall the assumed pebbles or sand; on the other side, the salt of Tartar which was in the liquor of pebbles, hath annihilated the sharpness of the AQUA REGIA, so that It could not keep the dissolved gold any longer, whereby both the gold and the pebbles are freed from their dissolver.

This edulcorated and dried yellow powder put into clean crucible, and set it between live coals, that it begin to be red hot, but not long, and the yellow will be changed into the fairest purple colour, which is pleasant to behold, but if you let it stand longer, then the purple colour vanisheth, and it turns to a brown and brick colour: and

therefore if you desire to have a fair purple coloured gold, you must take it off from the fire, as soon as it is come to that colour, and let it not stand any longer, else it loseth that colour again.

This fair gold-powder may .be used by the rich (which are able to pay for it) from 1/2k to 1/8 ounce, in convenient vehicles; and in all diseases, where sweating is needful: for besides the provoking of sweat, it comforteth not only the heart, but also by the virtue of the pebble it expelleth the stone in the reins and bladder (if it be not.grown to the height of hardness) like sand together with the urine: so that it may be safely used as well to prevent, as to cure the plague, gout and stone.

How to make further out of this purple coloured gold a soluble Ruby for medicinal use, shall be taught in the fourth part: for in regard that it must be done by a strong fire in a crucible, it doth not belong hither, but to its proper place, where other like Me.dicaments are taught tobemade.

If you will extract the colour out of this precipitate.d gold, then pour upon it (before it be, put into the fire for to calcine) of the strongest spirit of salt, and in a gentle heat the spirit will dissolve part of the gold, which will be much fairer and deeper in colour, than if it had been done with AQUA REGIA: upon this solution pour five or six times as much of dephlegmed spirit of wine, and digest both together its due time, then by the digestion of a long time, part of the Gold will fall out of the SOL:UtiOf1 to the bottom like a fair white powder, which may be reduced with Borax or salt nitre and Tartar; it is white

like silver, and as heavy as other gold, and may easily get its colour again by the help of Antimony. The residue out of which the white gold is faln, viz, the spirit of salt mingled with the spirit of wine, must be abstracted from the Tincture, and there will remain a pleasant sowre liquor coloured by the gold, upon the bottom of the glass body, which is almost of the same virtue, which above hath been ascribed to other tinctures of gold. Especially this liquor of gold strengtheneth the heart, brain, and stomach.

N. B. Sometimes there comes over with the spirit of wine a little red oil, which the strong spirit of salt bath separated from the spirit of wine, and it is impregnated with the Tincture of Gold. It is an excellent cordial, few are found like unto it, whereby weak people decayed by sickness or age, may be kept alive a long time, they taking daily some drops of it, who else for want of the HUMIDUM RADICALE, would be forced to exchange their life for death.

Here some body may ask, whether this Tincture is to be counted or taken for a true Tincture of Gold; or whether there be another better to be found?

To which I answer, that although many may hold it to be such, and I my self do call it so here, yet that after due examination it will not prove to be such: for although some virtue is taken from the gold by this way, yet it doth still keeps its life, though it be grown weak and pale, because it can so easily recover its former sound colour by a contemptible mineral: if its true Tincture or soul were gone from it, surely an inferiour mineral could not restore it to life, but of

necessity there would be required such a thing for to do it, which hath not only so much, as it hath need of for it self, but bath a transcendent power to give life unto dead things. As we may see by a man or any sensible beast, that if they have lost their vigor by adversities, in that no life more is perceived in them, yet by medicines fit for the purpose, they may be refreshed, and brought to. their former health, so that their former disease appeareth no more in them; but if their soul be once gone, the dead body can by no medicines be restored unto life again, but must remain dead so long, till he in whose power it is to give and to take life, have mercy upon it. So likewise it is to be understood of gold, when its colour is taken from it, and yet its life is left, which by the help of Antimony,, being its medicine, as also by the help of iron or copper can be restored. unto it, so that it recoverth its former fair colours, so that you cannot see at all, that it ailed any thing before. But if its life be gone from the body, it is impossible for any ordinary metal or mineral to restore it to life, but it must be done by such a thing, which is more than Gold it self hath been: for even as a living man cannot give life unto a dead man, so but GOD must do it who hath created man; so Gold cannot restore to dead Gold, the life which bath been taken from it, and how could it then be done by an unfixt mineral? But there is required a true Philosopher for to do it, such a one as hath good knowledge of gold and its composition.

Now as we heard that like cannot help its like, but he that shall help, must be more, than he that looks for help. from him: Hence it is evident, that the Tincture, whose remaining body (from which it is taken)

is still gold, can be no true tincture; for if it shall be a true tincture, it must consist in its three principles, and how can it consist therein, the body from whence it came being yet alive, and possessing invisibly all its three principles? How can a mans soul be taken from him, and yet the body live still? Some will say, that for all that, this may be counted a true tincture, although the body still remain gold, and have kept its life: even as man may spare some blood out of his body, which though it will make him somewhat pale, yet he still liveth, and the lost blood may be supplied again by good meat and drink. But what lame and senseless objections are these? Who would be so simple as to think, that a handful of blood may be compared to a mans life? I believe no wise man will.do it. Although life goeth forth with the blood, yet the blood is not the life it self; else the dead could be raised thereby, if a cup full of it were poured into a dead body; but where was such a thing ever heard or seen? With such groundless opinions some did presume to censure the truth, set down in my treatise DE AURO POTABILI VERO, saying, GEBER and LULLIUS were also of opinion, that a true tincture can be extracted out of gold, the same nevertheless remaining good gold: but it may be asked, what it bath lost then for to yield a true Tincture, since it remained good gold? Here no body will be at home for to answer I doubt. What are the Writings of GEBER or LULLY to me? What they have written I do not despise, they were highly enlightned and experienced Philosophers, and would defend their writings sufficiently, if they were alive: and what I write, I am also able to maintain.

Do those men think, that the writings of GEBER and LULLY are to be understood according unto the bare letter? Shew me a tincture of gold which was made by the writings of GEBER or LULLY? If it were so, then every idiot or novice, that could but read Latin, would not only by their writings be able to make the Tincture of gold, but also the Philosophers stone it self, whereof they have written at large; which doth not follow, because it is seen by daily experience, that the most worldly learned men spent many years, and have been at vast charges, and taken great pains, and Studied in their books day and night, and found not the least thing in them.

Now if such Philosophers were to be understood literally, doubtless there would not be so many poor decayed Alchymistso Therefore the writings of such worthies are not to be understood according to the letter, but according to the mystical sense hid under the letter.

But because the truth is eclipsed in their books by so many seducing and sophistical processes, there will hardly any man be able to pick it out from so many seducements, unless a light from God be given to him first, whereby he may be able to peruse the dark writingeof those men, that he know how to separate the parabolical speeches, from those that are true in the letter it self: or if an honest Godly Chymist by the grace of God in his labours do hit upOn the right steps, and yet do doubt, whether he be in the right way or no, then by reading of good and true Philosophers books, he may at last learn out of them the firm and constant truth: else hardly any ones desire may be obtained out of their books, but rather after the precious time spent, means and health wasted, a man shall be forced to fall a begging at last.

213.

In like manner, if the true tincture be taken from Copper, the rest is no more a metal, nor by any Art or force of fire can be reduced to a metallical substance.

N. B. But if you leave some tincture in it, then it may be reduced into a brittle gray body, like unto iron, but brittle.

Another way to extract a good Tincture out of gold by the help of the liquor of sand or pebbles.

Take of that gold calx (which was precipitated with the oil of sand) one part, and three, or four parts of the liquor of crystals or of sand, mix the gold calx In a good crucible with the liquor, and set this mixture into a gentle heat, so that the moistness may evaporate from the oil of sand which is not easily done; for the pebble or sand, by reason of their dryness keep and hold the moistness, and will not let it go easily; it riseth in the pot or crucible, as borax or Allome doth when you calcine them; therefore the crucible, must not be filled above half, that the liquor together with the gold may have room enough, and do not run over the pot: and when it riseth no more, then strengthen the fire, till the pot be red hot. The mixture standing fast, put a lid upon it, which may close well, that no coals, ashes, or other impurity may fall into it, and give it so strong fire in a wind furnace, that the liquor together with the gold calx may melt like water; keep it melting so long, till the liquor and gold together be like unto a transparent fair ruby, which will be done in an hours time or thereabouts; then pour it

forth into a clean copper mortar, let it cool, and then make it into powder, and pour spirit of wine upon it for to, extract, which will look like unto thin blood: and will prove more effectual in use, than the above described Tincture.

The residue from which the Tincture is extracted, must be boiled with lead, and precipitated and driven off as you do ores, and you will get the remaining gold, which went not into the spirit of wine; but it is very pale and turned like unto silver in colour, which If it be melted by Antimony, it recovereth its former colour without any considerable loss in the weight. How the melting in crucibles, and boiling of the remaining gold is to be done, shall be more punctually set down in the fourth part; I know several other fine processes, for to extract the colour easily out of gold; but because the gold must be first made fit for it by melting in a crucible, and that it is not pertinent to speak of that operation here in this second part, therefore it shall be reserved for the fourth, where you shall be informed at large, not only how to prepare Gold, Antimony and other minerals, and make. them fit for extraction, but also how to reduce them into a transparent, soluble and fire-proof Ruby (which are none of the meanest medicines) and as it was done here with the gold, so you may proceed likewise with other metals and minerals for to extract their colours. And therefore being needless to describe each metals tincture by it self, all the processes.of them shall be disclosed in one, viz. in that.of gold. The book would grow too.big, if I should describe them severally, which I count needless to do. Let this suffice for this Second part, that we have taught, how to

extract out of the gold its colour after a common way. Which indeed are good medicines, but for ought I know of no use in Alchemy. But he that seeketh to have a true Tincture out of gold, let him endeavour first to destroy the gold by the universal Mercury, and to turn the inside outward, and the outside inward, and proceed further according unto art, then the soul of gold will easily join it self with the spirit of wine, and come to be a good medicine, whereof more in my treatise DE AUPO POTABILI is handled. If one know the CHALYBS of SENDIVOGIUS, which is well to be had, he might with little labour quickly get a good medicine: but because we shew our selves still ungrateful children unto God, therefore it is no marvel, that he withdraweth his hand from us, and leaveth us in errors.

What further may be done with the liquor of pebbles.

Many more profitable things, as well in Alchemy, as in medicine, may be compassed by the oil of sand; as for example, to make fair painting colours out of metals, which abide in all elements: Also to frame all sorts of transparent hard stones out of crystals, which in beauty are like unto the natural, yea fairer sometimes; also how to make many fair Amauses or Enamels and the like profitable arts: but they belong not to this second part, shall be reserved for the fourth, where all such shall be taught very punctually with all the circumstances there-unto relating.

216.

How by the help of this liquor to make trees to grow out of metals, with thier colours.

Although this process In Physick may be of no great use: yet in regard that to a Chymical Physican it gives good information of the condition of natural things, and thier change. I though it not amiss to set it down here.

Take of the above described oil made of sand, pebbles or crystals as much as you please, mix therewith a like quantity of the lixivium of Tartar, shake both well together, so that the thick liquor may not be perceived in the lixivium, but be thoroughly incorporated therewith; both being turned to a thin solution, and then your water is prepared, wherein the metals grow.

The metals must first be dissolved in their proper corrosive MEN-STRUUM, and the MENSTPUUM must be quite abstracted from thence again, but not too near, that the calx of the metal may not grow red-hot, whereby its growing virtue would be taken from it. Then take it out of the little glass-body, and break in pieces about the bigness of a pulse, and put them in the above described liquor in a clear bright glass, that the growing of the metals may be discerned through it; and as soon as the prepared metals are taken out of the glass body, they must be kept from the air, else they lose their growing virtue. Therefore thus dry they must be broken in pieces, and laid in the bottom of the glass (wherein the liquor is) a fingers breadth one from another asunder, and must not

be laid together on a heap. The glass must stand still in a quiet place, and the metal will presently swell in it, and thrust forth some bulks, out of which branches and twigs do grow, so finely, that one shall admire at it; and let none think that this growing serveth only for to please the eye, for some special thing is hid in it; for all sand or pebbles, although they be white, invisibly contain a hidden tincture or golden sulphur, which none without experience will be able to believe; for If for a time you digest the pure filings of lead in It, there will gold come to stick to the outside thereof (which gold may be washed off with water) and the lead will look as if it were gilded. Which gold came from no where else but from the sand or pebbles, although they were white and clear, so that it could not be perceived in them. It showeth also its meliorating virtue, when the metals do grow therein, and for a certain space of time are digested therewith. For it may be seen apparently, that the metals in the growing do increase from this liquor, and attract what is for their turn; which hence also may be perceived, that when but as much as the bigness of a pea groweth therein, it will grow twice or thrice as big, which is worthy to be considered of. Also the pebbles or sand-stones are the natural matrixes of metals, and there appeareth a great Sympathy between them, especially between the unripe metals and them; as if nature should say to such raw or unripe metals, return into your mothers womb, and stay there the due time, till you have attained there to perfect ripeness, for you were taken thence too soon against my will. Further, out of this liquor there may be made a good borras to reduce the metals thereby. There may be made

218.

also with this liquor fair glazed and firm colours upon earthen vessels like unto Porcellan or China. Also by boiling it with water, a tender impalpable snow-white earth may be precipitated out of it, whereof there may be made vessels like unto Porcellan.

Many other useful things may be brought to pass thereby in mechanical businesses, needless here to relate.

Also unripe and volatile minerals may be fixed and ripened thereby, so that not only they may be the fitter to be used in Physick, but also the volatile gold and silver contained in them may be saved thereby, whereof more in the fourth part.

N. B. Hither belongs also the process of the spirit of lead, Virgins-milk and Dragons blood.

Of the spirit of Urine and of the volatile spirit of Salt Armoniack.

Out of Urine or Salt Armoniack, a powerful and penetrating spirit may be made several ways, which not only is to be used in physick for many diseases, but is also found very useful in mechanical and chymical operations, as followeth.

Take of the urine of sound men living chast, gather a good quantity together in a wooden vessel, let it stand for its time to putrefy, and distil a spirit thereof, which afterward in a great glass retort with a wide neck must be rectified from calcined tartar, and still that which cometh over first, may be saved by it self, and so the second and third also, the strongest may be used for the preparing of metallical medicines,

and the weaker for a medicine alone by it self, or else mingled with fit vehicles: The salt which in the rectification cometh over with the strongest spirit; may be put to the weakest, to make it the stronger, or else it may be saved by it self in a good strong glass.

But because the spirit of urine is tedious to make, therefore I will shew, how to get it easier out of salt Armonlack. The preparation is thus.

Take of salt armoniack, and LAPIS CALAMINARIS, and make each by it self into powder, and then mix them together, and cast of it into the red hot vessel at once no more than 1 or 1/2 ounce. Unto the vessel there must be applyed a great receiver: for the spirit goeth with such a force and power, that it were impossible to distil it in a retort without danger or loss, for I broke more than one receiver with it, before I did invent this instrument. The spirits being well settled in the receiver, cast in more of your mixture; this continue so long till all your matter is cast in; then take off the receiver, and pour the spirit into a strong glass, which must not be well closed at the top, but not with wax and a bladder, because it softeneth the wax, and doth penetrate through the bladder; but first stop it with paper, then melt Lacca or sulphur, and pour it upon it, so that it come to be very well closed, and then it will not be able to exhale, or thou mayst get such glasses made, as in the fifth part shall be taught, for to keep all the subtle spirits in them, for more security sake. And this spirit, if no water have been mixt with it in the receiver, needeth no rectifying: but he that will have it stronger yet; may rectify it by a glass retort, and so keep it for use.

And this is the best way to make a strong spirit out of salt armonlack: the same may be done also, by taking of filed Zinck, instead of LAPIS CALAMINARIS: also by adding of salt of tartar, salt made of the Lee of wood ashes, unquencht lime, and the like: but the spirit is nothing near so strong (although all those things may be done with it, that are done with the former) as that which is made with LAPIS CALAMINARIS or Zinck.

The process or the manner of making it, is thus:

Take 1 lb. of salt armoniack made into powder, and as much of salt of tartar, mix both together by the help of a lye made of tartar, or only with common water, so that all come to be like a pap, and cast in one spoonful thereof at once, into the distilling vessel, then cast in more till you have spirit enough.

N. B. The salt of tartar may also be mixed dry with the salt armoniack without any lye or water, and so distilled: but it is not so good, as when the mixture is tempered with lye or water: for if it be cast in dry, the spirit will come over in the form of a volatile salt: but if the mixture have been moistened, then most part thereof will come over like a fiery burning spirit: In like manner also the mixture of Lime and salt armonlack may be tempered moist, and it will yield more spirit than if it be distilled dry.

It may be asked: why LAPIS CALAMINARIS, Ziuck and unquenched lime, calcined tartar, salt of pot-ashes, fixed salt nitre or the like things

prepared by the fire, must be added unto salt armoniack, and whether it be not good to add some bolus, or other earth (as usually is done to other salts) and so distil a spirit of it? To which I answer, that there are two sorts of salt Armoniack, viz, a common acid salt, and a volatile salt of urine, which without mortifying of one of them, cannot be separated: for as soon as they feel the heat, the volatile salt of urine carrieth the acid salt upwards, and they both together yield a sublimate, of the same nature and essence with common salt armonlack which is not sublimed, only it is purer than the common. And no spirit would come over from it, if it should be mingled with bole, brick, dust, sand, or any other strengtbless earth, and so distilled, but the whole salt as it is of it self (leaving its earthly substance behind) would sublime thus dry: but that it falleth out otherwise with the LAPIS CAL- AMINARIS (which is also like an earth) so that a separation of the salts is wrought thereby, and a volatile spirit cometh over; the reason is, that the LAPIS CALAMINARIS and Zinck are of such a nature, that they have a great affinity with all acid things, and do love them, and are loved by them likewise (whereof some mention hath been made in the first part) so that the acid salt sticks to it in the warmth, and unites it self with it, and the volatile salt is set free, end distilled into a subtile spirit; which could not have been done, if the acid salt had not been kept back, by the LAPIS CALANINARIS or Ziuck. But that a spirit is distilled off by addition of fixed salts; the reason is that fixed salts are contrary unto acid salts, and (if they get the upperhand) do kill the same, and rob them of their strength, whereby those things

which are mixed with them are freed from their bond: and so it falls out here with salt armoniack, that by addition of a vegetable fixed salt, the acidity of the salt armoniack is killed; the salt of urine, which formerly was bound therewith, gets its former freedom and strength, and being sublimed turns into a spirit. Which could not have been done, if common salt had been added to the salt armoniack instead of salt of tartar; for the salt of urine would thereby (as by a far greater enemy be killed and kept back, so that it could yield no spirit. I thought fit to give notice hereof to the ignorant (not for those, who knew it before) and to the unknowing it will do much good, and that they may have a light for other labours: for I have many times seen, and see it still by daily experience, that the most part of vulgar Chymists, whatsoever they do (having got it either by reading, seeing, or hearing) they hurl it over like botchers, and are not able to give any solid reason, why this or that must fall out in such or another manner, not labouring to find out the natures and conditions of salts, minerals, and other materials, but contenting themselves only with the Receipt, saying this or that Author hath written so, and therefore it must be so, whereas many times such books are patcht up out of all sorts of authors. And those that stick to so many books, will hardly ever come to get any good, but are led out of one Labyrinth into another, spending their life miserably in watching and cares: but if they would first seriously consider things, and learn to know nature, and then take their work in hand, then they would sooner attain unto true knowledge; and so much of this matter by the way. I hope that he that hath been in error will

be pleased with it, and the knowing will not grudge us having imparted it to the ignorant.

That which remains after the distillation is done, is also good for use; if the addition have been of salt of tartar, a melting powder may be made of it, to reduce metals. Of LAPIS CALAMINAPIS or Zinck, yields PER DELIQUIUM a clear, white, and heavy sharp oil, for the sharper part of salt arnioniack, which did not turn to spirit, hath dissolved the LAPIS CALAMINARIS, and is almost of the same virtues for external use in Chyrurgery with that, which above in the first part which was taught to be made out of LAPIS CALAMINARIS, and spirit of salt, save only that this in the distilling doth not yield so strong a spirit as the other, but only yields a sharp sublimate.

Of the virtue and use of the spirit of Salt Armoniack.

This spirit is of a sharp penetrating essence, and of an airy, moist, and warm nature; and therefore may with credit be used in many diseases, 8, 10, 12. (more or less) drops thereof used in a convenient vehicle, do immediately penetrate all the body over, causing sudden sweating, opening the obstructions of the spleen, and dispersing and expelling many malignities by sweat and urine, it cureth the quartane, collick, the suffocation of the Matrix, and many more diseases.

In brief, this spirit is a safe, sure, and ready medicine for to disperse and expel all tough, gross and venemous humours. Also, this spirit acteth his part externally, quenching all inflaminations, curing

the Erysipelas and Grangrene; it allayeth the pains of the gout, clothes being dipt in it and apply-ed: and although it draw blisters, it matters not; laid to the pulse, it is good in ardent fevers, it asswageth swellings and pains; disfuseth congealed blood, helpeth strained limbs, and benumbed nerves: only smelled unto, it cureth the megrim, and other Chronical diseases of the head: for it dissolveth the peccant matter, and evacuateth it through the nostrils; it restoreth the lost hearing, being externally laid on with a little instrument fit for the purpose. Also in the obstructions of womens courses applied by a fit instrument in a spiritual way, openeth presently, and cleanseth the womb, and maketh women fruitful, etc. Mingled with common water, and held in the mouth, asswageth the tooth-ache, proceeding from sharp humors which are fallen in the teeth. A little of it applyed in a glister, killeth the worms in the body, and allayeth the colick.

This spirit may also further be used to many other things, especially by means thereof many precious and effectual medicaments may be made out of metals and minerals, whereof some shall be described as followeth.

N. B. There is yet another matter, which is found every where and at all times, and is to be got by every one without distillation and charges, and is as good for the abovesaid diseases, as the distilled spirit, and if all men knew it, there would not be found every where so many sick people, nor so many Doctors and Apothecaries.

225.

To distil a blood red oil of vitriol by the help of the spirit of urine.

Dissolve Hungarian or other good vitriol in common water, and let it run, through a filtering paper, pour of this spirit upon it so much, till all the green is vanished, and the water be made clear, and a yellow sulphur be settled: then pour off the clear, and the rest which is muddy, pour together in a FILTRUM, that the moisture may run off, and the earth of the vitriol remain in the paper, which you must dry, and distil to a blood-red oil, which will open the obstructions of the whole body, and perfectly cure the epilepsie. The clear water must be evaporated dry, and there will remain a salt, which being distilled, yields a wonderful spirit. Before it be distilled, it is a SPECIFICUM PURGANS, whereof 8, 10, 12, to 24 grains taken, may safely be used in all diseases.

The Tincture of Vegetables.

Spices, seeds or flowers being extracted therewith and digested and distilled, the essence of them will come over with it, in the form of a red oil.

Vitriol of Copper.

If you pour it upon calx of copper, made by often heating the copper red hot and quenching it again, it will within an hours time extract

226.

a fair blue colour, and having dissolved as much thereof as it can pour it off and let it shoot in a cold place, and you will get a fair sky coloured vitriol, a small quantity whereof will cause strong vomits; the rest of the vitriol remaineth a blue oil, good to be used in ulcers.

The Tincture of crude Tartar.

If you take common crude tartar, and pour of this spirit upon it, and set it in digestion, the spirit will extract a blood-red tincture, and if the spirit be abstracted from it, there will remain a pleasant red oil, of no small virtue and power.

To make the oils or liquors of salts.

This spirit also dissolveth crystals and other stones, they being first dissolved, and precipitated and reduced to impalpable powders, turning them into oils and liquors, good to be used in Alchemy and Phy- sick.

To precipitate all metals with it.

Any metal being dissolved in an acid spirit may be precipitated better and purer therewith, than with the liquor of the salt of tartar; for AURUM FULMINANS which is precipitated with it fulminateth far stronger than if it were done with oil of tartar.

227.

R. Some juice of Lemon and mix it with the solution of gold, before it be precipitated, and then not all the gold will precipitate, but some of it will remain in the solution, and in time many small green stones (not unlike unto common vitriol) will appear; which in a small dose will purge all noxious humors.

The oil and vitriol of Silver.

If you dissolve silver in AQUA FORTIS, and pour so much of this spirit into it till it ceaseth to make a noise, some of the silver will precipitate in the form of a black powder, the rest of the silver remains in the liquor: the phlegm abstracted from it in Balneo, till it get a skin at the top, and then set into a cool place, there will grow white crystals in it, which being taken out and dryed are a good purge in madness, dropsie, fevers and other diseases, safely and without danger to be used to young and old. The rest of the liquor which did not crystallise may be extracted with spirit of wine, and the faeces being cast away the extraction will be pleasanter. The spirit of wine abstracted from it, there will remain a medicine of no small value in all diseases of the brain.

To extract a red Tincture out of Antimony or common Sulphur.

Boil sulphur or Antimony made into powder in a Lixiviuni of salt of tartar, till it turn red, and pour this spirit upon it, and distil

gently in a BALNEUM, and there will come over a fair tincture with the volatile spirit, silver anointed therewith will be guilt, though not lastingly. It serveth for all diseases of the lungs.

How to ripen Antimony and common Sulphur, so that several sorts of such smells, as vegetables have, arise from thence.

Dissolve Antimony or Sulphur in the liquor of pebbles or sand, coagulate the solution to a red mass; upon this mass pour spirit of urine, and let it extract in a gentle warmth. The spirit being coloured red, pour it off, and pour on other spirit, let it extract likewise, and this you must iterate so often, till the spirit will extract no more tincture; then pour all the extracts together and abstract the spirit of urine from it in Balneum through a limbeck, and there will remain a blood red liquor, and if you pour upon this spirit of wine it will extract a fairer tincture then the former was, leaving the faeces behind, and this tincture smelleth like garlick: and if it be digested three or four weeks in a gentle warmth, it will get a very pleasant smell, like unto the yellow prunes or plums: and if it remain longer yet in digestion, it will get a smell not inferior to musk and amber; This tincture having been digested a long time, and got several smells, is not only notably by the fire increased in pleasantness of smell and taste, but also in virtue: for so many and various sweet smells are perceived in it, that it is to be admired, which variety and exaltation proceedeth only from the pure and ripening spirit of urine, for there is hid in it

a fire, which doth not destroy but preserve and graduate all colours, whereof in another place more shall be said.

N. B. Betwixt the spirit of urine and the animal and mineral Copper their appeareth a great sympathy; for it doth not only love copper above all other metals, and mingleth easily with it, and maketh it extraordinary fair, and of good use in Physick, but it prepareth it also to such a medicine, whereby all venerous sores (both inward and outward use) how deep soever they took root in the blood, without the use of any other medicaments, are perfectly cured; it maketh fruitful and barren, according as it is used; it cleanseth the matrix, hindreth the rising thereof, and miraculously furthereth womans courses that have been stayed, above all other medicaments of what name soever.

If this spirit be mingled with the volatile (but not corrosive) spirit of vitriol or common salt there will come a salt out of it, which is inferour to none in subtleness, and useful both in Alchemy and Physick.

N. B. The liquor of the salt of tartar, and the spirit of wine do not mix without water, this being the mean partaking of both of their natures, and if you add unto it spirit of urine it will not mingle but keep its own place: so that these three sorts of liquors, being put in the same glass, and though they be shaken never so much will not incorporate for all that: the liquor of the salt of tartar keepeth to the bottom, next to it will be the spirit of urine, and on the top of that is the spirit of wine: and if you pour a distilled oil upon it, that will keep uppermost of all, so that you may keep four sorts of liquors in one glass, whereof none is mingled with the other.

230.

Although this be of no great profit, yet it serveth for to learn thereby the difference of spirits.

Of the spirit and oil of Harts-horn.

Take Harts-horn, cut it with a saw into pieces, of the bigness of a finger, and cast in one at a time into the aforesaid distilling vessel, and when the spirits are settled, then another, and continue this until you have spirits enough: and the vessel being filled with the pieces that were cast in, take them out with the tongs, and cast in others, and do this as often as is needful. The distilling being finished, take off the receiver, and pour into it dephlegmedspirit of wine, which will cleanse the volatile salt; pour the oil with the spirit and volatile salt through a filtering paper made wet first and lying in a glass funnel, and the spirit of wine together with the spirit of Harts-horn and the volatile salt will run through the paper, and the blackish oil will stay behind, but it must quickly be poured out, else it will pass through after them. The spirit together with the volatile salt rectifie through a retort, and the beet part of the spirit will come over together with the spirit of wine and volatile salt; and when the phlegme is corn- ing, take of the spirit, which is come over, that the naughty phlegm may not come amongst it; keep it well, for it is very volatile, the oil may be mingled with salt of tartar, and rectified by a glass retort, and so it will be clear; if you will have it fairer, you must rectify it with spirit of salt.

231.

The first, which is done with salt of Tartar, is of more virtue; it cureth the Quartane, and provoketh sweat extremly, cureth all internal wounds and pains, which were caused by falls, blows, or other ways: 6, or 8, 10 to 20 drops of it taken in wine and sweated upon it in the bed. The spirit is very good for all obstructions of the whole body, from 1/24 to 1/8 ounce therefore taken in a fit vehicle, provoketh urine, and forceth down womens courses, it cleanses the blood and maketh sweat mightily. In the Plague, Pox, Leprosie, Scurvy, MELANCHOLIA HYPOCHONDRIACA, malignant Fevers, and the like where sweating is necessary, it proveth a rare medicine.

To make the spirit of mans hair an excellent medicine.

After the same manner you may make spirits out of all kind of horns and claws of beasts: but since by reason of their ill smell the use of them is not liked (although in several heavy diseases, as in the fits of the mother and Epilepsie, they do admirably well) therefore I will acquiesce. However it is worth observing, that the spirit made of mans hair is not to be rejected in metallical operations, for it dissolveth common sulphur, and reduceth it into a milk, which by further ripening may be turned into blood, the like whereunto no spirit is able to do. The same spirit may also of it self, without addition of sulphur be fixed into a ruby-; but that which is ripened with sulphur is the better; and if it be brought so far by the fire, that it have lost its stink, and be made fixed than it will be sufficiently to pay for the pains and coals bestowed upon it.

N. B. Hither belongeth the Process to pour dissolved metals upon filed harts-horn, and so to distil them.

Of the oil of Amber.

Amber yieldeth a very pleasant oil and of great virtue especially the white Amber: the yellow is not so good, and the black is inferior to this; for by reason of its impurity it cannot be well used inwardly; and there cometh over also along with it a volatile salt and an acid water, which must be separated; the water (for ought that I know) is of little virtue; the salt if it be sublimed from the salt of Tartar and purified, is a good diuretick, and in the Stone and the Gout, may successfully be used both inwardly and outwardly. The oil if it be rectified, especially that which comes over first, is an excellent medicine against the Plague, Epilepsy, rising of the Mother and Megrin, 6, 8, 10, to 20 drops being taken thereof at once, and the nostrils also being anointed therewith for to smell to it; and it is to be observed, that when it is rectified with spirit of salt, it proveth much clearer, than done by it self without addition: but if it be rectified with salt of tartar, it is of much more virtue, though it fall not so clear, as that which is done by spirit of salt.

N. B. If it be rectified from a strong AQUA REGIA having before once already been rectified with spirit of salt, it will turn so subtile, that it is able to dissolve iron or copper in some sort, and to reduce them into good medicines; and in this second rectification by AQUA REGIA

233.

all will not come over, but part of it will be coagulated by the corrosive water, so that it turneth thick, like unto mastich, which in the warmth is soft, and may be handled with owns fingers like wax, but in the cold it is so hard, that it may be broken and made into powder, and glittereth like gold.

Of the oil of Soot.

Of the soot, which is taken from Chimneys, where nothing is burnt but wood, there may be distilled a sharp volatile salt and a hot oil. The salt is in virtue not unlike unto that which is made of harts-horn or amber, and it quencheth inflammation, from what cause so ever it do proceed: The oil may without rectification externally be used very successfully for all loathsome scabs, and for a scald head, etc. But if it be rectified, as hath been taught to be done with the oil of Tartar, of Amber, and of Harts-horn; then it may safely be used inwardly, as the above written oil are used; for it doth as well as these, yea better in some special cases.

How to make a good oil out of soot without distilling.

Boil the soot in common water, till the water turn blood red (urine is better than water) and set this solution (being in an earthen pot) in winter time into the greatest frost so long till all in the pot be frozen into one piece and turned white: then break the pot and the ice,

234.

and in the midst thereof you will find the hot oil unfrozen in colour like blood, which is not much inferior in virtue unto that which is distilled, yet afterwards it may be rectified, and so exalted in its virtue, when you please, and it is to be noted, that this separation doeth only succeed in the greatest frost and cold, and not else.

Of the spirit and oil of Honey.

Of honey there may be made a subtle spirit and a sowre vinegar, if it be mingled with twice as much of pure calcined sand and so distilled; and it falleth much better yet if it be made with the flores of Antimony, which were taught to be made in the first part, whereby the spirit is increased in its virtue, and its running over hindered thereby; and so distilling it, there will come over a pleasant spirit, a sharp vinegar and some red oil also, which must be separated: the spirit after the rectification inwardly used is good in all diseases of the lungs. It openeth and inlargeth the Breast, strengtheneth the Heart, takes away all obstructions of the Liver and Spleen; it dissolveth and expelleth the Stone, resisteth all putrefaction of the blood; preserveth from, and cureth the Plague; all Agues, Dropsies, and many other diseases, daily used from 1/24 to 1/8 ounce taken with distilled water proper for the diseases the sowre vinegar coloureth hair and nails as yellow as gold: it cureth the itch and scabs of the skin; it cleanseth and healeth old and new wounds, they being bathed and washed therewith.

The red oil is too strong to be used of it self, it may be mingled

235.

with the subtle spirit which came over first and so used, and the spirit will be exalted thereby in its virtue.

Of the oil and spirit of Sugar.

In the same manner as hath been taught of honey, there is also made a spirit and oil of sugar, viz, adding pure sand to it; or (which is better) of the flores of Antimony, and then according to the rules of Art one spoonful after the other of this mixture cast in, it will yield a yellow spirit, and a little red oil, which after the distillation must be digested in Balneo so long together, till the spirit have assumed the oil and be turned thereby very red in colour; it needeth not to be rectified, but may daily be used either by it self, or with such vehicles as are proper for your purpose; in all it is like in virtue unto that which was made of honey; yet this of sugar is more pleasant than the other; it reneweth and restoreth all the blood in man, in regard that it received great virtue from the diaphoretical flores of Antimony; and this spirit may fitly be used in all diseases, it can do no hurt, neither in cold nor hot diseases; it doth help nature mightily, and doth so much good, that it is almost beyond belief. Especially if for a time it be used daily from $\frac{1}{24}$ to $\frac{1}{8}$ ounce. The residue of it is black, and may be kept for the same use again, viz, for an addition to other honey or sugar, or else you may sublime it again into flares in the furnace described in the first part, or in the furnace described in the fourth part of this book, with an addition of iron or tartar, reduces it into a REGULAS, & etc.

To distil an excellent spirit and a blood red tincture of corals and sugar.

If you mix sugar with red corals made into powder and distil it, there will besides the spirit come over a blood-red tincture like a heavy oil, which is to be joined with the spirit by digestion in Balnec, and it will be as virtuous as that which was made with Antimony diaphoreticum. It doth perfectly and lastingly cure the epilepsie in young and old; it cleanseth the blood from all filth, so that the Leprosie together with its several species may be cured thereby, etc. Its use is the same as was taught above of the Antimonized spirit of sugar.

The spirit of Muste or new Wine.

Take sweet Must or juice of grapes, as soon as it is squeezed out, boil it to the consistency of honey, and then mix it with sand, corals, or (which is better) with flores of Antimony, and so distil it, and it will yield such another spirit as that which is made of honey or sugar, only that this is Somewhat tarter than that of honey. With honey, sugar and the juice of grapes, several metals may be dissolved in boiling and so prepared and made up into divers medicaments, both with and without distillation, after the same manner as was taught above with tartar: for honey, sugar, and the juice of grapes, are nothing else but a sweet salt, which by fermentation and addition of some sower thing, may be changed into a sower Tartar, in all like unto that which is gathered in

the wine vessels, There may be made also a tartar out of cherries, pears, apples, figs, and all other fruit, yielding a sweet juice; as also of rye, wheat, oats, barley, and the like, whereof in the third part more shall be said.

For every sweet liquor of vegetables, if it be turned Inside out, by fermentation may be changed to a natural sowe tartar; and it is utterly false, that (as some do suppose) only wine yields tartar, which by daily use made of it by those that have very hungry stomachs (like those of Wolves) indistinctly together with the nourishment went into the limbs, and there turned to a stony matter. If this were true, than in cold Countries, where no wine groweth, men would not be troubled with the Gout or Stone; the Contrary whereof is seen daily; though I must confess, that among all vegetables none yleldeth more than the vine, the concurrent acidity being the cause thereof; for it turneth the sweetness into tartar; for the sowre the wine is, the more tartar it yieldeth; and so much the sweeter, so much the less tartar. By this discourse an industrious Chymist may easily come to know the original nature and properties of tartar, and in default of wine, how to make it out of other vegetables; common salt or the salt of tartar may be distilled with honey, sugar, or sodden wine (SAPA) and it will yield such strong spirits, that metals may be dissolved with them, and they are not to be despised in Physick and Alchemy.

Of oil Olive.

Out of oils made by expression (as oil olive, rape oil, walnut oil, hemp-seed oil, lin-seed oil, and the like) there may be distilled a penetrating oil, useful both outwardly and inwardly, which is done thus: Take common potters clay not mingled with sand, frame little balls of it, as big as a pigeons or hens-egg, burn them (but not too strong) to a hard stone, so that they may attract the oil, and when they are no more quite red-hot, but pretty hot, then throw them into oilolive which is the best: let them lye in it, till they be quite full and drunk of the oil, which will be done in two or three hours (some cast them red hot into the oil, but amiss, because the oil contracts thence an ENPYREUMA) then take them out, and cast in one or two of them at once into your distilling vessel made red-hot, and let it go; and within a while after cast in one or two more, and continue this till you have oil enough.. If the vessel be full of the balls, take them out with the tongs or ladle, that you may proceed without let in your distillation, and in this manner you need not fear the breaking of your retort or receiver, or the burning of your oil. The distillation being performed take off your receiver, pour the oil that came over into a glass retort, and rectify it from calcined Allome or Vitriol, and the Allome will keep back the blackness and stink, and so the oil will come over clear, which must be yet rectified once or twice more with fresh calcined Allome, according to the intentness of penetrating which you look for; that which cometh over first, ought. still to be caught by it self, and you

will get a very fair, bright and clear oil, which is very subtle; but that which cometh after is somewhat yellow, and not so penetrating as the first; and therefore it is but for external use to extract flores and herbs therewith, and to make precious balsoms for cold and moist sores. Also you may dissolve with it Amber, Mastick, Myrrh, and the like attractive things, and with Wax and Colophony reduce it to a plaster, which will be very good in venemous sores and boils, for to attract the poison, and to heal them out of hand. If you dissolve in it common yellow sulphur made into powder, you will get a blood red balsom, healing all manner of scabs, and other like defects of the skin; especially when you add to It purified verdegrease, and in hot sores SACCHARUM SATUPNI, which in a gentle heat and by continual stirring about do easily melt and mingle therewith. It needeth not to be done in glasses, but may be done in an ordinary earthen pot or pipkin.

The use of the blessed oil.

The first and clear is of a very penetrating nature: some drops thereof given in some AQUA VITAE, presently stays the collick, proceeding from winds that could not be vented; as also the rising of the mother, the navil being anointed therewith; and the cold humour being fain upon the nerves, whereby they are lamed; if you do, but anoint them with this oil, and rub it in with warm hands, it will quickly restore them, and therefore in regard of its present help, may well be called OLEUM SANCTUM. If you extract plates of iron or copper with this oil, it will

turn deep red or green, and is a sovereign remedy for to warm and dry up all cold and watery sores. It consumeth also all superfluous moisture in Wounds and ulcerous Sores, as also all other excrescencies of the skin: It healeth tetter and scald-heads, and other like defects proceeding from superfluous cold and moisture. You may also dissolve in it Euphorbium and other hot gums, and use them against great frost, for what limb soever is anointed therewith, no frost how great soever can do it any hurt. The balsomes made with gum or sulphur may be also distilled by a retort, and in some cases they are more useful than the undistilled balsome.

Of the oil of Wax.

In the same manner may be distilled also the oil of wax, the use thereof is in all like unto the former; and for all cold infirmities of the nerves, this is found more effectual yet than the former.

A Spirit good for the Stone.

Out of stones which are found in grapes, there may be distilled a sower spirit, which is a certain and specifical remedy for the stone in the kidneys and bladder, and also for all pains of the gout. It is not only to be used internally, but also externally, wetting clothes in it, and applying them to the places affected, and it will assuage and drive away the pains.

Of the spirit or acid oil of Sulphur.

To reduce sulphur into a sower spirit or oil hath been sought hitherto by many, but found by few. Most of them made it in glass-bells, but got very little that way; for the glasses being quickly hot, could not hold the oil, so that it went away in smoke. Some thought to get it by distilling, others by dissolving, but none of all these would do the feat. Which is the reason why now-adays it is found almost no where right, and in the Drugsters and Apothecaries ehopa they usually sell oil of Vitriol instead of it, which by far is not to be compared in virtue to the oil of sulphur. For this is not only of a far pleasanter sower taste, but In efficacy also much exceeds the other. And therefore being of so great use both in Physick and Alchemy, as in all hot diseases, mingling the patients drink therewith, till it get a pleasant sower taste, for to quench the intolerable drought, to strengthen the stomach, to refresh the lungs and the liver: Also externally for to cure the gangreen: Also for to Chrystallise some metals thereby, and to reduce them into pleasant vitriols, useful as well in Alchemy as Physick: I thought good to set down the preparation, though it be not done in this our distilling furnace, but in another way by dindling and burning it as followeth.

Make a little furnace with a grate, upon which a strong crucible must be fastened resting on two iron bars, and it is to be ordered so that the smoke be conveighed (not above by the crucible, but) through a pipe at the side of the furnace: the crucible must be filled with

sulphur even to the top; and by a coal fire without flame be brought to burn and kept burning. Over the burning sulphur, a vessel is to be apply-ed of good stony earth like unto a flat dish with an high brim, wherein is always cold water to be kept, and whereunto the burning sulphur doth flame: which thus burning, its fatness consumeth, and the acid salt is freed and sublimed to the cold vessel, where it is dissolved by the air, and in the form of a sharp oil runs from the hollow vessel into the receiver, which must be taken off sometime, and more sulphur supply-ed instead of that which hath been consumed, to the end that the sulphur may still burn in the crucible: and beat with the flame to the cold heat: and within few days you will get a great quantity of oil, which else by the (campana) glass-bell in many weeks could not have been done.

N. B. Such a sowre spirit or oil may also be got by distillation together with the flores, viz, thus: If you take pieces of sulphur as big as hens eggs, and cast them one after another into the hot distilling vessel, a sowre oil together with flores, will come over into the receiver, which must with water be separated out of the flores, and the water abstracted from it again in a cucurbit, and in the bottom of your glass body you will find the oil, which in virtue and taste is equil to the former, but you get nothing near so much in quantity by this way, and if you do not look for the oil, you may leave it with the flores, which by reason of their pleasant taste of acid are much toothsomer to take than the ordinary ones.

243.

To the Courteous Reader.

Thus I conclude this second part; I could have set down more medicinal processes in this Treatise: but having as many as will be a sufficient guide for the distilling of other things also, I thought it good here to acquiesce; and whatsoever hath been here omitted, shall be supplied in the following parts.

FINIS.