



A. Ein kleiner Zinßbau mit ziner Pfing B. Ein Zinßbau mit 3 Pfing C. D. D. Zinßbau mit 2 Pfing D. D. D. Zinßbau mit 3 Pfing E. Die Register dadurch die Feuer regiret wird F. Daß eingestete Glas mit seinem Licht und Recipienten G. Die Thier zu dem Rißter H. Daß Aßchenloch I. Ein Körlein mit Kohlen

Part I. before Page 337.



Und mit 4 Jagen,  
Mus die Garne tragen,  
Stelt & recht nach dem Wundt,  
So wird gefangen Frau & Kindt.

THE  
THIRD PART  
OF THE  
Prosperity of Germany.

In which is Delivered,  
The way of most easily and plentifully extracting Salt-petre out  
of Various Subjects every where Obvious and at Hand.

TOGETHER

With a succinct Explication of Paracelsus his Prophecy; that is to say, in what manner  
it is to be understood the Northern Lion will Infrigate or Plant his political or ci-  
vil Monarchy; and that Paracelsus himself will not abide in his Grave; and that  
a vast quantity of Riches will offer it self.

LIKEWISE

What an one that Artist Elias is, of whose coming in the last Days, and his disclosing  
abundance of Secrets, Paracelsus and others have predicted.

To the READER.

Friendly Reader,

Although there are very many Causes that might  
dissuade me from Publishing this Third and the  
Fourth following Part of the Prosperity of  
Germany in Print, (because of the inconveni-  
encies and hurt done me by the perfidious Farnner, against  
whom no body hath hitherto opposed himself; but all have  
conived and wink'd thereat; and consequently have every  
one left such a perfidious Treachery unpunish'd) and incou-  
rage me to leave Germany, a most ungrateful Germany  
as it is. Yet notwithstanding, the Love to my Neighbours  
(amongst whom there are many honest and good Men to be  
found, who lead a troublesome kind of Life to get their daily  
food) hath compell'd me. To such therefore as these are,  
would I willingly give [or hand forth] a Torch [so to di-  
rect them] that they may for time to come fare better and  
more easily get things necessary to uphold Life withal; but  
yet after such wise, as that they set their Hands not,  
for the Gods; sell nor ought to those that Labour not,  
but all good things are sought, and found out by daily La-  
bour and diligent search.

Now albeit, that all those things which are thoroughly  
handed in this book are true, and so confirmed by experience  
as that anyone may easily understand and imitate them,  
yet notwithstanding, I am certain that there will be a very  
many who by reason of their ignorance, cannot understand  
them, and apply them to use; because the greatest part of  
mankind are too much addicted to laziness, and do for the  
most part refuse to apply their Limbs to work, but would  
rather walk abroad, and discomse of Arts when they are in  
their cups.

I say that these secrets of mine will no ways profit such  
kind of Men, for such must first learn in what manner  
the [necessary] Instruments are to be handled, and how the

Operations are to be rightly instituted and managed in  
seemly Order.

There are abundance of Men who (if they hap to read  
some Chymical Writings, or hear others talk of the pro-  
fitableness of them, they) are presently inflamed with such  
a love, that they will even wholly devote themselves to Chy-  
mistry on the hopes of growing rich. And now when they  
have propos'd any thing to themselves, and attempt to do it;  
if they hap to have a sparkle of Fire light on their hands,  
or that by reason of some other obstacle, all things do not im-  
mediately fadge to their minds, they throw away the Tongue  
and the Crucibles upon the Ground, and detest (or curse)  
the Author, because he hath not Written clear enough, and  
that they do not presently extract great store of Gold.

Let not such as these at all persuade themselves that they  
can receive any instruction from these my Writings; for  
my Writings require Men that are diligent, whose minds  
are never wearied with labour, and who are not sloathful,  
and impatient of Labour. Now to the Studios (Sear-  
chers) and especially to such Children (or Disciples) adop-  
ted or chosen by God, all these things will be unto them clear;  
manifestly evident, and easie to be imitated.

Forasmuch therefore as I have spoken many things in the  
First and Second Part of the Prosperity of Germany,  
concerning the making and use of Nitre, I do now go on in  
God's Name, and do teach in this third part, by what easie  
ways Nitre may be variously made, and be fruitfully and  
profitably used both by Noble Men and common Men; so  
that there is not a man in the whole World; but may (if he  
please) get great benefit thereby.

The Omnipotent God, the Author and giver of every good  
thing, bestow upon us to be able to enjoy and make use of his  
Gifts, that all things may tend to one Honour of his most  
Holy Name, and to the Safety and Preservation of us all.  
Amen

Rrrr

O F

## Of the Preparation of SALT-PETRE.

Shewed in the First Part of the *Prosperity of Germany*, the way whereby Wood may be concentrated and turned into excellent Nitre, and which otherwise is every where for the most part consumed by lying rotting in the Woods, and yields no benefit at all unto any Man.

This Operation is to be done with the help of a certain Press artificially contrived for that particular business, the due (or right) description of which, we gave you in the *Continuation of Maraculum Mondii*. But the circulatory Vessels by which the Lixivium of the wood (or the distilled Liquor out of the wood) is to be excited and heated by the Air, have not as yet been described; and therefore we have determined to do it in this Third Part. This Figure therefore represents them, and its use; and is as follows.

There must be two Boxes (as 'twere) made of Boards, each of them of like bigness and capacity, as the Figure (or Letter) A shews. These Boxes are to be so placed, that a Vessel may be set under one end of each Box, to receive in it (if need be) the Lixivium poured into them: Let one of the Boxes or Vessels be filled top full of Horse-dung, Hens, or Pigeons-dung; or else with the Leaves of the Trees, amongst which Fir-tree Leaves are best; then pour thereupon so much of this Lixivium which we shall make a description of by and by, so much as may suffice to moisten the Dung or Leaves contained in the Box or Vessel, and a little to over-top it. The next day (after you have so done) when you judge that all the matter is thoroughly wetted, let the Lixivium run out by a Tap, the which said Lixivium you must pour into the other Box filled with the like matters, and which stands just against it. Let these things stand thus wetted for some days. In the mean time, the matter contained in the first Box grows hot, and the useless moisture being most plentifully resolved into Vapours out of the Lixivium, the said matter doth daily get more and more efficacy. As long as you observe the heat of this Box to continue, and the evaporation of moisture to last, so long must it be left in the same posture whereby the Lixivium, thus poured on, may by its notable power consume and dissolve the Dung, or the other matters contained in the Box, and turn them into Water. And here you are to observe this direction. You must always put in new matter instead of that which is turned into Liquor, and so one Box may be always at all times kept full of the matters. But now when your materials being put in the first Box, begin to cool, the Lixivium which now lies in the second Box or Vessel, must be poured upon the matters yet warm, in the first Box, that so it may again contract a heat thence from by little and little, and so may dissolve those matters. And now whilst these things are thus detained in the first Box or Vessel, the materials that are in like manner put in the second Box do heat each other, and the unprofitable Phlegm evaporateth: Now as long as this second Box vaporateth, the Lixivium must not be drawn out of the first Box and be poured thereinto, but all the matters are to be left to heat or burn (as it were) themselves. And when you perceive that the materials cool, then the Lixivium must be drawn off from the matters in the first Box, and be poured upon them in the second Box; and hereby the matters contained in the first Box will again wax hot, be burnt, and

be turned into Liquor. By how much the oftner and longer this repeated pouring of Lixivium is done, so much the more, and sooner are the materials consumed; from which matters thus consumed, a most excellent Salt-petre may afterwards be made, for the heat makes the matters rot. Now then to make trial (if it be well enough done) take some of this Lixivium boil it away to a sufficient height for Chrytallization, set it in a cold place to shoot, dry the salt you had, being dry, put it on a live Coal, which if you find it burn up, it is a sign that it is full time to draw off, and take all your Lixivium to the intent that Salt-petre may be thereof made by due evaporation and coagulation. But if you chance to find it otherwise, and that the salt does not flame up, the Lixivium must lie longer in the Boxes to be heated and animated by the Air which is magnetically attracted by means of the heat: This labour being rightly ordered, there may be made excellent Salt-petre out of the said matters by the help of a convenient Lixivium, in ten or twelve Months space without any costs, save some small trifle about the Lixivium; neither is the Work so grievous or troublesome, for there is nothing more required but that the Lixivium be several times poured out of one Box into the other.

NB. There are yet, besides the other aforementioned several sorts of matters that offer themselves, out of which, Salt-petre may be made by the help of the Boxes, & a due Lixivium far speedier & plentifuller; but I judge it not needful to divulge every thing: Likewise there may be made a convenient Lixivium to prepare Salt-petre sooner, by and after another manner, to wit, in a dry form, without such putrifying as is done in the Boxes or Circulatories; but even this Artifice too, will I reserve yet a little longer for my Friends.

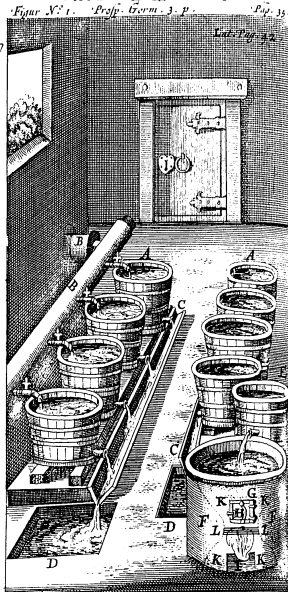
Nay yet more, there may be (by a yet secreter and shorter method) excellent Salt-petre extracted by the means of such a Lixivium in three hours space, and that with most great profit: And this way of preparing Salt-petre, I do prefer before all the others, and have found it the most excellent (Petre) of them all.

*The Lixivium is on this wise made.*

Make you a strong Lixivium of Wood-ashes, and when you burn the unprofitable Wood in the Woods into ashes, make by the same labour of your Fire some good Lime of stones fit for such a purpose: Then quench this Calc or Lime with Water, that so it may fall into powder, then pour thereon as much of the Lee of the Wood-ashes now spoken of, as is sufficient, mixt it with a wooden *Spatula*, and repeat this mixing and stirring it very often, some days following, that so the Lee may be made the stronger by reason of the Lime, and be like Fire, the which has an excellent virtue to putrefy the vegetables and animals, and to turn them into burning Salt-petre. (See the foregoing Figure belonging to this Operation noted at the top page, 1.)



Part I.  
before Page 339



Part I.  
Last Page 332

Part I. the Prosperity of Germany.

- Here the Cuck sits that hatches the Baslish, by the top of the Chest.
- A A Are the two Chests.
  - B The appearance of the Chests within.
  - C The Horse-dung, or Leaves of Trees, wherewith the Chests are filled.
  - D The Cistern or Vessel to receive the Lixivium.
  - E The Pump.
  - F The Man that pumps the Lixivium out of the Cistern, upon the matter in the Chests.
  - G The Bottom of the Chests full of holes.
  - H The Second or lowermost Bottom where the Lixivium is kept without running out.

Another way of making Excellent Salt-petre in great Quantity out of Lime and the Lee of Wood.

TAKE the aforesaid Lime and Wood-ashes, of each as much as you will; and twice as much Horse-dung or Cows-dung, mix these matters exactly in a wooden Vessel or Tub, with Mans Urine or beasfs Piss, and make it of the thickness of the thicker sort of Mortar that the *Masons* use, is wont to be of. You must have good store of this Paste made. Then make a certain arch of boards, which said arch must be some three, four, six or more feet broad, and deep or high, and the length of it must be double to that (or twice as much, as broad, and deep, or high) according to the convenience of the place, and the quantity of Salt-petre you would make. The arch thus made, must be all over dawbed with the aforesaid mixture, the thickness of an hands breadth, just as we see Vaults, or Arches built up, of Stones and Lime upon wooden arches. Now when all is duly ordered, there must be put some Fire in under the vault of the arch, at first it must be very gentle, least the arch (of wood) as being the very foundation and supporter of the (other) arch should presently kindle and be burnt, which must not be, but be kept whole rather, until the arch or covering thereon which is made of Lime, Ashes, and Dung; be perfectly dried. This done, there must be dawbed on, upon the said arch formerly made, more of the aforesaid prepared Calx, of about an hands-breadth thickness, and you will find that the humidity of this latter mafs or second arching will be in a short time attracted by the first arch, and that this second pargetting will soon be dried: When this is done, there must be again the third time made another dawbing on, after the aforesaid manner. And this Operation is to be so long and so often repeated until the arch be a foot or two in thickness, which when so, it is strong enough, nor needs it any more its wooden prop, and therefore now the Fire may be put thereto, and it may be burnt. And thus have you a vault or arch prepared, which is a most commodious instrument to make a quantity of Salt-petre by: And now if occasion require, and the condition of the place will permit, there may be built or made three or four arches after the same manner; though it be better to have them placed one by another, and to be of less magnitude or capacity; for so they are more convenient for Operation, as any one that practiseth hereabouts will easily apprehend and find.

Likewise it is better to build this arched Vault which we have called an Arch, long and narrow, than

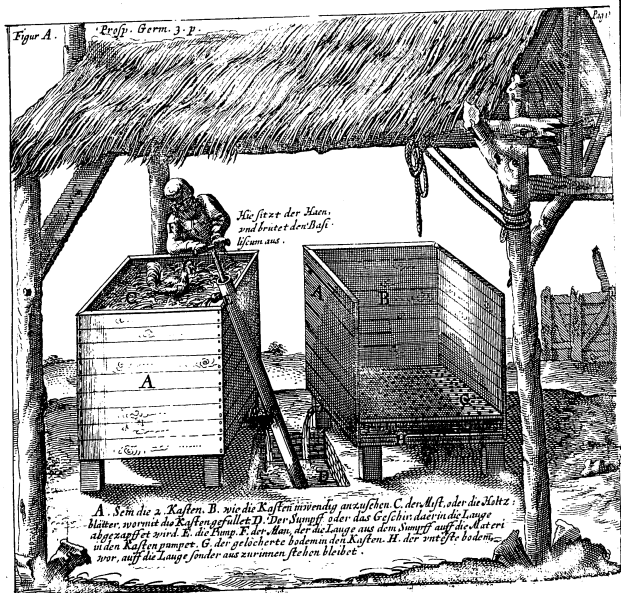
short and broad, because the Fire being put under one part of such a long Chimney-like Vault, will very well diffuse its heat to every place thereof, and so keep the arch continually hot.

When this Chimney like vault is wholly dry, it must be again moistned with Mans or Beasfs Piss, that it may thence contract more new humidity, which we observe will easily be, seeing we know that it is made up of Horse or Cows-dung, and not barely of Lime, for then it would not so readily and easily receive the humidity, as when Dung is mixt with it; the wetted Chimney-arch must be dried by the force of Fire put thereunder, the which may also be a little augmented proportionable to the bigness and thickness of the vault or arch.

NB. You must take good heed, that the Fire put under be not too much augmented, and so hurt your arches, but let it always be such as may suffice to dry your arch by little and little, or else the Dung will be burnt up, and the already generated Salt-petre will be spoiled, for the Fire can easily endamage the Petre.

But now when we shall have often thus moistned the said arches with Piss, and shall take notice that they (viz. the arches) do attract no more thereof (viz. of the Piss) as being already filled with the 'alt of the Urine, the which may be done in some four or six Weeks time, there must be little bits broken off with an Iron Instrument in several places of the arch, and these bits must be powdered and be dissolved in Water so to make a Lixivium of it, be filtered, and after a due evaporation made, must be Chrytallized and dried; the dried Salt matter must be put upon the Fire to see if it will flame or not: If we shall find it thus to be and to burn like Salt-petre, we must break down all the arch, and by the help of a certain Mill, reduce it into powder very fine, and pour hot Water thereupon, to extract the Lixivium with, then evaporate it as much as is convenient, and set it by in a cool place to Chrytallize; this artifice of Boiling and Chrytallizing shall be declared in proper Figures or Cuts in the end of this Work. But now if so be we perceive that the Salt extracted out of those little bits of the arch do not as yet flame up, 'tis a sign that it is not as yet sufficiently animated by the air: For the air gives life, which the Fire strongly attracteth, so that by the help of the Fire the air and life are attracted, whereby the Salt is animated and made inflammable. The Fire therefore here, is to be again admindred (or put under) and the arched matter to be continually moistned with Rain water; and that Rain water is best, which (if it may be had) falls down when the Wind is in the North; though when there is no Rain water to be had, other water may be substituted in its stead. This pouring on of water is to be so long continued (always, permitting the Furnace or Arch to be rightly dried afore it be sprinkled with new water) until the Salt, sticking in the arch, be found to be sufficiently animated by the benefit of the fire and air, and be inflammable when you make trial thereof by the aforesaid method.

This is a compendious way of making good Salt-petre in quantity enough, by only Lime, Wood-ashes, and Mans or Beasfs Piss. If you proceed rightly on, you may get you a great quantity of Salt-petre in a most short space of time, and that for small cofts, & in a manner no labour at all. The Lime and Ashes from whence the Petre is extracted, may be mixed again with new lime and new ashes, and other arched vaults be made thereof, upon which Urine must be continually poured



A. Sien die 2. Kasten. B. wie die Kasten nimmer anzuweisen. C. der Mast, oder die Holz-Blätter, womit die Kasten gefüllt. D. Der Sumff, oder das Geschur, das in die Länge aller Kasten wird. E. die Pump. F. der Man, der die Länge aus dem Sumff auf die Materie in den Kasten pumpt. G. der gelocherte Boden in den Kasten. H. der unterste Boden, wor, auf die Länge sonder aus zu rennen, stehen bleibt.

in like manner as we taught above, that so they may be animated by the help of fire and air into Salt-petre. But if you have always at hand new Calx, or Lime and ashes, it is better to make new arches, thereof in the place of those you have pulled down, and to employ the residue of that, out of which the Salt-petre hath been already extracted about dunging some barren Soil, especially the moister sort of Ground, because it is impossible to thoroughly to separate all the Salt that nothing abides behind in the reliques.

This way I communicate to all, but I reserve for my Friends only the way by which, with the help of other Waters that cost nothing, and may be had in every place, a far greater quantity of Salt-petre may in a yet shorter time be prepared by the said arches, than is done by the help of Mans or Beasts Urine. Nay more, there are some waters which in eight days time, we have observed to have been coagulated into burning Salt-petre, which secret verily may be practically improved with most notable benefit in all parts of the World that Men live in.

Besides the subjects already mentioned, here offer themselves to our Hands many others which are obvious to all, of which such arches may be made, and which will yield more Salt-petre than the afore recited matters will; but let what has already been delivered, suffice. I cannot here forbear, but must tell you that there are some subjects to be found which (without the making the aforesaid arches, though there lie notwithstanding abundance of secrets therein) will bring a most notable benefit, and that belong not to this place, and which may be changed in three hours space into excellent Petre; which labour (or operation) I keep for my Friends, and should it be divulged, it would bring nothing but hurt, and therefore it is better to be silent: There shall more secrets be delivered in the following discourse, where we speak of the Northern Monarchie.

*Here follows another way of plentifully extracting Salt-petre out of Rocks and Stones without Vegetables or Animals.*

TO the intent therefore that it may be sufficiently evidenced, and that I may prove it to be true, that Salt-petre is an universal Salt or Subject, and is consequently contained in all the things the World possesseth, I judge it a thing worth while to set down here some proofs or trials thereto accommodated.

It hath been sufficiently enough already shown in the first part of the Prosperity of Germany, that good Salt-petre may by Art be extracted out of all the subjects of the World: But the way of so doing was not at all disclosed. For as much therefore as all Men do so greedily desire it, I determined with my self to describe first of all, the Presses requisite to the extraction of Salt-petre out of Wood. to the end that so it may evidently appear unto all Men, that it is a thing agreeable to nature, and that it is most easily accomplishable, to press a juice out of any Wood, which may be turned by the air into good Salt-petre. But as for the circulatory Vessels, I was not willing (then) to communicate them, but rather kept them a little longer for my Friends, which said Vessels I have notwithstanding set down in this Third Part.

Likewise it seemed not expedient unto me to reveal unto such as are enemies, the transformation (or changing) of Animals, much less of Minerals into

Salt-petre. Yet however I have done so much by my Manufacture, as for any wise Men easily to understand the same by what hath been exhibited, and I have in some sort opened it, that such things are possible to be done. But I have not so clearly shown the way of effecting the same, least I should take away the occasion of other Mens exercising their ingenuity in be thinking themselves how it is to be done: Otherwise, it is not prohibited any one to seek a fuller information, from those that have knowledge in these affairs.

Therefore, so far as the way of extracting Salt-petre out of Stones, is look'd on as a most impossible thing by such as are not skill'd in this Art, I have determined to describe the same, for the sake and benefit of such as succeed us; The knack of this Artifice consisteth more in the knowing of the Stones, than in the extracting of the Salt-petre out of them, for the extraction is not any other way to be done, than as the making of their Lee out of the common Nitrous Earth is wont to be, concerning which things, *Lazarus Ercker* hath written at large. The knowledge therefore of the Stones, and the preparation of them whereby they may communicate (or let go) their Nitre unto Water, is the principal thing, and without that, there cannot be any thing done in this Operation.

First of all therefore 'tis necessary that the lover of Chymistry knows, that there are various Stones to be found that yield Salt-petre, viz. all such Stones of which (being commonly calcined by the force of the fire) they make Lime for to build houses withal. For there lies hidden in these kind of Stones, abundance of Salt-petre, which cannot be gotten out thence by the help of common Water by any kind of way or method: But when they are burnt with a violent Fire, they yield an hot Salt, extractable by the benefit of common water; which Salt indeed is not Salt-petre, but yet may most easily be turned by the air into Petre, like as it was formerly Salt-petre afore the Stone was burnt, and now first got another nature by the burning.

The truth of this thing, viz. That there resides natural Salt-petre in all Stones, which may be burnt into Lime, may be proved on this wise following:

Take of these Stones which Lime may be made of,  $\frac{3}{5}$  or  $\frac{3}{4}$  powder it very fine, pour thereupon as much of the best *Aqua-fortis*: Place the Glass in which this matter is contained, in a warm place upon ashes or sand, that the stone may be dissolved in the *Aqua-fortis*: After it hath thus stood for about one quarter of an hour, take out your Glass out of the ashes or sand, though the stone be not wholly dissolved as yet, and pour thereon drop by drop, some Lixivium of wood, until the ebullition of the Lee or Lixivium poured upon the dissolved stone ceaseth, and (the noise ceasing) you shall perceive some kind of Salt produced from them thus commixt, viz. from the dissolved stone and the Lixivium. Pour some common Water upon this Salt, so much as may serve to dissolve the Salt in a warm place, the solution being made let the Liquor be filtered, or be strained through some thin Linen cloth, that so the part of the stone undissolved, and the faces may abide behind in the Filter or Linen cloth: The filtered Liquor must be coagulated into Salt by evaporating it away in a brass Vessel, then you are to weigh it: And now that we may exactly know, how much Salt-petre was in that  $\frac{3}{5}$  of the stone, you must proceed on farther thus:

Take the same quantity of *Aqua-fortis* as you used before now, about the solution of the Lime-stone, and put thereon likewise the same quantity of Lixivium, that

you

you used about the precipitation of the dissolved stone, and let there be made a precipitation, let the precipitated matter be coagulated into the substance of a salt, and then also weigh how much this quantity of salt is: and now, as much less weight, as you observe to be in this salt than in the first salt in which the Lime-stone is, so much Salt-petre was there in that half ounce of Lime-stone. This is a most certain trial, and by this means may we most easily find how many pounds of Salt-petre, are contained in an hundred weight of stones.

NB. To the end that the proof you make, may be most certain, we must use the lesser Centenary, or hundred weight, as being more usual, and more accommodate for the trying of Metals.

And albeit, that the using of *Aqua-fortis* to this Operation, is altogether without profit, where you would extract that salt in great plenty out of the stones, yet notwithstanding, it is not so slight or trivial a thing to know a certain way of trying what stones do most abound with Salt-petre, that so if we have a mind to extract Salt-petre out of them, we may take those, in which it lies in a plentiful manner.

Besides, those stones which do commonly yield a Calx or Lime by Calcination, and which the Bricklayers use; there are found other stones, out of which there cannot be made any Lime by Calcination, and yet nevertheless, abundance of Salt-petre may be thence extracted without any previous Calcination. He that delights himself in this work, must exactly know beforehand such kind of stones: Forasmuch as no body would easily persuade himself that Salt-petre is contained in them. Nor do I think that ever afore this time the way of extracting Salt-petre out of these kinds of stones was used; but whether there was no body that knew that there was such a Salt contained in them, or judged it a thing not to be regarded, this I know not. But this I know well enough that that way of extracting Salt-petre out of them was never observed and used in Germany, though there lies a most notable quantity of Petre in them, and easily extractable thence, did we but know the way.

Therefore, so far as there is plenty enough of such stones in all places, and that Salt-petre may easier be made of them, than of wood, I could not forbear, but must needs open and disclose this artifice for the good of the Country, and clearly explain it in this place.

Therefore, as concerning those stones which are here mentioned, there is such a plentiful store of them in most places, that they even make whole Mountains; they are in substance like a soft and tender stone, whitish in colour, [or of a shining colour] ahy colour'd or reddish, and are easily broken, and may be fashioned into all kind of shapes, or figures; and therefore they are frequently used about building Houses, for the making various Ornaments about the House, as for the corners of the Houses, the Doors, Windows, Steps or Stairs, or other External Ornaments. As long as they are yet in the Mountain, and not exposed to the air, they are of a considerable hardness enough, and do always hold it. When being used about Buildings, they are put in such places, where they may abide at all times dry, or else always moist.

But if so be they are one while dry, and another while moist, and are always obvious to the air [or weather] they easily become soft, and there scales off from them yearly, a little portion of the back of a Knives thickness, like Meal, so that they are yearly

lessen'd, and are not at all fit to build stable, or durable Houses with. The Stone-Cutters can easily distinguish these kind of stones from others, nor do they willingly use them where there is plenty of others to be had. And now, if you should go about to make your trial with these stones, like as you did with those that they make Lime of, according to the afore delivered Probation, so to know what quantity of Salt-petre is contained in them, it will not succeed so, because the Salt-petre becomes Volatile in the Calcination of it, and doth for the most part fly away into the air; and much less can you with [bare] water extract ought out of the Crude, and not Calcined stones; for such do not yield any Salt-petre at all, unless they have been placed in a moist air for about half a years space, whereby they may of themselves fall in pieces; for being so ordered, they easily yield forth their saltiness to the water that is poured on them, and consequently yield plenty of Salt-petre. Of which thing, this is a most certain Testimony, if (viz.) such stones are laid in some dry place, whereto the Rain cannot come, and we do most frequently sprinkle them with common water, and they do thereby turn into a powder. And if it fall out otherwise, 'tis a sign that there is very little Salt-petre to be found in them, and that the labour you shall bestow about them will be in vain. But such stones as grow soft, and fall in pieces, in six or eight Months time, do promise notable Rewards for your Labour, viz. a great quantity of the wit for salt; an hundred weight of these kind of stones thus fallen in pieces, will easily yield you ten pound of Salt-petre, more or less according to the Condition of the stone. The extracting of the Lee, or salt, is done with common water, in the same manner as the Lixivium is otherwise extracted out of that Earth which is digg'd up in the Stables where Beasts stand; which way of extracting Salt-petre, of coagulating and perfecting it, is clearly and perfectly enough described by *Lazarus Ercker*, heretofore the Emperours chief Overseer of the Metallick Affairs, in his most experienced Book of his Art of the proving of Metals; inasmuch, that I esteem him to have required the hardest, or most difficult part, very clear, and therefore I will refer the well minded Reader thither.

But for as much as every one cannot buy himself a Book of such great bulk, only to get thereby the knowledge of the way of extracting and evaporating Salt-petre, I have judged it worth while to set down here for the sake of the Chymical Students, such directions as the aforesaid *Lazarus Ercker* hath delivered us hereabouts. For I was never of the mind to call off such things as have been well delivered by other men; I only add unto them, those things that are mine: Let others do the like, that are the Authors of any new thing, that so there may arise some benefit thereby unto our Neighbours, for whose sake, that we may (viz.) serve them, the most great and blessed God hath bestowed on us such various knowledge.

But that we may get a certain knowledge of distinguishing the said stones, I think it altogether necessary to treat of them more at large.

Therefore although this kind of stones are plentifully enough, to be found every where in the World, yet they are not known, or regarded, because we cannot persuade our selves, that there is any the least portion of Salt-petre contained in them; for albeit, that an hundred pounds of such stone should contain in it ten pound of Salt-petre, and we should reduce the same into a most subtle powder, and should labour to

§ f f f extract



extract from thence a Lixivium or Lee, with either cold or hot water, yet should we not hereby get so much as one Ounce of Salt-petre. The reason is this, because there is not to be found in such a Stone as soon as ever it is digged out of the earth, any Corporal Salt-petre, which may be extracted by means of water, but there lies hidden only a certain Soul or Magnet of Salt-petre, by the virtue of which, that which gives a Corporeity thereunto is to be first attracted out of the air, to the end that Salt-petre may arise thencefrom. And this is hereby evident, for were it otherwise, and were there in that Stone any Corporal Petre at the first digging, it must necessarily be extracted thencefrom by the help of water; but we find it impossible to make any such extractions, unless that Stone be before laid for some certain time in the air, and doth, together with its softness, acquire (or make) Salt-petre in a Magetical manner.

But for all this, we know that this our reason for exceedingly well founded, will not yet satisfy the unskillful, unless we make it yet more clear unto them with other Expressions, and various Examples; but I pray how is it possible to declare all such Circumstances to one that is utterly ignorant. 'Tis too much labour to boil Meat for another, and to thrust it into his Mouth too. It is surely sufficient enough to have shewn the truth, and discovered the way by which the operation is to be contrived, though all things be not founded on such palpable Reasons.

But forasmuch, as the work, which I treat at present of, is an altogether new thing, and unknown to any men, the necessity of the thing requires, that we do a little more openly and clearly exhibit (and set down) the whole knack.

We presuppose, that it is a thing well known already, even to all, that each thing hath in it its peculiar magnet, by the benefit of which, it attracteth unto it self from the air, or earth, whatsoever is profitable for it; and especially, because we have largely treated thereof in our Works; inasmuch, that we deem it altogether needless to repeat the same here. However 'tis requisite that I add thus much, viz. That the Minerals do abound with a certain Magnetick Virtue, more than other things do; and that they do attract their Life, Figure, or Shape, and Essence, out of the air, like as the Animals do, that so they may be nourished, and encrease; but being destitute, or deprived thereof, they are observed to be as it were dead, and bound, or wholly void of vigor.

As for Example. Let the Minera, or Ore of Vitriol, or Alum, be digg'd out of the Earth, that the Vitriol, or Alum in this Minera, be already duly digested and ripened, the salt may even presently be extracted thereout of, with common water. But if they have not as yet attained their full maturity, there is no salt extracted thence, unless the Minera be first torried, or calcined. Nay more, a Minera, or Ore, that is yet less ripe, will not yield any Salt, neither by the force of the fire, nor without it; but must be yet farther exposed to the air for some time, that so it may first attract that out of the air, that is requisite to make Vitriol or Alum of, and thus (these things being first done) the Alum, or Vitriol, is most easily gotten thereout of, by a convenient Extraction and Evaporation.

We made mention in the second part of the Philosophical Furnaces, of a certain Minera, or Ore of Vitriol, which is plentifully found at [Hercules in Haff.] sticking in that Earth, which in that place they make their Crucibles or Pots, in great quantity

with; and we shewed a way of making a red and sweet Oil of Vitriol thereof, yet with this Caution, viz. That we shall not have from the said Minera, nor the least portion at all of this Oil, if we do not expose it, broken in bits, to the cold air, for half a year, that so it may fall into powder. Such as have heeded this going to work, have made thereof amongst sweet Oil; but such as have neglected the doing this, which I published out of a sincere heart, and have reduced the said Mineral into fine powder, and laboured to extract a salt thencefrom, by boiling it in simple water, belted their labour in vain, because of their refusing to expose that Minera for a while to the air, and they received not so much as one Grane of Vitriol; and thereupon they took occasion to slander me, and to accuse me of Lying.

But now, when they have observed that this Mineral that they cast away, being exposed to the air, had attracted therefrom a salt by its Magnetick Virtue, when it had lain so long as to mould into powder of its own accord, and that thereout of a Vitriol doth proceed, they were enforced to believe that there lay hidden some Vitriol in those Stones; which notwithstanding, could not be extracted by means of water, and so they have afterward publicly confessed, that what they afore gain'd, or oppos'd, was agreeable to the truth.

Thus likewise, there are various sorts of Copper (Ores) endued with an attractive power, and upon that account, there cannot be separated any Metal, by fusion, when it is first taken out of the Earth, unless we have first exposed it for some Months unto the Air.

Every Nitrous Earth, out of which Salt-petre hath already been extracted, doth (when it is again exposed to the air) attract Salt-petre anew, and this we observe to happen in all Wood-ashes, but especially in Lime-stones Calcined; for, it attracteth more salt out of the air, than its weight was afore its being Calcined. For, at the first time, you will scarce get ij. or iij. lb. of salt out of a centenary, or hundred weight; now by how much the longer it lies exposed to the air afterwards, so much the more plenty of salt doth it yield, as is sufficiently well known already. He that is ignorant of that we speak, or else cannot understand it, let him make trial, and he shall find that what we say is a truth. Such as are Ideots do extremely need these kind of Admonitions, that so, the business being the better understood, we may take from them all occasion of ignorantly detracting from my Writings.

I say again, that if the stones which we here treat of, are but well known, though they do not at the first yield any salt, by endeavouring to extract it with simple water, yet is there no difficulty at all therein, nor should we at all mind that, but let them only be left in the air for some due time, and by this means they will plentifully enough attract, and yield us, by a convenient extraction, good Salt-petre. The Ancients did extract Salt-petre, chiefly out of stones, which way of Extraction is now wholly lost, or out of use. All the Europeans do now extract their Salt-petre out of the Earth of the Stables where Beasts stand; albeit, that the very Name it self of Salt-petre, doth declare, what matter it was first produced out of, viz. out of Rocks and stones: For 'tis as much as to say, salt educed out of Rocks.

Nay, even to this day there is Salt-petre extracted out of Rocks in the East-Indies, the which they transport thence in Ships into our Lands: Our Common-wealth

wealth of Amsterdam only doth yearly receive some thousands of hundreds of that Salt, which is extracted out of the bare Rocks without the addition of any other thing; I wonder what the reason is, that that way of extracting is unknown to us Germans; surely I impute it merely to the want of skill to manage this business.

Thus therefore do we think we have sufficiently declared that Nitre may in very deed be extracted out of stones; and that so clearly that I cannot see what reason any have to misbelieve my words.

But now that the certainty of the thing may be the more apparent, and that no body may think it a fable, that Salt-petre may be extracted out of stones, we will show some places in which Salt-petre lies in the stones in a most pientous manner: And although that there are sundry such places that offer themselves unto us, where the stones contain Salt-petre in them, we will demonstrate the verity of this in those places we have lived in, for 'tis impossible for us expressly to pronounce such or such a Mountain in this or that Country full of Salt-petre, which places we never saw. 'Tis not given us to search all places of the Earth, but such places as we have seen and come to, we have left but few things in them untouched, whose nature we have not thoroughly examined.

Therefore for Examples sake, we will take some part out of our own Country, and exhibit or shew unto all Men, those stones which are therein found to participate of Salt-petre, any one that is studious in these affairs may do the same in other places, and make a diligent inquiry into them, and he will find that almost all Mountains are filled therewith, and yet is known to none or at least-wisely to but a very few. In Franconia, (or Franconia) and indeed at Kitzing where I dwelt before I came to Holland, I often went into the Field in clear weather, with an intent to search out Minerals, and although that sundry Men ignorant of (such) businesses, do report that there are not any Minerals at all to be found in Franconia, and that never any Veins of Gold or any other Metal have been found there, because all the Inhabitants do live contentedly with the plentiful provenue of Wine and Corn; nor do they labour about finding out any other Treasures (for there is not any Country in all Germany in which is gathered more abundance of Wine, and of a better sort, than in Franconia afore said; which gathering of Wine is to be accounted to the Franks or Franconians instead of Mine-pits, and yield them employment enough) yet nevertheless forasmuch as my mind was ever bent that way, and I was naturally inclined to search very inwardly into those things which offer themselves unto us, amongst the wonderful works of the most great and glorious God, I could not omit the visiting such places, which seemed to all Men as unfit for bringing forth Minerals, and which were judged to be clearly void of the same, as being willing to try whether or no some things that others knew not of might not offer themselves unto me. Nor was my hopes in vain, for I found far more than my expectation was, and if necessity required I could shew those very places.

But forasmuch as I have proposed to my self, here to shew such places only in which Salt-petre may be plentifully made, I will at this time pass by the other Minerals in silence: Yet so, as not wholly to leave such things, as offer themselves in the way, untouched. I will therefore take in hand some part of the Rhine, which is between Kitzing and Aschaffenburg, and will will very briefly (for my purpose is not to write a Chronicle) shew what treasures the most Great and

Blessed GGD hath vouchsafed unto those places, besides Wine and Corn so plentifully abounding there.

Kitzing is an Eminent Town and well built, belongs to the Bishoprick of Wartburg, and is founded upon Lime-stone, and therefore the soil is very fruitful; and yields Wine and Corn in abundance. But as soon as ever we are past over the Bridge of the *Mhene*, the Earth begins to be sandy, and has abundance of Flints in it, which contain in them some Gold as well as Iron. The manner of extracting it, is described in the second Part of the Prosperity of Germany, and is confirmed in this third Part.

About a mile distance opposite to the said City is situated an high Mountain, very full of huge Trees, in this Mountain are various Castles (or Houses) the chief of which is the *Coffel* Castle, which is the House belonging by succession to the Lords of the County de *Coffel*: At the bottom of the Mountain there is a Village of the same name, belonging to the said Castle (or Palace.) In this Village there are abundance of Springs, the Waters of most of them I have often times tasted, and have perceived them to be mightily impregnated with Salt-petre, inasmuch that the Beasts do altogether shun the drinking of them, much less can Men use them about the boiling of their Victuals: Yet some of them yield sweet water very fit for domestick affairs. These Nitrous Fountains are of no use, nor do they effect ought, save that they drive some Mills, and run through the Village, a particular way afore they fall into the *Mhene*.

And forasmuch as the afore said Earls have known that the chief part (or most part) of the said Fountains are wholesome (or reason of the plenty of Salt-petre in them; they have therefore taken care to have a great House built, that so the place may be rendered commodious for those that by reason of some disease should come unto this place for the sake of walking their sick bodies; and there are abundance known to come, that are ill, in the Summer time, from places far remote; several of them too by a due using this Bath are restored to their former health.

They know not any other use of these nitrous Fountains than what is afore said; whereas if they did but know how to add some Virtues to the said waters by the benefit of the Juice of the wood, of which there is great store in that place, they would find by the use of them then, many wonderful effects in the curing of Diseases.

Being therefore earnestly intent upon the search hereof, viz. from whence these nitrous Waters should chiefly proceed, I found that the Mountain nigh that place, extending it self for some miles, was every where full of Salt-petre, and that it stuck in the Rocks themselves, out of which whatsoever is on the Mountain grew. I did therefore diligently search out, what condition those Stones were of, which the workmen dig'd out in these places, and I knew that there was a great quantity of Salt-petre contained in them, inasmuch, that as many Mountains as here (abouts) seem to be replenished with the same: Nay more, if you shall break one or two of those Stones with which the Houses of the Village of *Coffel* are built, you shall find every where in them abundance of Salt-petre. I went to visit the place it self where those Stones are digged out, but found not any Salt-petre among the digging, because the Air had not as yet displaced its Virtues thereupon: But I observed that in those stones exposed a while to the Air, there was plenty of Salt-petre. He that would see it with his own Eyes, let him go into any House of the *Coffel* Village, whose

Walls are of ancient standing, and he shall find that there is abundance of Salt-petre in those Stones, and withal, that the Pillars belonging to the Bath-house do yearly wax less, for as much as scalings of the thickness of the back of a Knife do fall off, by the power of the separated Salt-petre, as I have often very accurately and curiously observed. If the Earls or Counts did but know the true use of this excellent and occult Treasure, they would get far greater riches out of that bare Mountain only than by all the County. I doubt not but that seeing I have in this place detected this Treasure, there will some be found that will labour for their own profits sake to find it out.

Not far off from the said Mountain the whole Earth abounds with Iron, not in the form of Veins but of Reins, inasmuch that the Metal of Iron offers itself in various particles or pieces of diverse magnitudes; for in some places it is found as big as an Hazle-nut, or an Acorn; in other places as big as an Egg, or ones Filly, yea and as big sometimes as ones Head, which by the force of the Fire is made facile and yields abundance of Iron, nor did I ever yet meet with any Metal of that sort more excellent than that is, but no body knows it, though it may be commodiously prepared or fitted for the use of Man, because there is in this place plenty enough of Wood and Water to be had [for such a purpose.]

This Mountain stretcheth out itself some miles, reaching as far as *Iphovia*, and the jurisdiction of the City of *Wurtzburg*; so that the chiefest and greatest part thereof is seated in the Bishoprick of *Wurtzburg*: And therefore might immense and vast Treasures be gotten, were there but such as were lovers of Art and would make themselves skill'd in the Operation.

Besides, this Mountain yields abundance of white and red Gypsum, which may be reduced to an exceeding whiteness by the force of the Fire.

Besides this too, we have known Marble and Alabaster digg'd out hence, and yet it has not been very durable, for it becomes nitrous after it hath lain exposed a while to the Air, and falls to powder, and yields plenty of Salt-petre, were it but rightly managed, for there's no want of Wood here.

There is yet moreover found in the said Mountain another Castle which is called *Swansburg*, and belongs to the Bishoprick of *Wurtzburg*, where the Soldiers did heretofore use the Metallick Rods, to search after, and to see if they could find (by the using them) some Treasures; and they tried whether or no (the Castle being burnt by the occasion of the War) any such Treasures lay any where hidden. What they found I do not yet know: But this I know, that the said Rods did hew good Metal to be every where (thereabouts) The which thing gave occasion of explaining or unfolding the said matter in its proper places. Besides this, they digg'd up nothing else but such nitrous stones for some fathoms depth. I once viewed this place, and found that the stones extracted some years ago out of this Mountain were altogether brittle, and is a manifest token that the whole Mountain is fill'd with Salt-petre.

There is besides this Mountain, another nitrous one that I know of, of the like condition in the mid-way 'twixt *Kitzing* and *Wernfeld* (and is about a miles distance from *Carlstadt*) but that which is here had, differs from the former in this, *viz.* that the stones which it exhibits are of a red colour, nor are they so much impregnated with Salt-petre, as those of *Kitzing* aforesaid, for they are richer in Petre, and are of a more alby colour.

There are likewise such kind of stones also that they cut or dig forth at the *Albene* near the City *Koetsfeldt*, but they have not in them so much Salt-petre as those have that are found in the *Coffel* and *Swansburg* Mountain.

There's abundance of such stones in several places in *France*, but my purpose is not to mention them all, for I was minded to mention such only as my self have seen, and that are near bordering upon the *Albene*.

They that have a mind to deal with them may make their search, and they will find in all Countrys of the Earth fit stones for their purpose, the which we may hereby know, if being kept a while in the Air, they wax soft, and scale off in most thin leaves, and there sticks to your Fingers in rubbing them off, a reddish Meal.

Besides this too, you may have a most certain sign of such Petry places by those Spiders that have a small body and round, and long feet, for they stick to those stones in abundant measure: For such Spiders do not feed upon hearbs, grafs, flies or other insects, but on old Walls, and they feat themselves chiefest of all on those aforesaid stones. They are not all venomous as the common house Spiders are, and therefore the Children do gather them, and are much delighted with them. Now they sticking on to the softer sandy stones do most certainly demonstrate that Salt-petre is contained in them; for tis that which they are nourished with, and conserve their life by, and this I was willing to signify unto you. But put care that no such nitrous stones were to be found, yet however there is not the opportunity denied us of making Salt-petre of the common Lime-making stones, and of them there is every where plenty enough, if they are calcined by the benefit of Wood, and made nitrous with the juice of wood.

What shall I say of the Calcined feces of *Tartar* which are yearly gathered up and thrown away in vast quantities, in all that tract which lies on the River *Albene*, between *Bamberg* and *Frankfort*, whereas notwithstanding some hundreds of hundreds weight of Salt-petre might be extracted thence-from, did they but mind it. For whatsoever *Tartar* is therein contained, is all of it Salt-petre when 'tis duly boiled with a Lixivium of Lime, and being hence strained, and a sufficient evaporation made, it be set by to Crystallize. For it attracts the soul after a magnetick manner, which Operation if rightly instituted, there may be prepared thence-from a most inflammable nitre in threedays space, the which is likewise of far greater profit than the getting out the *Tartar* by the help of a Press, and with a great deal of labour; or else than the making Potashes, as we see usually done.

Besides too, there are found other stones that being burnt do yield abundance of Salt-petre, such as are the *Tophi* (or soft sandy stones) which may be abundantly gathered near *Triefelsheim*, which is a Monastery situate on the *Albene*, and in other places of *Germany* they make even whole Mountains: So that it is evident that there is no where any want of convenient matter to gather Salt-petre from, if Men would but set their hands to the work. These stones are obvious unto all; and who knows what Treasures the Woods (which we do not at all search into) abound withal? Would time permit me I could shew that various kinds of Metals are conveyed in the Mountains situate between *Kitzing* and *Frankfort*, and especially in the *Spishardensine* (Mountains,) the disclosing of which, some other more commodious place will admit of.

Now

Now follows what we mentioned of the aforesaid

## LAZARUS ERCKER.

Of the manner of Boiling Salt-petre.

AND FIRST

By what means a Lixivium is to be made out of a Nitrous Earth.

IF you are minded to make a Lixivium of such an Earth, dig it as deep as you shall find by proving it to be either good or naught, especially if you intend to make it in great quantity, and keep it in a dry place. Then take care to have some great wooden Tubs, or Vessels made, so large, that each of them may hold about some ten Wheel-barrowes full of the Earth, and whereby you may be able to prepare Lixivium enough, answerable to the work you have propos'd to your self to do, and to the bigness of your Copper. Now there are commonly required for such a work, to one Copper Pan that weighs two hundred weight, eight Wooden Vessels which are to be placed in such order, that on each side there may stand four in a row, opposite to each other. These same Tubs are to be so far distant from the next Colateral Vessels, as is requisite for the Wheel-Barrow wherein the Earth is brought to come between: Yea, and it is necessary that there be half an Ell's space between the said Tubs and the Earth, or Ground, it self, whereon they are placed. Likewise, each of the Vessels, or Tubs, must have a hole in the fore-part, and towards the bottom thereof, fit to put in a Plug (or Tap) at: Then finally, there must be put under those Plugs, a long Vessel like a Channel-pipe, which may receive in it the Lixivium running out of the Tubs, and may guide it along into a peculiar Wooden Vessel, as into a common Store-house set in the Earth hollowed for that purpose, to receive the said Lee in.

All your Tubs being thus rightly ordered, put in upon every Tubs bottom another (false) wooden bottom, perforated with many Holes, and let it lie two Fingers breadth distant from the true bottom: Upon this (false) bottom lay yet another made of Bull-rushes, or your small sort of Reeds which grow plentifully in Ditches about the thickness of a quarter of an Ell: In want of these Reeds throw in upon the aforementioned perforated bottom, the quantity of a Span (thick) of Chopt Hay, or Straw, laying some very thin boards thereon, that so it may not be scattered (or float) abroad. And your Vessels are made completely ready.

Now then, put of the Earth you have already tried and gathered, as much into each of your Tubs, as they can hold, yet with this Caution, That the top part of your Vessel be empty a Spans height. And observe this, that if you can get some old ashes of the Carriers, or Soap-boilers, as much of it as two or three Wheel-barrowes will carry, it must be put in

upon the topmost (made) bottom of the Tub, afore the Earth, but now spoken of, be put in. At the top of the earth, lay a Cover made of Twigs, (or Withes) and fasten it with a wooden stick at the top of the earth. This done, pour common water upon the earth contained in the Vessel, an Hands breadth in height, so as that it may rather touch (or be poured) on the Twigs, than the Earth it self, lest the said earth become unequal thereby, and hollowed in several places. Let it stand thus for eight hours, which time being overpast, draw your Plug out, and let the water you poured on, run out at the hole beneath, which as long as it is muddy, you must always pour in again into the Vessel, repeating this so often, till it comes out clear, then keep it, and this water is called a weak Lee or Lixivium.

This done, pour common water again upon the earth from which the Lee hath been already, once separated, that so it may extract the residue of the Lixivium out of the earth; and this Lee is of no use, save that it may be poured on upon new earth, instead of simple water; for it oftentimes doth even yet contain a great deal of Nitre, inasmuch, that you may sometimes extract out of an hundred weight thereof, three or four pound of Nitre.

This Extraction being finished, take out the unprofitable earth out of the Vessel, and put in new; and continue the Operation, after the aforesaid manner, reiterating it so long, and so often, until you have gotten store enough of the Lixivium, that the work of boiling be not intermitted for want of Lixivium.

Besides, there must be some Wooden Vessel placed at the upper part of the Copper which this Lixivium is boiled in, out of which may run so much Lixivium into the Copper as is wafted away by boiling, that so there may be still kept the same order of boiling, and the same quantity of Lixivium in the Copper. This boiling is to be on this wise continued, until a Centenary, or hundred weight of Lixivium in the Copper, yields according to the less assay (or weight) twenty five pounds of Nitre; and this may be done in two Days, and one Night.

This being thus done, you must have ready yet two Tubs, or Vessels (more) of Wood, made after the afore prescribed manner, and furnished with a (false) perforated wooden bottom, besides its own bottom, and likewise with such a bottom as is made of Reeds (or Bull rushes); only you are to observe this here; That there must be put yet another perforated wooden bottom upon this topmost bottom of Reeds, upon

T t t - which

which there must be first cast in some chop'd Straw, then some Ashes of Firr, Beach, or any other Tree, so much in quantity as may overtop the Straw an Ell or Cubit, [*Uma*] high; or rather (if it may be had for a very mean price) as much as may fill the Tubs, or Vessels. But yet, these Ashes are not to be just simply thrown in (as they are) upon the Straw, but afore this is done, they must be first well mixt together, then moistned with some of the best hot Lixivium, that there may be made a Mass. Then when the Ashes are on this wise prepared, and put in the Vessel, the Lixivium boild to its height, and which yields in the proof twenty five pound, must be poured thereon, as hot as possibly it may, and is to be often drawn off by the lower hole, until (if troubled or muddy) it becomes clear.

Afore that all the Lec hath thus passed through the Ashes of both Tubs (the which is done upon this account, That all its fatness may pass into (or be left with) the Ashes, which Ashes are hereby rendred stronger to wash withal) keep it in a peculiar Vessel.

Then pour the common Lec or Lixivium upon the Ashes remaining in the Tubs, which when it hath passed through the Ashes, is called the second stronger Lixivium: Then again pour on yet a third time, the hot Lixivium, and when 'tis drawn off, it is called the second weaker Lixivium: Lastly, the common Lec, or Lixivium, may be poured on cold upon the Ashes, that so all the virtue of the same may be wholly extracted.

The Figure before going (*Numb. 1.*) will shew you the way of placing the Tubs, of preparing the Lixivium, and ordering the boiling.

- A *Are the eight Wooden Tubs, wherein the earth is put.*
- B *Chamels, or Conveyances, by which the water runs into the said Tubs.*
- C *Channels, or Gutters, by which the Lixivium is conveyed into a Vessel set thereunder.*
- D *The Vessel in which the Lixivium is gathered, or received.*
- E *The little Vessel out of which the Lixivium runs into the Copper.*
- F *The Furnace.*
- G *The Copper.*
- H *The door of the Furnace whereby Wood is put in under the Copper.*
- I *The Lower Wind-draught (or Ash-hole) of the Furnace.*
- K *The inward shape of the Furnace.*
- L *An Iron Grate, which the Wood is put upon.*

The manner of preparing the Liquor, out of which Salt-petre may be made by Boiling.

First of all, pour your second weaker Lixivium into your Copper, and set it a boiling, then let your second stronger Lixivium run thereinto by little and little; and then lastly, the first Lixivium it self, and which is the chiefest of all, until the Copper be almost filled, and the Lixivium be boild enough to float.

And now when you perceive that your Liquor is made strong enough by boiling, put in a Bras Vessel

perforated (or full of holes) several times, even to the bottom of the Copper, and if the Lixivium lets fall out of it any Salt, you will find it at the bottom, the which you may take up with your Ladle.

Note also, That the Scum which at the end of this Boiling is plentifully gathered, must be carefully taken away: Now then try the readines of your Lixiviums Crytallization, on this wise: Put either two or three drops on a cold Iron, or on a Polish'd Plate of Iron, and if it stands, or grows hard; that is, if when you turn the Iron up and down, it does not run (or flow) down, these are signs of the fitness of your Liquors Crytallization. Or else, you may put some of the Lixivium in a Bras Vessel, and let it in cold water, and so you shall see whether the Lixivium be fit enough to Crytallize; for alfoon as ever the Lixivium shall be cold, there will be plenty of Salt-petre generated: Nay, even the very Bras Spoon it self denotes the goodness of the Liquor, if being put into the Liquor, and again taken out, it will show it sticking on it, as if it were Oil.

Out of a Centenary, or hundred weight of Liquor thus perfectly prepared, there will proceed more than seventy pound of Salt-petre.

The way of rightly using the Liquor for the Generating of a more Crude Salt-petre.

POUR your Liquor prepared after the afore-shown manner, out of the Copper into a narrow Tub, or Vessel, made of Firr, or Pine-tree wood; wherein let it remain quiet, till it be a little refrigerated, and the muddiness, or slimyness [*Limus*] appear, and you find that the salt sticks on in Granes to the sides of the Vessel; now when you perceive your Lixivium so cooled, as that you can put your finger thereinto without burning, pull out the Plug, wherewith an hole made in this long Vessel, about a Span's height from the bottom, was shut, or stopp, and so let the Liquor run forth, into very great Wooden Vessels, and deep, purposely made for such a business; or else into Copper Pans, buried almost (up to their Necks) in the earth, (for the cooler the place is, which they stand in, so much the better, and the more plenty of Salt-petre is gathered, and Crytallizeth) and you will find that your crude Salt-petre will shoot therein, the thickness of almost two fingers breadth, partly of a whitish colour, partly yellow, and partly blackish.

Afore that this boild Liquor hath stood for two days, and so many nights in the Vessel, the Lixivium of the Salt-petre which swims at top, must be taken away, which you may mix with the strong Lixivium, and pour a second time upon Ashes, for else the Lixivium will contract too much fatness, and there will be no Salt generated.

Sometimes it happens, that when the Ashes are not good, there's no salt at all gathered in the Liquor, in which case there is no presenter Remedy, than to mix such a Lixivium stronger than is fit, with another, and so pour it again upon new, and good Ashes, and then let the boiling be again perfected after the afore-prescribed manner.

Likewise, when in the boiling you find the Lixivium very muddy, whereby the Collection of the Salt is oft-times hindered, it must be taken away, and let the Washer-Women, or Lawndresses have it, and other

must be substituted in its room, and be farther purified by the help of Ashes.

The Figure signed (*Numb. 2.*) shews the manner of preparing the Liquor by boiling, and of extracting and gathering the Salt thereof of.

- A *Long narrow Tubs, or Vessels, in which the decocted Liquor of the Lixivium is cooled.*
- B *The Furnace wherein the Copper stands.*
- C *The Man that manageth the boiling, and extracteth, or draws out the salt with a Ladle, the which he lays in a Wily Basket placed on the Copper, that so the Lixivium (in it) may again run down into the Copper.*
- D *The little Basket.*
- E *The little Tub out of which the strong Lixivium runs (by little and little) into the Copper.*
- F *Coolers, or Vessels, in which the Crude Salt-petre shoots.*
- G *Four Bras Pans put in the Earth, hollowed for the purpose, in which likewise the Salt-petre is generated (or shooteth).*
- H *A strong Vessel whereinto the Lixivium remaining after the generating (or shooting) of the Salt-petre, is put.*

The way to purifie the Crude Salt-petre.

WHEN all these things are thus done, and the Lixivium that swims at the top of the Salt-petre is taken away, lift up those Vessels, or Bras Pans, containing that salt, and turn them up and down in some convenient place, that so the residue of the Lixivium, that lies as yet in them may flow, or run clearly out, into another Vessel set thereunder.

This done, take the Salt-petre out of the Coolers, or out of the Coppers (or Bras Pans) with an Iron Spatula, or rather with such an Instrument as your Plasterers use (nimb tulle, a Truel) and put it in a Tub that has a hole in the bottom thereof, that so the Lixivium may be perfectly separated therefrom. They that sell that crude Salt-petre, and not at all purified, for the Salt-petre Boilers, do pour thereon pure (or clear) Well-water, by the means of which, it is made more white, that which is thencefrom separated they do again mix with other stronger Lixivium and so boil it up for the following use.

But if you have a mind to purifie this crude Nitre from its salt, and all its Impurities, that it may be rendred fair, and white, you are to proceed this following way:

Take almost as much Well-water as is sufficient for the dissolution of the Salt-petre, put it in the purifying Copper Vessel, first cleaned with water, and dried with a cloth, and put the fire under it, and make it most exceeding hot, then throw in your Salt-petre by little and little, and in pieces, continually stirring the Salt-petre that sticks at the bottom with a Spoon, that it may be the easier, and sooner dissolved; this only is to be observed, that there is required a more gentle fire, while the Salt-petre is cast into the Copper, so as the water may be kept always hot. When all the Salt-petre is almost dissolved in the water, promote the boiling thereof, by augmenting the fire, then try if there be any salt in a (biggish) gross form, residing in the bottom of the Copper Vessel,

which if you find to be, (for indeed, the Salt-petre it self is not so very easily dissolved, nor doth its being admixt in a more copious manner, at all benefit the Lixivium) take it forth with a Spoon, (or Ladle.)

This done, separate the Scum swimming at top of the boiling water, then have ready a Bras Vessel that will hold about  $\frac{3}{4}$  of a Gallon, fill it half full with the Lixivium, set the Vessel in cold water to cool, and you shall find your Nitre presently to Crytallize, or shoot therein.

Hereby may you try whether your Purgative water be strong enough, or not; for if it be stronger than is fit, you will find a little skin spread it self over the matter contained in the Vessel, and when it comes to be so, add thereunto more hot water, keeping the fire in that degree of heat, as may suffice to keep the water contained in the Copper, gently boiling.

Now when you have kept it thus boiling for some season, try the goodness of your water again, after the afore-said manner; and if you shall find a Crytallization therein, and no Concretion, or heaping-together, leaving a gaping, or chapp in the middle, the business is well done; but if it be otherwise (than thus well done) so that it be wholly shut in (or gathers a skin all over) at top, pour on hot water, until your Matters come to succeed after the manner afore-said.

Then after all this, take of the best Wine Vinegar, about one pound thereof, and pour it into the said water, and you will presently see a blackish spume, or filth arise in plenty at the top thereof, and when you have left it so a while, it may be easily taken off, because of the thickness it contracts.

The boiling being yet a while longer continued, pour in the same quantity of Vinegar again, and diligently separate the Scum as afore: This pouring on of Vinegar, and separating of the Scum, may be repeated yet a third time, and oftner, whereby the purgatory water may be made altogether pure, and that there appears not any more spume.

When all this is done, cast in upon this water two or three Ounces of Burnt-Alum, most finely powdered, stir all well with a Spatula, whereby the Salt-petre may shoot into longer Crytals.

Then after this, pour out the purgatory water into the aforementioned deep Vessels, and cover them over with Linen Cloths, that the Liquor cool not. Let it stand thus one hour or two at most, and a yellow slime will settle to the bottom: Then let the water while it is yet warm flow out hence, into other Vessels made of wood, and especially of Elm, and which are large enough; or else, you may let it run into Copper Pans set deep in the Earth, for the better coolings sake, which cover over very neatly with Cloths, that so the Crytallization may begin from the bottom, and not at the upper part, as we see it wont to happen, where it is not kept by Coverings from the External cold: And we also observe therein too, that the Crytals shoot not into that length, as when the Crytallization begins from the bottom.

Let them stand thus for two or three days, until you see no more Crytals generated, which you may on this wise try.

Put some of the Lixivium in your (little) probatory Vessel, wherein, if you find that there are no more Crytals generated, you may take out the rest of the Lixivium: Then take out the Petre with an Iron Spatula (or Truel) and put it into a Vessel that is full of holes in the bottom, that so all the Lixivium may be the better separated therefrom. And you shall have

have your Salt-petre pure and white, and freed from its Salt.

Forasmuch as the Lixivium here separated hath as yet some saltness in it, it may be mixed with other strong Lixivium to be (agen)boil'd up, for the production of the Crude Salt-petre is usually holpen forward there-withal.

Some there are that for the better purifying the Petre, do put Calx vive in together (with it) whereby the water becomes most white like Milk, and the Salt-petre gets a greater fairness.

You must withal observe that during the time that the purifying water is contained in the Copper, your fire must be most gentle, least by overmuch boiling you get some damage, for a little fire is able easily to cause (a too vehement) ebullition, and when it has got strength (or the start of you) it is hardly allayed again. The scum which you take off from it you may pour upon ashes as if it were a Lixivium, that so nothing (from whence any profit can be hoped for) may be lost.

There is sometimes seen to stick to the bottom of the Copper (especially when it is used about many boilings) a certain stony and hard substance like Tartar, which unless it be taken away, your Copper will easily suffer damage under that same matter and be burnt.

The earth and ashes left, after the weak Lixivium (hath pass through them) are to be laid up in some convenient place, and there kept for four years or more, that so they may be again apt to yield a new more Lixivium by extraction; which, that it may be the better and easier done, there must be made in them (many weeks afore they are wrought upon) by digging some Pits or Gutters, that so they may be freed by the heat of the Sun from that moisture wherewith they as yet abound. Nor do the ancients so much wander from the Truth in that they suppose it much better and more profitable to keep all the earth under a roof or shed, and that it will be far sooner reduced unto a sitting goodness, than to lie open to the weather, for much of the Salt-petre is corrupted (or spoiled) with an abundance of moisture, especially with the Rain it self: For it needs only a little wetting whereby it may be generated, and extremely shuns, or is injured by too much moisture.

Besides these ways, there are many that mix with this earth that is yet contained in the Tub the Sawdust of Firr, or some other Wood (the height of) a Fingers length (on it): And they persuade that Salt-petre is also generated and multiplied from that fatness which is mixed with the Sawdust, and that the earth prepared on this wise can be so changed in a years space (so it be kept in a dry place) that it may be again made use of as afore. Yea and they suppose too that they can do much here, if they pour upon such a barren (or lean) earth, thus lying in a dry place, the reliques or remains of the dyes, which the Dyers are otherwise wont to throw away, and evident it is that they are aluminous, but yet not so frequently.

Besides such waters of the Dyers they are wont also to mix soot with their earth, (yea and the ashes too of which Lawndresses do commonly make their Lee;) that so it may be made the more fruitful and may be the sooner brought to use.

This only is to be noted, that there are sometimes found earths that give a thick black Lec, which being used by it self is too fat, to which is to be added a leaner and dryer earth, that so the Salt-petre may be the better and more plentifully generated.

The way therefore how, and the instruments by which crude Salt-petre is purified, is shown by the 6 and 8 Figure (in *Lazarus Ercker's* Book I think he means.)

*The manner of purifying the gross and blackish Salt that comes out of the Salt petre.*

That black or rather ashy colour Salt, which is found in the Copper while the nitre is prepared by boiling, and likewise in the narrow Tub or Vessel, may be reduced into very good Salt, and very convenient for daily use, and no ways at all hurtful to Man, if it be but duly purified; which said purification is to be thus ordered.

The Copper being well cleaned fill it with most clear Well-water, put fire under it and make it boil, throw in the said Salt by times (not all at once) into the boiling water, that so it may be dissolved; which, that it may be the sooner and better done, stir it continually with a *Spatula*, when you think that it is all dissolved pour out the Lixivium into some Vessel or Tub, & you shall see the grosser part will settle to the bottom, and the Lixivium will clear up: When you perceive this, pour this clear Lixivium again into the cleansed Copper, and boil it so long till the Salt settles to the bottom, which take out of the said Copper with a perforated Ladle, and put it in a Basket that is placed over the Copper, that so all the superfluous Lec or moisture may again run down into the Copper, and yields (or leaves) the Salt perfect and dry.

Some there are who afore they use this Salt about domestick affairs, do decrepitate it first, and persuade themselves that it becomes thereby the more virtuous (or strong.)

What remains behind of the Lixivium in the Copper, you may boil it up like as you would any other Lixivium appointed to be Crystallized, then pour it out into the Vessels destinated to that purpose, and you shall see Salt-petre to be generated in them; for seeing the said Salt proceedeth out of the Salt-petre, this Lixivium cannot be wholly void of Salt-petre, and therefore may it be separated from that Salt by the afore said way, and be purified.

But you are to note here, that where there is too great a quantity of Salt-petre permixt with the said Salt, or that the Salt it self is too black and impure, that Salt cannot get its due lustre and whiteness by barely one such a purifying Operation, and therefore there is requisite a reiteration of this Operation, so that it be again dissolved in new water, and be purified, whereby it may become altogether white.

However, such a black and impure Salt, may be purified even by this way (following.) Pour the solution it self, while 'tis yet hot, (the water I mean in which the Salt is dissolved) upon the ashes which a Lixivium hath been already poured on before, and you shall see the Salt Lixivium to be wholly purified: But yet all the Salt which is extracted thence, is not sufficiently white, but that which is gathered last of all is yellowish, and therefore must be yet once again purified. Note also here, that when such a Lixivium of Salt is poured on the ashes, they must be well edulcorated (after the operation is finished) least the Salt sticking in the Reedy or Bull-rush-bottom should give an unfitting saltness to the Lixivium that is next poured thereupon.

And thus have you the common method of boiling and preparing Salt-petre, in which you meet with what

what may be well disallowed or rejected, *viz.* it is extremely tedious, nor is it at all gainful, for out of a Centenary of Lixivium, we have no more than three or four pound of Petre; to get which too, all the rest of the water must be done off by evaporation, which is a long time doing, and requires no small costs. Yet I will shew in what follows, by what means this inconvenience may be prevented, which I have proved by mine own experience.

*The way of augmenting the Crude Lixivium afore its boiling.*

**T**HE Salt petre boilers have hitherto variously sought after the way of augmenting (or fortifying) the Lixivium of Salt-petre; that is, of causing a more plentiful provenue of Salt-petre, in the Water remaining of the extraction of Salt-petre, but in vain, because they were ignorant of the lesser proof which all things here are tried by. Its augmentation is done on this wise.

Take of a Lixivium, a Centenary of which contains *iiij.* lb. of Nitre, pour so much of it as a Tub or Vessel will hold, upon new earth, let it stand for twelve hours; then draw off the Lixivium, and as much as you find wanting of what you poured on (which may easily be known by the emptiness of the measure which it was in, afore you poured it on, and in which it is now gathered or received again) pour so much simple water on the Earth, which draw off in like manner, and mix it with the Lixivium, and you will then have the same quantity that you had in your Vessel afore. This done try the Lixivium by the lesser experiment or proof and you will find it to contain *vj.* lb. of Nitre. Pour this Lixivium that contains in it *vj.* lb. of Nitre upon other new earth, and proceed on the manner afore said, and you shall have your Lixivium to contain *ix.* lb. of Nitre. You may pour this a third time upon other new earth & proceed on with it after the afore said manner, and you shall yet have more Nitre out of a Centenary of Lixivium. But you must be always wary in this Operation, that you draw off, neither more nor less Lixivium from the earth than you had before in the Vessel. These things it pleased me to add, concerning the second pouring on of water, merely for the experiments or proofs sake, whereby we may be made certain of the augmentation thereof (forasmuch as the Lixivium doth by this means hold in it more Nitre) and that we may be forced to acknowledge its augmentation even in that way. Then after this is done, you may use the weaker Lixivium instead of water, to fill up the first measure, and so the Lixivium will be the easier, and more augmented; and we may in a short time have sufficient quantity hereof for to boil. And although this augmentation of the Lixivium requires a great deal of labour, yet are all the (pains, &c.) recompensed, because we hereby get in one Weeks space, and with less expence of Wood, far more Nitre than by the other common ways: But yet there are requisite more Vessels for this kind of working, wherein the separated Lixivium may be kept.

I will also give the Reader a manuduction here, by what way the boiling of the Lixivium is to be ordered, or contrived: First of all, this is well to be regarded, that forasmuch as a great boiling requires a great quantity of earth, and yet there does not at all times, earth of a like goodness offer it self (especially seeing a Man cannot make proof of it all) upon which the costs

and labours (necessary about it) may be well (or at the best hand) bestowed: It seems wholly expedient, not to make such a great Coction (or boiling-trade) but to do it with only three or four Tubs, that so we may choose only the best convenient earth, which we may dig in the Cities (or Towns) out of Houses of long standing, and out of Stables, but yet not too deep: Such a Lixivium as contains in an hundred weight of it eight pounds of Nitre, may be increased to eighteen or twenty pounds, if we proceed according to the afore said method. And therefore such Nitre boilers as inhabit those regions where there is scarcity of Wood may give hereunto good heed.

Now the Lixivium augmented on this wise, doth not attract all the nitre out of the earth it self, but there doth yet some always remain behind: And therefore you need not presently throw it away, but pour thereupon some simple Waters, which after it hath stood thereon for some hours, draw off again, and you shall have a weak Lixivium, which you may try by the proof, and proceed on therewith in the method of augmenting it, and so you will have a continual labour.

This likewise is to be observed in an especial manner, let the Work-houfe in which this boiling up of your Salt-petre is done, be very low, and covered with thatch, that so the heat may be the better kept about the Tubs, and this Operation may be done as well in the Winter as in the Summer, and that the weak Lixivium may not at all congeal.

And now, even as Salt-petre is made by boiling, out of the Lixivium which is made of Earth, even so is it of that Lixivium which is gotten out of Stones or the Lime (and Dung) Arches (afore-spoken of; ) only there is this difference, That this last way of my contrivance (with Stones &c.) is easier, and yields more Nitre. Such as are pleased with this kind of work may set about it, nor will they bestow their Labours in vain; there may be abundance of things, and those wonderful ones too, effected with Salt-petre, as I have abundantly demonstrated in my foregoing Writings, and shall in my following ones too, more clearly demonstrate if God vouchsafe strength and abilities.

But before I come to the practice it self, and to describe the benefits of Salt-petre in specie (or in particular) it is wholly necessary to shew how wonderful, yea how incomparable a subject, that Salt-petre is. And this thing I have already handled at large in the *Second Part of the Philosophical Furnaces*, in the *Second Part of the Pharmacopœia Spagyrica*, but especially in my *Miraculum Mundi*, and in the *Explication*, and *Continuation*, and *Defence* of the same.

*Here the Author runs out into a large digression in his own vindication, upon the occasion of certain Letters sent him by one I. H. S. who stiled himself the Son of Sendivogius; in which Letters he highly extols the Hermetick learning of the Author, but blames him for Writing so plainly of great secrets, add exhorts him to be more sparing and obscure for the future. Withal offering his service (and begging the Authors leave) to defend his Person and Writings against Farnner and others. The Author not taking his advice nor yet accepting of his service (suspecting him to be a self designer) this I. H. S. afterwards published a Book entitled Lucerna Salis Philosophorum. In which he offers to teach the making of the Philosophers-stone at a price or reward; and reproacheth Glauber whom he before had so highly magnified in several Letters, advising People to avoid his writings as Supersticial. In this Treatise he mentions a Prediction or Prophecy of three Monarchs that were to appear in the*

U u u u World:

World: The first of Paracelsus, concerning Elias the Artift. Secondly, That of Cosmopolita of the coming of the Northern Monarch. Thirdly, That of Jacob Behmen, That a Lily shall bring forth Flowers from the North. He intimates that himself is the Elias of Arts. Secondly, That some Northern Monarch shall do mighty things in the World: And Thirdly, that the Writings of Jacob Behmen should be again Printed a new. After the Author hath shew'd the ill dealing of this I. H. S. with him, and vindicated himself, then he proceeds briefly to Comment upon these three Predictions or Prophecies.

By what hath been said, may the Candid and well-minded Reader judge what judgment is to be had of this Monarch of Arts I. H. S. Every one that reads them will find whether or no such a Monarchy is to be expected from such a ones Writings. But now that I my self may likewise here produce my opinion, concerning Paracelsus his meaning where he writeth, I lay that the most eminent Secrets will not be known afore Elias the Artift shall come and teach them: (But I pray) what hath the holy Man Elias to do with Arts? verily nothing at all. Paracelsus minded or pointed at some other thing, he well knew, that no body comes unto such knowledge, unless by Revelation from God, by godly Prayers, and by searching: This is the true Elias which Paracelsus speaketh of, if (*viz.*) the word Elias be read backwards, and E changed into A: For then 'tis the same with *Salua* (that is, Salts) such as these (*viz.*, salts) are known unto, to them is Elias a master or teacher. And where the said Paracelsus speaketh of Salts he adds *Alchimy finds it (to be) in Nitre*: Hereby bewing and pointing at *Salua*, Salts, which word being read backward is *Elias*? And this is my opinion as touching the coming of *Elias* the Artift, and I do yet (again) say, that to him to whom Salts are known, hath *Elias* appeared. And let this be sufficient to have spoken of the first Monarchy of I. H. S. and what is to be judg'd thereof.

#### Now follows the Second Monarchy.

AS for the second Monarchy, he allegdeth the Prophecy of Paracelsus, which runs thus: *A Lion shall come from the North, and become the Monarch of the World*: Which Prediction is not at all to be understood according to the Letter. What has Paracelsus to do with the Northern Lion? What business has he with the Monarch of the World. Some there are that endeavour to attribute that Prophecy to one or other of the Northern Kings, but yet that was not in the least Paracelsus's meaning, he drove at a far other-guets business, and by that Lion he meant Salt-nitre, which is wont to be brought unto us by the Northern Winds, Rain and Snow, and that several times yearly as is well known unto all; hereupon many amongst the Philosphers, and some of them the latter Philosphers, have filed great Vessels with the Rain and Snow that comes out of the North, and aimed at the preparation of a Tincture thereout of, but they found nothing else but Salt-petre, which to get, I have shown a much shorter way.

Paracelsus, Basilisk, and others have Written many things of the green and red Lion, all which are to be understood of Salt-nitre, which may most easily be transmuted into the green or red Lion, concerning which thing I my self have made mention in many places. But some or other may reply, How can it be said

that the Lion shall be expected out of the North, if Paracelsus did by it understand or mean Salt-petre, for that cannot be said to be expected (or waited for) which hath always been? Surely the approach of this Northern Lion is not to be supposed or thought to be as to the outside aspect and known use, but only according to the internal virtue, & the Treasure therein hidden; concerning which, the Philosphers have written many things enigmatically, and kept up all things most secretly. Verily he to whom the inside of Salt-petre is known will be able to report wonderful things, for 'tis that only that is the true Monarch, and is able to institute a good governance for those that possess it and know it. This Monarch will not be to any one a stirrer up to kill others, and to take from others their Goods and Kingdoms, and to disquiet the whole World, as we see other Monarchs do, but he will bring Peace and Concord, and will persuade the Soldiers to stay at home and to get their food by the labour of their hands, and not to shed the blood of the innocent; he will injoin the greedy Usurers to be beneficial to the poor & to put an end to their immoderate utility; he will shew to the Divines, that all their contentions are vain, and that they cause nothing but iniquity, dissention and discord amongst Men, and will require at their hands to Preach concerning friendship to, and love of ones Neighbour, which under this unprofitable contending is wholly lost, and to banish away all hatred; and contrary-wise to strive after patience and Christian humility. These kind of Doctrines and governance the inward or inside knowledge of the Northern Lion will bring with him, and not any War or shedding of Blood. But afore the said Lion is tamed and made gentle, he is very ravenous, and the venomous Basilisk, and devouring Dragon, preying both upon Men and Beasts, demolishing Cities and Castles, and destroying Goods and Men together. Thus have I in brief expounded my opinion of the coming of the Lion from the North, let every one believe it as he listeth. And thus much shall suffice for the Second Monarchy, and how it is to be understood.

#### Now follows the third Monarchical Prophecy.

AS for what concerns the third Prophecy which I. H. S. doth also make mention of, (& will have it) to concern a certain Writer, whose name is Jacob Behmen, who exercised the Shoemaker's Craft, and published many Theological and also Chymical things, which John Beth doth again Print: As far as I know by his writings, he was an honest Man, but I do not know what he understood in Alchimy; but however this is evident, that he never exercised or practised Chymical Operations, and that his Chymical writings are most difficult to be understood, but his Theological writings are read by many. My opinion concerning the business is this, that this same I. H. S. was minded to quarrel with me, that so there being a brawling bred between us he might make his Books the more saleable. I have therefore thus plainly answered him, but if he proceed on in contrarying and oppoling me, I shall be constrained *Nolens Volens* to meet with him another kind of way, for I am even wearied and glutted with contention. If he will needs brawl and scold let him do it with those that have no work to do, such as he himself & his associates are, who have no Family to rule and look after, I can for my own part bestow my time better than in those contentions, which bring

no profit, but only to the Bookseller, whose Books before they are known sell well.

But to conclude, I will in a few words open the ill affected mind of J. H. S. to the Candid Reader. When I had lookt into his Treatise, and perceived that he had ranked me amongst the Sophisters, I shew'd to some of my faithful Friends, the Letters which he had written unto me, that so I might hear their judgment concerning them; verily, there was not one amongst them all, but wondered at the wicked mind and falseness of this Man: Yea, one of them did afterwards inform him by his Letters, what way I had purposed to take, *viz.* again to wipe off that undeserved Title he had put upon me, and to defend my self against such monstrous Impiety; To which he received from the said J. H. S. an Answer, which he likewise shew'd me, whereto (amongst other things) he pretends, that the cause of his hatred [against me] was, because I had in some places written so very clearly of the Universal Medicine: Yea, and he farther adds, that it is no such great despising one, or Contempt to call one a Sophister; for *Geler* was accounted for a Sophister, and yet was hea King. And that if I wrote against him, he would do the same against me, and

endamage not only me, but my Children too; which Epistle is yet kept safe. Now let any Honest Man consider whether this be a Human, or Diabolical action.

Some, when they heard this, perswaded me to pass over all in silence, and that there would come of it such another brawling business as was with *Farnor*, whose Exhortation I yielded to, that I would not so much as once answer him, how great Lies soever he told, but rather purposed by referring all till the next Spring, to get me Friends by the benefit of my very eminent Inventions (God willing) which should not only intercede, or stand up for me, but also for my Children too, after my Decease: I doubt not, but that there may be some principal persons found, which are capable of overturning such Inhuman Pervertenes.

These few things was I constrained to add (in a Parenthesis) for the defence of my Writings, thereby to paint out the deceitfulness of Men, and to discover what is to be opinionated concerning such turn-coated Foxes: The which I entreat the Reader not to take in evil part, but to accept of the Secrets laid open in this Treatise, as a Reward for his pains in reading this Apology.

Now follows the Most Potent Lion, and Monarch of the North; to whom none in the World may be compared, nor did ever any excel him in Glory and Power, or shall be like unto him.

But before I begin to write any thing of that Omnipotent Monarch, I have thought it profitable to add here in this place, for the better knowledge of the same, Paracelsus his Prophecie, as I met with it, whereby any one that is skill'd in nature, may sufficiently see, that Paracelsus did not mean a King, but the great Philosophical Miftery, and would point that out unto us: His Words therefore are as follows.

#### The Prophecie of Dr. Philip Theophrastus Paracelsus of the Northern Lion.

They will not leave me in my Sepulchre, but will hale me out thence, and lay me down towards the East: And I do foretell unto you, that there are three great Treasures hidden.

1. The First is at Weyda, at the Alps of Julia. 2. The Second is between Suevia, and Bavaria: The place I do not point out, because of avoiding the being the original of many evils, and because of the shedding of Blood.

3. The Third is between Spain and Franec. He now that shall find these, will be carried in Triumph, and be admired by all: Likewise between Suevia (or Scawben) and Bavaria, there are Books which contain no mean and common Artifices, that will offer themselves together with precious Stones and a Carbuncle. I will here likewise declare the Age of such as shall find them.

The First will be 31 years old. The Second 30 years old.

The Third 28 years old.

And these shall be found not long after the exit (or ruine) of the Aultrian Empire, and it shall happen, that in this very same time, a Yellow Lion shall come out of the North, which shall be Persecutor of the Eagle, and at length its Conquerour: He shall subject under this Empire all Europe, and a part of Asia and Africa, and shall profess the good and Christian Religion, and shall have many Followers thereof. It shall first of all be a most troublesome work for him to chase away the Claws of the Eagle out of the Empire; but afore this comes to pass, there will arise extremely great Dissentions, and various Grudges amongst all Men in all Countries; the Inferior will rise against the Superior, so that there will be a great tumult, but yet notwithstanding the Members shall suffer the punishments of their wickedness, and the head abide safe.

Nor shall here be an end, but there shall be kindled a great fire, which shall turn all into ashes, but the Omnipotent God will be at hand to help his own people, for there shall yet remain a small sparkle of Piety, which will take rooting, and encrease by little and little, and strike a terror into the plundering Robbers, and make that alive, which seems to be dead. The Enemies and Persecutors of Christ, will call themselves powerful, and every where bring in great Devassations, in such that there will seem to be an end of our Actions.

Now whilst the Enemy is placed in the very topmost pinch of fortune, the most Just God, will (by the help of a small company) destroy, and utterly root out the Northern Lion, accompanying him, together with all his Clerks; yet abundance shall be converted, and believe on his Omnipotence, and in the most Holy Name of God.

When therefore this Lion hath gotten the Eagles Scepter, every body will reverence, and run after his Majesty: He shall



that be porous in Deeds and Councils, and the Subjects that may respect him, shall receive him with the greatest joy, and the greatest love in Spawes.

How must the aforesaid Treasure twixt Suevia and Bavaria be found, which is equivalent to the Rubes of the Kingdom, where also lies hid, a Carbuncle, as it is an Egg, rather than any price.

The other Treasure that lies between Spain and France, is hid great and price, but yet it gives place to the former, it shall be manifested at the entrance of the Lion that comes from the North, and which shall be the Eagle, and then at length shall men consider well what I Theophrastus have been.

Now when the praised Northern Lion hath finished his Course, and hath broken the edge of the Eagles Claws, then shall Peace and Concord every where speedily and conveniently be created, but yet he will send before, some signs and tokens by which it shall appear unto us, that the Messengers first forth shall declare the coming of the Lord. There is yet one only thing that I Theophrastus do beg at your hands, that ye do not any of you impute unto me the things which I now lay open; forasmuch as I cannot be against the Will of God, which I must put in execution in the Nature of things.

These are those Secrets of Secrets that I was willing to open unto you. This Treasure far exceeds other Treasures; my Arts are hidden in that place betwixt Suevia and Bavaria, and they are these, viz. The true Transmutation of Metals of a short way: The Universal more than perfect: The so much talk'd of Aurum Potabile, and Philosophers stone: But he that by the guidance of God has an entrance opened to the finding of them, shall there find (besides other stones) a precious Carbuncle, which lies hidden in a little Box cunningly made by Men, and covered over with Gems; the Key of the little Box is in a Golden Coffin, the Golden is put in a Silver one; the Silver one in a Tin one; and it lies in such a place as God hath chosen, or appointed.

The Omnipotent God will bestow upon him that finds them his Divine Benediction in all his Affairs, and will give him power to overcome all evil, and to draw out good; whereby things necessary may likewise be obtained from God who is able again to reduce the world he made of nothing, into nothing: Let the Son and Holy Spirit be also with us, the Blessed Trinity, for ever and ever. Amen.

First of all, Paracelsus saith in this his Prophecie, that Men shall draw him out of his Grave, and place him towards the East; who is so simple as to think that this is to be understood according to the Letter? What Profit and Honour would thence arise to Paracelsus, if his Bones were digg'd forth, and translated into another place? Whereas if he were even now living, he could not desire a better and more excellent Tomb, than that he lies in. Whilst he was living, he was not so proud; he very well knew that the Honours of this World are fading and vain. Nor did he ever require, that any Epitaph should be erected to his Honour: Although (when his Friends had taken care to lay him in a decent place.) The Magistrate commanded a very notable Epitaph to be engraven on the which Epitaph will bring him Praise enough while the World lasts. The said Epitaph runs thus.

The Epitaph of Theophrastus Paracelsus, which is to be seen Engraved on a Stone at Saltzburg, in the Hospital of St. Sebastianian, erected against the Wall of the Church.

Here lies Buried Philippus Theophrastus, an Eminent Doctor of Physick: Who by a Wonderful Art, took away those Dire Maladies, the Leprosie, Gout, Dropsie, and other the Incurable Diseases of the Body; and Honourably Distributed, and gave his Goods unto the Poor. He Died the 24th. Day of September, Anno 1541.

How could he be possibly more praised after his Death, than I see to be done by this Epitaph. But yet I would not have you think that I desire you to account of my Opinion as if it were Gospel. It pleased me here to put it for this end, to shew, what my thoughts are, as concerning this thing, every one may believe as listeth him, but as for my part I will in no case believe, that the Prediction is to be explained according to the Words or Letter: But whereas it is said, that he shall be taken out of his Sepulchre, and put in another towards the East, I do thus interpret it: That if any shall understand his Writings, they shall thencefrom perceive what, and how great a one he was, and so will make his Cause their own, and will defend his Writings against Inimicitious Zoffists (or Carpers) and Ignorants, who as well since his Death, as whilst he was alive, entreated him very inhumanly, and as it were, oppressed him with Lies, and Infamous Libels, and so do they take him as it were out of his obscure Tomb, and place him towards the East, by which it may appear to every one what an incomparable Man he was; to the performance of which, I will not refuse to lend my poor help, though small, (God permitting.)

He doth afterwards add, that there are three great Treasures hidden, which whoever shall find, shall triumph very nobly; the places which Paracelsus points at, and where those Treasures are hidden, are, where the Metals are digg'd; and indeed such places they are, as in which there lies hidden the highest Tincture, and which otherwise is not to be found neither in Gold, nor Silver, nor in all the other Metals, or Minerals.

I do think that Paracelsus knew these Minerals, and made a Tincture of them, and thereupon was willing thus obscurely to describe such Treasures.

He that shall find, that is dig it forth, and shall know the way of preparing a Tincture thencefrom shall doubtless be magnified, especially if he will disclose them unto others.

Now I believe that if these Treasures should be digg'd out by some godly, honest, and wise Man, (for the finding them is denied unto reprobrates) would not hunt after or affect vain Glory, but be contented

in that he knows it: But it is not convenient to open or disclose what this *Minera* is, wherein God hath put such a singular Tincture, and which he hath hidden from the proud and covetous. But seeing that all things reside in the hands of God, who can give unto his own People that which he denies unto others, I do not at all fear any one's exhausting so easily a Treasure lying so profoundly hidden, although I should make known this subject.

Thus much I have experienced, that there lies in them a much more excellent Tincture than in the other Metals or Minerals, but I do not boast that I have thence drawn the universal Tincture and made it fix, for time and occasion would not as yet permit it. But I have often times in a particular way instituted a graduation of *Luna*, by the help thereof, inasmuch that it hath left some fix'd Sol: Whereby I have observed, that many excellent and profitable things may be effected, when that volatile Tincture is by the rule of Art made fix'd and fluid. However I will make trial, if God shall vouchsafe me life and strength, and see what I shall thence obtain.

As concerning the name of the subject, it is called *Magnesia Saturnina*: which is found between France and Spain in the Piedmont Mountains; 'tis commonly called the *Piedmont-magnesia*, but 'tis very much unlike (to one another) for some of it is of a yellow colour, and this the *Venetian* Glafs-men use, when they make Glafs, that it may become pellucid and transparent. The Glafs doth at first become of a purple or Amethyst colour, but this colour abides not one hours space in the subject, but it evaporates, because it is not fix'd enough as yet, and then the Glafs becomes wholly transparent and bright, but if they would have the Glafs hold the purple colour, they presently work it up as soon as ever the *Magnesia* is therein molten. Many years ago, when I attempted operations about things of less moment, and changed Crystals into variously colour'd Glasses, I found that this purple colour was not fix'd in the Fire; and that the *Magnesia* had in it many impurities, whereby my Glasses were obscured: But yet I attempted to extract from thence the pure Tincture by Art, and to free it from its unclean faces, and to this end used various Menstruums, but yet effected nothing; until at length I saw that by mixing that *magnesia* with fix'd nitre, it was by boiling them in a strong Crucible, opened by the Nitre, from whence proceeded a delicate purple colour. I poured out the Mass and powdered it, and extracted it with hot Water, and pass'd the Liqueur through a Filter, and then had I a most dainty purple fiery liqueur, which did almost every hour (standing but only in the cold) change colour, so that it became one while green, then sky colour, another while of a blood colour of its own accord, then again presently it received other most elegant colours. Out of which liqueur I did a new separate the more pure part, and I used this red powder to tinge my Glasses, the which thing I indeed obtained, but because the Tincture was more fusile than the green stone it self which it was extracted from I was constrained to leave it off. However this I experienced, that there lies a mighty Tincture hidden in the said *Magnesia*, and thenceforward I pondered upon the business more deeply, and adjoined the *Magnesia* thus fusile unto *Luna*, and then I found some Sol: but I could not bring the work to any fuller perfection because of the want of time, & store of business. I am of that opinion that (by Gods permission) a Tincture may thence be extracted for Metals and Animals. These are my conceptions, but I well know, that the igno-

rant *Atomus*, or Carper, will hence take occasion of mocking at me, but this I cannot at all hinder.

This *Saturnine Magnesia* in the Alps of *Julia* is much purer and excellenter than that *Piedmont Magnesia*, is and there is in it more Tincture, the which we may extract most easily by the help of Nitre, and albeit the *Minera* be of a yellow colour, yet is there extracted thencefrom by the benefit of Salt-petre, a most elegant Tincture, of a greenish colour, and is likewise one while purple; then sky colour, then again red, and by and by again it assumes a green colour, the which also is so fusile, it fixeth every *Luna*, and doth in some sort make it golden. These two Minerals I have often times handled, and have thencefrom gotten the green Lion, but have not proceeded any farther.

The third Treasure twixt *Suevia* and *Bavaria*, is not much unlike unto these two, and without doubt such kind of Treasures will offer themselves even in many other places where such Mountains & Mine-pits are found out, were but the right way of digging out and ripening them, but known unto us; which knowledge is only granted unto the Sons of GOD.

These things was I willing to mention, that so it may be known what my opinion is as touching those Treasures. For I am firmly persuaded that the universal Medicine may be thence prepared, especially out of that which very much abounds thining in Metal resembling a vein of Lead, and yet yields not any Metal by fusion, because of its exceeding volatility, and of wholly flying away in the form of a vapour: Yet nevertheless, that Northern Lion is able to master it and to fatten its young ones thereby. And if GOD shall vouchsafe any one such a Treasure, he will verily find more Art-containing Books than is indeed needful. And whereas Paracelsus adds that the Lion out of the North will (after he hath found the aforesaid Treasures) become a Potent Monarch, this is easie to be believed, for he is enriched with the digged-out Treasures, and is able to manage his affairs as listeth him. He will be able to give whole Kingdoms unto others; and yet his power will not be diminished, he will in like manner be able to institute good precepts and government, and there will be a notable assistance of all things, inasmuch that there will be nothing wanting. There are many Men would lead an honest Life, were they not constrained by poverty and need to do evilly.

The Northern Lion is able (when he hath found the Treasure to abolish all these vices, and contrarywise recover a good political Governance, Peace and Quietude. For Wealth and Riches are able to transmute Strife into Peace, and these the Northern Lion can abundantly exhibit, inasmuch that he may deservedly be Stiled a most Potent Monarch. But if so be that evil companion, viz. Sulphur be joined unto him, which may provoke him, he becomes more venomous than the Basilisk, and is able to kill in a moment of time, both Men and Beasts, yea to ruin Castles, Mountains, and Fortifications, and to annihilate them. But on the contrary when he hath found the Treasure, he becomes tame and liberal, and lays off his anger, and bestows on all Men sundry most acceptable gifts.

Furthermore, Paracelsus saith that a yellow Lion shall come out of the North, which shall dull the Eagles Claws; all which verily is to be only understood concerning Salt-petre's transmuting virtue much conducing to a perfecter augmentation of the Metals, from whence O and D together with the Carbuncle may be achieved; and not at all of a certain Northern King and the Roman Eagle. For the yellow and fiery

Lion which is here treated of, is fixt Nitre, and if it be joined to the volatile Eagle, that is, to the volatile Corrosive Salt; this (Eagle) is overcome by that (fixt Salt) and is tamed, because the Corrosive virtue which it abounded with, is taken away: So that he that is skill'd in Chymistry may well enough understand what *Paracelsus* drives at, and that he does not at all mean those Monarchs and Rulers, as may be gathered out of his Manual, where he Writes, that the Blood of the red Lion is to be commixt with the liquor of the white Eagle, and that from them by a due Colliation is the universal Tincture to be extracted.

Therefore they do evilly that interpret the Writings, and these predictions of *Paracelsus* otherwise, they earnestly expect external Monarchs, but experience hath taught that those Lions do bring with them nothing but a hungry Stomach, which can hardly be well filled (or satisfied) with the Sheep and Lambs of all Countries. And I pray God, turn them from us and continue unto us Peace and Concord, which is most of all to be wished for.

Moreover *Paracelsus* further saith, that he was constrained to detect this Treasure and hidden secrets, to shew the nearest way to the description of the Philosophers-stone, which (Stone) whoever finds and knows how to open the Gate, he shall find a Carbuncle as big as an Egg, together with other Gems, which are conserved in a Chest made of Gold and Gems, and this Chest in a Golden Sepulchre, the Golden one in a Silver one, the Silver one in a Tin one, on which the Key is placed.

And now will there be any one so foolish as to interpret this according to the alleged Words: No certainly unless he be deprived of the light of Nature. It was never heard off, that ever there was any Carbuncle found of the bigness of an Egg: neither the *Roman*, nor *Grecian*, nor *Persian* Monarchs are reported to have had such an one, and from whence then should *Paracelsus* only have the same? All Men therefore see that this Prophecy is not at all to be understood barely according to the Letter. Now in that he calls the universal Medicine a Carbuncle, he does not therein offend, because even other Philosophers have imposed upon their Tincture this very name, and this merely because of the form it has, for if there is to be a certain Tincture that should tinge the white Metals into yellow Sol, it must of necessity be red; and therefore some of the Philosophers have likewise called their Tincture *Hematitis*, for likeness sake.

Nay more, so far as it is mentioned of the Carbuncle that it shines in the night like a burning live-Coal, and yet such a stone was never any where seen or found, it necessarily follows that those things which are delivered thereof are not to be understood according to the Letter. The chiefest *Lapidaries* do Witness that they never saw it; the Oriental Rubies are the chiefest red Gems that we know of, of which there is scarce one found that is bigger than ones nail, which notwithstanding, if it be pure and shining, is sold for many Thousands of Duckets. In like manner, Granates are red, and of a meaner price, and shine no more in the Night than Rubies do. But that a shining in the Night like a live-Coal, should be attributed to a Carbuncle, is not done without cause; verily, the Authors of that thing are not at all to be supposed to be such Merchants, continually handling Gems, (as if they had ever seen such a stone): No, but they were the Philosophers themselves, who wrote which they wrote of the prepared Tincture,

the after Writers did fallily construe their meaning and understood it literally, perswading themselves that there was such a Carbuncle in the nature of things. Therefore we have no reason to induce us to believe that the ancient Philosophers did in very deed describe or mean such a Stone as shines by night, but let us rather perswade our selves as being thereto constrained by the Verity of the thing, that they did not in the least mean a natural Stone, but a stone prepared by Art, and their Tincture. And this, the very Name it self seems to point out; for *Carbo* signifies a greater Coal; and *Carbunculus* signifies a little, or lesser Coal.

Now if so be that any one would endeavour to prove with Oaths to this blind, proud, and wicked World, that such a red stone shining by night, may be made of a Wood, or stone Coal, certainly every body would mock at him, and would say, That he propoundeth meer Lyes; and therefore no body ever dared (though he were never to certain of the Truth of the thing) to write ought of the same.

But some or other will say, Whence come you to know these things, and by what Notes or Testimonies do you prove that you are to be credited, as touching this Business, seeing no body ever writ that these things were so? To such an one I answer, That I leave every one at his liberty; for whether he believes my Sayings, or believes them not, 'tis all a case to me. However I say, that I can change by melting, a meer black Coal by the help of a Salt (but not common Salt) into a most red stone in one hours space. For Coals are nothing else but a fixt and volatile Sulphur, which if we will fix it, will be fixt; if we will volatilize it, it will be so. A wood Char-coal (though there's much difference amongst them) should it lie shut up firmly & most tight in an Iron Vessel even for an hundred Years so as that no air get in, and should be (all that while) kept in a most vehement fire, yet would it not shew the least sign of being consumed or changed, but let but the air come unto it, and it will be reduced into ashes in a moment. If now you have understanding and sense, consider with your self more largely as touching this thing, and you will find many profitable and good things if GOD shall open unto you the Eyes of your mind: This red stone having the form of Glafs, being poured out of the Crucible, shines in the dark like a burning Coal, according as is the Coal you prepare it of. And albeit that this Glafs can perform many good things in Medicine and Alchemy, yet it is not at all the Stone of the Philosophers, which they call a Carbuncle, for that must be fixt, and resist the Fire, both which are denied to this Glafs to be, for it is volatile, and can easily be changed by the Fires force.

I have several times made this stone of Salt and a Coal, but never had time as yet to bring it to a perfect fixation, and therefore I cannot determine certainly, what may be farther hereof made. However I would not have the lover of the wonders of GOD to be unacquainted with this, that (viz.) my said Stone of a Coal, or my red Carbuncle, if it be dissolved in the air, it yields a green fiery Liquor, which if smeared upon any Silver it gilds it as Sulphur does. If the Divine Clemency shall supply me with life and strength and my enemies, and opportunity shall permit, I will some time or other set about the work of fixation, that so it may appear what is thence to be hoped for.

And now friendly Reader who art not addicted to either party tell me, whether or no there does not re-

dound unto these more light from this [most brief treating of the Carbuncle, than from the obscure *Lucerna* or Candle of I. H. S. in whose Book there are indeed the names of a many Authors cited, but none of their Writings are explained, and therefore it is rather a bringing others into a Labyrinth, than a showing of the true way.

*Paracelsus* adds, that this Carbuncle is hid in a little Chest made of Gold and Gems, this Chest in a Golden Coffin (or Tomb), this in a Silver one, and finally this Silver one in a Tin one; which sayings verily are to be taken or understood in a far other sense than they are uttered, as well as the words foregoing: For to what end should there be such a multitude and variety of Coffins? My opinion hereabouts is this: Forasmuch as there lies in Tin (as *Paracelsus* testifies in his Book of *Excitatus*, when he saith, that *Jupiter* has much Gold in it, and not a little Silver) a spiritual Gold and Silver hidden, and that ☉ contains ☉, and ☉ contains ☿ Tincture, we are to understand these things of them, they being as to many Coffins.

But some may say, to what use serve the Tin and Silver, if they are to be removed afore we can come to the Golden Coffin, and get to that which contains the Carbuncle, may we not presently even at first dalh seek such a stone in ☉, and leave Tin and ☿ untouched? I could most easily satisfy such an objection, and give a sufficient reason of *Paracelsus* his Writing such things, but that I judge it inconvenient to communicate such things of so great a consideration (or moment) to wicked Zoilists or Carpers.

However I cannot here let this slip, viz. that there lies hid in ☿ an excellent Mercurial Liquor, which is thence extractable by the benefit of that Key which lies upon the Sepulchre or Tomb, viz. by the benefit of Salt-petre. This mercurial Liquor, loosens the bonds of ☿, and makes it fit, so as to be extracted (or made into the belt ☿, out of which the Carbuncle is to be afterwards made, for every (kind of) ☿ doth not at all resemble the nature of a seed, but supplies the place only of an House or covering, which containeth seed in it, and which (covering) must of necessity be removed by him who desires the seed it self.

Inave in other places shown how properly the metalline stock or nature may be compared to a Vegetable Apple: *Satura* is the root of the Tree; *Mars* the Trunk or Body; *Jupiter* the Bark of the Trunk; *Mercury* the Juice contained betwixt the Bark and the Trunk; *Venus* the green Leaves; *Luna* the white Flower or Blossom; ☿ the Fruit or Apple of the Tree containing the seed of the Vegetable.

Now then, even as it is a thing evident to all, that the Apple it self is not the seed of the Tree, but the Nut or Kernel is hidden in its inward part, so that the Apple doth only keep or hold in it the seed; even so in like manner ☉ is not at all to be accounted as the seed of Metal, but only as a preserver (and coverer over) of the seed. He now that lights on the true Key, which *Paracelsus* hath put upon the Golden Coffin, (viz.) the inside of Salt-nitre, he will be able to open, not only the Tin Coffin, but the Silver and Gold Coffin too, and to take that Coffin therout of, which contains the Carbuncle and other Gems.

These are the things I was willing to publish according to my opinion, concerning that great Carbuncle lying so deeply hidden in those Coffins: I permit others to expound them otherwise, for I do not offer these things to the old Men who stiffly contend for their own conceptions as it were for the best thing they have, it being an hard matter to tame an old dog;

but I present them to such only as are the younger students of the true Hermetick Physick or Medicine, and who are not already drawn into various errors by the reading of many Authors. And he that refuseth to believe that even the greatest *Arcana* may be handled or treated of in a meer simple or plain Stile, and that they need not at all any prolixity, shall never attain his wish'd for end, though he were able to recite by heart even all the Philosophers Books. And thus much may suffice in this place.

Lastly, *Paracelsus* adds at the end of the Prophecy, that the most Great and Blessed GOD will grant to the finder out of these Treasures notable Power and Fortitude, whereby he may oppress all evils, detect good things, and get every profitable thing, certainly whoever he be that shall find such an universal Treasure, he will labour to suppress every noxious thing; and to diffuse (on the other hand) whatsoever is any ways profitable for man-kind, and necessary, and this to the very utmost of his power. For the Philosophers say, *Omne Ars doct either find a Man honest and godly, or it even makes him such an one*; that is, it is altogether impossible for such an one that lights on such Treasures to be an ungodly Man, so, as for those highly precious gifts of God not to stir him up to godliness and Mercy.

I could render this Prophecy of *Paracelsus* more clear, but that I study to be brief, and could manifestly prove, that it is not to be understood according to the bare Letter, but that *Paracelsus* had regard to this great universal of the Philosophers, which is clearly enough hinted in these words which are mentioned at the end of the said Prophecy, viz. *That all evils may be kept under, (or abolished) and that all good things may be drawn forth or advanced, and withal, all necessary and useful things may be gotten*. These words do openly enough point at the universal Treasure of the Philosophers, by which all evil is kept under, and all good educed, and all necessary and profitable things acquired. On this wife are my Conceptions of them, let another interpret them according as seems him good. For when the Lion shall have found the said mineral Treasure, he will be incited or stirred up to such a great passionate wrath and power, that is able easily to dull the edge of the Eagles Claws, that is, his adversarities. 'Tis impossible for the Eagle to get such a Treasure, but a thing most easy to the Lion; For there is not a subject in all nature that can make the Lion so fiery and powerful as the *magnum Saturnianum*, and therefore it easily tames all Corrosives, and cuts off their Claws. Experience confirms the things I here mention, and therefore I will say no more: Yet however I think it expedient to add this one thing more of the nature and properties of the Lion and Eagle.

It is sufficiently manifest, that the Eagle is called the King of all Birds, and the Lion the King of all four-footed Beasts. Not, as if the Eagle were the greatest amongst the Birds, and the Lion the strongest and greatest Animal amongst the Beasts: No, no, There are bigger Birds and Beasts than the Eagle or the Lion; Geese, Swans, and our Country Storks are bigger than an Eagle. (I omit to speak of the other huge Birds in *Asia*, *Africa*, &c. Amongst which the *Ostrich* is reckoned for one, which is as big almost as a Horse, and runs swifter than a Horse.) Then, for Beasts, there are some of the (like proportionable stature) as the Rhinoceros and Elephant, which fear the Lion no more than the *Ostrich* and other (great) Birds do the Eagle; yet nevertheless do they ac-

knowledge

knowledge the Lion and Eagle for Kings, and that deservedly too, because of the Velocity, strength, valour, and other virtues that those Creatures have.

But yet Historians rank the Griffin and Dragon amongst the Birds and the greatest Animals. They paint (or describe) the Griffin, a winged Animal, one half part resembling a Lion, the other half part an Eagle; the Claws, Wings and Head like an Eagles, the other part of the body like a Lions. But this is a Philosophical and Poetical Fable, by which they would disclose and lay open other Mysteries and Arcana's. For there is never to be found in all this whole compass (of the World) such a Dragon as flies in the Air or spits out Fire; but all these sayings, point at Salt-petre. They likewise feign the Griffin to be of such power as to be able to carry away through the air an armed Souldier on Horse-back; these and greater things than these can Salt-petre do; for 'tis able to blow up whole Castles and Fortresses with many myriads of Men into the air; and would to God this were not so well known. The Philosophers have only shadowed out their Dragon amongst other Birds. Our Dragon never dies but by the help of his Brother and Sister, that is of the fixt Lion, and corrosive fluid Eagle, the which thing may be likewise said of the Griffins. For of the fixt burning Lion, and fluxile or fluid corrosive Eagle, there is created no other thing but a Griffin, part Eagle and part Lion, which lifts (or blows) up Mountains of most vast weight; when they fight each with the other they kill one another and are raised up again out of the dead Carcasses. And thus there are regenerated (or again born) other Lions and other Eagles out of the Griffin, and (if you are so minded) both the Lion and also the Eagle may be fed and fattened with the common Flesh of other Wild Beasts, so as thence forward they may generate innumerable Griffins, which you may use not only in time of War against the Enemies, but also in the Mountains, to dig out Treasures thence, and being digged to carry them into the Nest.

N.B. It is reported of the Griffin that he gathers much Gold which he carries with him into his Nest; But all these things are to be understood of the strength and virtues of Salt-petre; concerning which I could be much more prolix and more clear were I not even constrained to over-pass it and let it alone because of the ungodly crew of wicked men.

And now let us enter with the Philosopher *Virgil*, into the dark Cave or Den of the *Sybil*, and let us see whether or no we can find the Book there (that is Salt-petre) wherein are found all the secrets of nature: Or rather, let us enter into the Stable with the three wise Men or Kings that came from the East, and let us there seek the Son that was born of a Virgin, who is the King of the World & the King of all Kings, and let us apparel or adorn him with due gifts or presents, that his age & strength may grow up and be augmented, & he may at length drive away the Diseases of his three brethren, viz. of the Vegetable, Animal, and Mineral. This Infant needs not Gold, Myrrh, and Frankincense for his sustentation, but we will bestow upon him instead of Gold Myrrh, and Frankincense, three other things for multiplications sake; common Sulphur shall supply the room of Gold; common Salt of Myrrh; the external green boughs of Firr or Elder, of Frankincense; thereof will we make his Bed, and these shall be his coverings.

The Salt which is animated by the Sulphur and converted into Milk shall be his food, so long until he becomes great and strong enough, yea a Potent Mo-

narch, and then will he gainfully reward his Tutor (or Guardian) *Joseph*, for his laborious Wardship.

The Magi and Philosophers observed the Star of our Infant, which shined so brightly as that it dazzles the sight of the beholder; nor can any one look long upon it without hurting his sight, and thereupon it is worthily called the Son of the ☉: For there is not any clear or bright light without the Sun, the Country fellows therefore do not perceive such a light, but the Chymists can (whensoever pleaseth them) make and see such a light.

The things which I here declare concerning the nativity of Salt-petre, are most ealie to be understood. It is generated or born in the Stables, The ☉ is its Father, the ☽ is its Mother, the Wind conveys the Paternal seed in a spiritual manner, into the moist Earth of the Stable, by which, the Virgin Earth being impregnated doth after due time produce its young to light.

N.B. That Earth which produceth and conveys Herbs, Grafs, and Metals is called the Mother; and that Earth which doth not produce (as in Stables, &c.) is as yet to be accounted as a Virgin, which doth afterwards yield fo noble an offspring. No Earth out of which, Herbs, Trees, and Minerals are born doth ever conceive again, or ever intermits the production of such things, and for that reason is it called the Mother of all things. But now that Earth that is found in Stables, which conveys neither the *Solar* nor *Lunar* beams, nor is moistened with either Rain or Dew, cannot produce any thing, unless the beams are conveyed thereto from the Sun by the Air, then the impregnated Virgin in the Stables, brings forth an offspring, which is by the Philosophers presented for its sustentation, with a threefold kind of gifts; to wit, Sulphur instead of Gold, and that being in like manner fixt and most pure; with Salt instead of Myrrh, which is pure and preservative, and with the Juice or Resin of the Firr-tree, or Elder, instead of sweet smelling Frankincense. These three things are the Aliment or food of the new Infant; The Green Boughs of the Firr or Elder, do furnish him with a Bed for his Cradle; The Sulphur and Salt yield him sweet milk to nourish him; so that there needs not any thing else but a good overseer, *Joseph*, that may keep off the Rain and the cold Air from this Infants Bed.

By such a means as this may we nourish our most tender Infant and advance him to his Kingly Monarchy; when he shall arrive thither he can make all his Brethren found and rich: For the Vegetables do only desire profitable and convenient food, or some fat earth, whereby they (being well and found) may attain to their perfection and encrease themselves; which thing Salt-petre does better than any other.

Nor do the Minerals desire ought else but that the impurity and superfluous Sulphur be taken away from them, that so they may (after a perfect Purification) cast forth their seed, that is Gold; and this, Salt-petre does most perfectly. Then lastly, the Animals seek not after other food than what the Earth supplies them withal, which to effect, Salt-petre must of necessity be at hand.

Salt-petre therefore is the only preserver of all Vegetables Minerals and Animals, but the soul of Man doth not at all belong thereunto, for it is the property of Jesus Christ; but as for the bodies, Salt-petre is the most profitable medicament. Wherefore I have here produced in this place, I have already written the same in other places of my Treatises, in another kind

kind of manner and expression, and therefore I suppose it to be plainly needless to make any farther addition: He that will not be able to light his dark Candle at this shining light, will be blind all his life time, and consequently incurable.

As concerning the preparation of Sulphur with Salt, how it is to be made a *Lac Virginis* I have already mentioned it abundantly in many places. And as for the making of the Cradle or Bed, and what form 'tis of I shewed about the beginning of this Work: So that now there remains nothing behind but the applying the hands to the work if we desire to get honour and goods from (this) principal Monarch.

Salt-petre is the only Artificer to reduce Metals unto their first matter, or of making them Astral. For the Stars are nothing else but pure fire. They exercise fiery Operations, and produce fiery things; like as the Vegetables do putrefy by the Salt-petre in the Dung, and are reduced unto perfection and multiplication, without which putrefying there can never be made any multiplication of the Vegetables, as Christ himself witnesseth; if the Wheat does (not) putrefy in the Earth it can produce no fruits. The like is in the Animals too, yet especially in the Eggs of Birds, which said Eggs must stink and rot afore the hatching of the Chicken comes. Therefore in vain have many tried so to delie (or putrefy) Metals and reduce them to their first matter. Now though the Philosophers tell us that Metals are to be first putrefied afore they can be multiplied, yet they meant not such a putrefaction, but the putrefaction of Metals must be done by the help of fire, and withal must be so effected by Artificers: here below, as the Metals are wrought by the Stars in the Heaven, for we must imitate Nature. And forasmuch as nature generates all Metals by a Celestial Fire, therefore the Artificer must go no other way, but must imitate nature if he would do any good on't.

As for Vegetables and Animals, we willingly allow them a moist putrefaction, but for the Metals, a dry and fiery putrefaction suits with them, and which may be perfected in two or three hours space, as may be seen in my *Continuation of Miraculum Mundi*, and in (my) *Testimony of the Truth*, [or *Explication of Miraculum Mundi*:] And this is the only cause (or rock) against which many have fallen, and so have not gotten any good thing, (or profitable.) Now, afore putrefaction it cannot be encreased; and every thing which induceth a putrefaction into other things must of necessity consist of two contraries in its nature: Water poured upon Water remains Water, and there is no change wrought; but from Fire and Water do many wonderful things proceed. If we pour the corrosive Spirit of Nitre, of Salt or Vitriol upon another corrosive Spirit, they easily embrace each other and are commixt without noise, and there is not thence generated any new thing, but it always remains an acid corrosive Spirit. If we put one (strong Lixivium to another like Lixivium, there is no noise (or hissing) stirred up, nor any change made; but now if we mix that same Lixivium with a corrosive Spirit the one operates upon the other, being both contraries, and there is generated of them both somewhat of a middle nature, which has not the likeness of either. This now is clearly evident in strong fixt Nitre, or any other Lixivium of Wood, when it is poured into *Aqua-fortis*, and they act one upon the other; then of them both, there proceedeth a certain middle thing, viz. burning Salt-petre, which brings all things to putrefaction, and promotes or advanceth their multiplication, the which

thing is after a sort known in the Vegetables, and Animals; but as for the Metals, the Philosophers have accounted it as a secret even to this very day; and therefore hence comes it to pass that there hath been so much erring in putrefaction (which is the very key of the Art) and nothing hath hitherto been brought unto the will'd for end.

Forasmuch therefore as Metals ought to be putrefied by the Fire, we do not find any thing more commodious than Salt-petre, which in one hours space, putrefies all the Metals prepared aforehand, and multiplies them, viz. when a commodious and moist Matrix is put into the Fire, wherein (a man) may put his (metalline) seed to be therein multiplied; for seed is not multiplied without a Matrix, and this is daily observable in the Vegetables and Animals.

Now, as a Vegetable seed needeth for its multiplication a fat and moist Earth, and an Animal Matrix; so likewise the seed of Metals needs a metalline Matrix, without which it cannot be multiplied: And by how much the more apt and commodious the Matrix is, so much the more noble is the Fruit, and so on the contrary.

So then, by this time all men know that by how much the stronger and better the contraries be, so much the better are the fruits, as hath been already said. The stronger the *Aqua-fortis* is, and the more fixt the Salt or Lee is, that are mixt together; the better and the more plenty of Salt-petre is there generated. But especially if we concentrate corrosive Spirits by Metals & do make them (thereby) yet more corrosive, as also if we concentrate fixt Salts by Flints, and so make them yet more fiery, they do then perform many wonderful Operations. For whereas the bare contraries do yield but only Salts; being concentrated, they do yield forth fruits that break out as if it were Trees: Concerning which you may see in the second part of the Furnaces, about the Liquor of Flints. This is that which we see and believe, viz. that by how much the more the contraries are contrary to each other, so much the greater product is there of Fruits. But because Fire and Water are naturally exceeding contrary to each other, therefore do they also produce the greater fruits, viz. Metals, which are greater than either the Vegetables or Animals are.

N.B. If the Artificer can think upon a yet hotter Fire than the common Fire is, and a colder Water (than usual) and know where to find them, such will of necessity likewise produce Metals that are more excellent than the Vulgar.

But seeing that amongst all the fires there is not given a hotter than Salt-petre, a cold wife is to be associated unto him, and the wedding is to be celebrated in Hell, then will both of them leave (behind them) Sons of Riches and Health.

'Tis an usual custom throughout all Germany, haply other Kingdoms have the like, that when two contract Matrimony, the Bridgroom and the Bride, are led into the bathes two or three days afore the Wedding is Celebrated, and they are there wash'd, to the end that they may be the more acceptable to each other: And although they put on their best apparel and do adorn themselves with most clean dressings, yet do they at last put off all their fine Ornaments when they desire to conjoin themselves and multiply.

The same is here to be understood of the new metallick multiplication: If each party be but only found & of a good constitution (though the outward raiment be vile) yet are they able to beget as fair Children, as Royal Persons, (who are loaden with Gold, Silver,

Y y y

precious



and therefore well worth the searching after, and the application to the use of Man.

Therefore like as by the help of Salt-petre, we see we are able to get all such things as an honest man seems to need, such as are Food, Drink, Health, yea and ☉ and ☽ too, and all this most plentifully and perfectly: so on the contrary, the use of this Salt-petre is very hurtful when it is used for evil, and this is sufficiently seen in the time of War. Yet nevertheless we should not esteem less of it than it really is, because of its being abused, but rather the benefits attending it (which are very many) should stir up our minds to make a diligent enquiry into it. The end of the World is at hand, and sundry things are detected, which the ancients reserved amongst the highest Secrets, but they are but little esteemed; some of them, I will here exhibit and show unto you.

Now follows the Process, Operation, or Manner of extracting Sol and Luna out of all the Metals with Profit.

That you may gainfully extract ☽ out of the Metal (or Mineral) of Silver, Litharge, stones, and the like fossils, which have ☽ in them, First of all you must commit them to the fire, that they may be made red hot (but yet this needs not be done with sand) then powder them, and put them in a Glass Cucurbit, pour thereupon as much *Aqua-fortis* as is sufficient, put this Cucurbit in a pan full of sand, and then heat the sand by little and little by putting Fire thereunder; that so the *Aqua-fortis* may by the help thereof attract the ☽ out of the powder; then pour off the *Aqua-fortis* from this powder, and pour it upon the other like conditioned powder, that it may also extract the ☽ out of that too, and this decanting and pouring on, must be repeated so often until there be no more dissolved.

The *Aqua-fortis* is always diminished or wasted because some of it adheres to the Metal, and therefore must there always be other *Aqua-fortis* put in the room of that which is wasted; The *Aqua-fortis* which adheres to the Metal is to be thence separated by the benefit of boiling, on this wise; Pour common Rain-water upon the Metal contained in the Cucurbit, and mix it well by strong shaking of the Glass, then heat the sand so as to make it boil, and so that hot water will draw to it self the *Aqua-fortis* out of the Metal, which said water contains ☽ in it. Then when this water is abated by inclination or pouring off, put on some Rain-water a second time upon the powdered Metal remaining in the Cucurbit, and this will extract that which the former water left of the *Aqua-fortis* partaking of ☽ (unwashed off:) and so let nothing of the ☽ remain in that metallic powder; when it's thus done the matter is to be thrown away as altogether unprofitable, unless there lies hid therein any Gold; which if it be so, we must pour some *Aqua-Regia* thereupon, and order the operation according to the foregoing method; then mix both the strong waters together; both that which extracted the ☽ and that which extracted the ☉, mix them diligently, and there will thence arise a certain white Water, and the solution will be like Milk; For the ☽ cannot abide the *Aqua-Regia*, but there will precipitate a white powder which snatches (or precipitates) down with it self out of the Waters the Gold too. We may make use of the decanted Water to extract ☉ out of the

other Metals; for the pouring on of the *Aqua-fortis* with the ☽ in it, to the *Aqua-Regia*, doth not at all take away ought of the virtues.

Upon the precipitated powder of ☉ and ☽ hot Rain-water is to be several times poured, that so all the sharpness of the *Aqua-fortis* may be extracted. The powder of the ☽ is to be put upon some Cap-paper and dried. And as for the way of separating the ☽ from the ☉ we will presently teach in what follows.

The edulcorating waters as well of ☉ as of ☽, are to be all of them mixt together, and then the ☽ will settle to the bottom, and attracts the ☉ which was in the other water (or washings): so that there remains not any either ☉ or ☽ in the edulcorating Water (or washings): nor are these waters of any farther profit as to the work of separating as afore, yet notwithstanding there may be made excellent Salt-petre of them, as we shall mention in what follows.

When you have rightly edulcorated and dried the precipitates of ☉ and ☽, they are to be put into a strong Crucible, this Crucible is to be placed in a Gentle fire, until the matter therein contained doth flow, which is easily done, for it is very fluxile; as soon as ever you perceive it flow, turn it out, for fear least any of it should penetrate the Crucible, and so bring damage or loss to the Operator. When the ☽ is poured forth, you will find the ☉ sticking to the sides and bottom of the Crucible like pale Gold, altogether Crude and not at all fluxile. The ☽ turn'd out is brittle, fusile, and volatile, and is by the Chymists call'd Horny-Luna, but call it the ☽ of ☽, it being of excellent use in Alchemy, as shall be shown in what follows.

The Crucible in which that ☉ remained may be kept to melt such like precipitates of ☉ & ☽ in again; when this hath been done pretty often (in the same pot) melt down this ☉ by adding a little borax, and you shall receive a palish Gold, because in this first melting, some of the ☽ doth adhere therunto.

This now is the common way of separating these precipitates of ☉ and ☽ from each other, there shall follow a better way in what ensues.

NB. That if so be, both the Metals are boiled in a strong Lixivium after their edulcoration; or if some fixt Salt made of a Lixivium, be powdered and permitted with it afore melting, then the ☉ and ☽ are reduced together, and may be afterwards separated by the help of *Aqua-fortis*: There is yet a more accurate way; (and it is this) when we mix the edulcorated Calxes of Luna and Sol with (A) and being mixt put them in a coated Retort, and put fire thereunder by degrees (as is wont to be done in desilling) and keep it for 6 or 8 hours in a continual Cmentation; and so the volatile ☽ of ☽ is made fixt by the help of (A.) and corporeal: Yea and tingeth some part of the added (A.) so that by the benefit of this Cmentation, the ☽ is made more Golden. This Cement is to be most finely powdered and to be reduced by the following melting; and you will find your ☉ and ☽ augmented. The melting is thus; Take of the best Salt-petre, and (A.) each alike: mix them, and separate the Spirit of Nitre by a Retort, which (Spirit) is much fitter for separation than simple *Aqua-fortis*: The *Caput Mortuum* remaining behind in the Retort, is to be powdered, the fixt Nitre is to be extracted with Rain-water out of the powder. This Lixivium or extracting Liquor will be of a green colour which is to be coagulated into a Salt by a due boiling; which Salt is able to reduce the ☽ of ☽; and

to make aureous or Golden, yea, and to reduce the Cemented ☽ (of ☽) too.

NB. It is better to mix the fixt Salt-petre, or the Green Lyon simply with the horny ☽, to cement it in a Retort, than (to take it) out of the Retort, (and) reduce it with a stronger fire; and so we shall have an excellent augmentation of ☉.

NB. The Mercury of Luna cemented with (A) may be likewise reduced by this means, (viz. with this flux) that we take one part of Flints that will melt in the fire, and of the fixt salt of ashes four or five parts, and so mix them together, and melt them into a white glass; 'tis able to reduce the best Cements. And this is the best way of all of reduction.

Besides, all these ways of reducing a Cement, there may even this way too be instituted, and that not unprofitably. Take of the fusile Glass of Lead four parts, of the cementing Powder one part; melt them in an iron Crucible in a strong Fire, and some of the Lead will be reduced out of the Glass of Lead, and will be near (or partake of) ☽: This Lead is to be blown off on the Telf, and you shall find an aureous ☽: But for as much as the Lead separated from the Glass of Lead in the iron Crucible, contracts a blackish colour from the Iron; it is profitable to add to the matter in the fusing or melting, some Salt of Ashes, as being that by which the Lead becomes deperated, and so is easily separated on the Telf.

But if so be, that (for this work) the Metals (or Minerals) of ☉ & ☽ cannot be had to precipitate the Mercury of ☽ out of them, (then) the artificially-made (vessels or plate) whether simply Silver, or else gault with ☉, may be made use of; let these be dissolved with the *Aq. For.* left after the precipitation, & precipitated with Salt water or *Aqua Regia*, and be edulcorated and mixt with (A) and be fixt in a Retort. Now this Operation is to be done in a Retort, that so the precipitated ☽ that is altogether volatile, may not be wasted, which in a Crucible evaporates away, a good part of it, which cannot be so done in a Retort; for in a Retort, that which flies up, sticks in the Neck, and may be separated thencefrom, and be mixt with other Cements: And besides too, the Cement is easily separated from the Glass, than from an uneven Crucible; for some part always sticks thereon, and cannot be gotten off.

When you are minded to purify this Cement sooner (or more speedily) it may be molten with an equal weight of Antimony, and there will arise from your golden ☽ a Regulus, which must be purified with Salt-petre. Concerning which work of Reduction, and which is far easier than that which is done by the help of the Glass of Lead, I have most clearly and fully handled it, in my Testimony of the Truth, or the Explication of my *Miraculum Mundi*. By this means every ☽ may be rendred aureous, and that as oft as one will, yea, even until all the ☽ be changed into Gold by Cmentation and Gradation. Now if you would otherwise separate ought of the aureous or golden ☽, or extract the Metals (where nevertheless you would reduce the separated ☉ and ☽) it may be effected by this means most commodiously and most gainfully of all, because the Calx of ☽ is made aureous by Cmentation. This labour yields a continual augmentation of ☉, by which we may live very well and plentifully.

Another Augment or Encrease of Sol.

Dissolve ☽ or ☽ in *Aqua Fortis*, also ☽ in *Aqua Regia*: (NB. Let there be always thrice as much Silver as Tin;) mix the solutions very accurately, and when you see that all the matter is fallen down (or precipitated) to the bottom; pour off the water, which said water will very commodiously serve instead of *Aqua Regia*, to dissolve other ☽ in. NB. If your *Aqua Regia* be not strong enough, it will not at all dissolve the Tin, therefore in such a Case, you may pour on the Tin, *Aqua Fortis* mixt with simple water, which after they have a while acted upon each other, there must be some salt-water poured thereupon, that so the ☽ or ☽ may be precipitated to the bottom of the Vessel, in which (Vessel) the white ashes of the Tin ly. This matter lying in the bottom, is to be edulcorated, dried, and reduced by a strong fire, by which operation you have not only an augmentation of your Luna, but it is likewise made golden.

NB. This business may also be thus managed, First, dissolve ☽ or ☽ in *Aqua Fortis*; to the solution add an equal quantity of Rain-water, pour this mixture upon ☽, and let the solution be made in a pretty warm place with sand; separate that which is dissolved, the matter that is yet somewhat harder, by decanting or pouring it off, then make the precipitation with salt-water, edulcorate it dry it, and melt it, and you shall have Encrease.

But if this Mass will not so easily melt, then powder it, and mix it either with Antimony, Glass of Lead, or with a fluxing matter made of salt of ashes and flints, that thereby it may be made fluxile or meltable: That which is made fusile by the help of the Glass of Flints, is presently pure; so is not that which is done by the help of the Glass of Lead, for that must be hence separated, and be (by the benefit of ☽ and ☽) reduced into Regulus, and be purified and washed by Salt-petre. Therefore it is the better way to promote the melting, with the Glass of Flints than with Antimony, because the ☽ may be afterwards separated without Loss, which is not so easie a thing for every one to do (otherwise.)

The Reduction which is made by the help of the Glass of Lead, is indeed (otherwise a most easy way, but by that way which is done with Antimony, we get more ☉ than by any other way.

Another way of Augmenting Sol.

Take the golden Talck, Granates, Smiris, Hematit, the aureous Scoria's of Copper, the greenish, reddish, golden Flint, Sand, or Clay; extract their volatile Gold with a strong *Aqua Regia*; pour into the solution, a solution of Lead made by *Aqua Fortis*; mix it well; when the matter is settled, separate the *Aqua Fortis* by inclination; edulcorate the said Calx of ☽ with water, and dry it, and so have we gotten the volatile Gold extracted out of the *Aqua Regia* by the ☽: This volatile Gold is made fixt on this wise. Take the most subtle Powder of ☉, or its most thin Leaves, add thereto thrice as much of this ☽ of ☽; or four times as much, or fix times, according to the quantity of it, by which we formerly got (or fish'd out) the volatile Gold: Set it in such a place where it may have a gentler heat, so as that the ☽ of ☽



h may just flow, and not fume; the matter is to be thus kept in this heat for some hours, or rather days, that so the filings of  $\odot$  or its thin Leaves may by little and little attract the volatile Gold out of the  $\forall$  of h, and consequently be therewith augmented.

NB. But seeing it is a most difficult thing to keep such a very temperate heat as that nothing at all of the  $\forall$  shall fly away, and the  $\odot$  shall not melt in the Crucible: It is better to put the  $\odot$  mixt with the  $\forall$  of h in a coated Retort, and set it at a strong Fire for a; season for so nothing of the  $\forall$  of h flies away, or penetrates the Crucible. That which ascends up to the Neck of the Retort may be separated, and be kept for common  $\forall$  of h, out of which may be prepared a most excellent Medicine.

#### Another Augmentation of Sol.

TAKE of red Arsenick, Auripigment, *Hungarian* Antimony or Cinnabar one part, of  $\forall$  of h three parts, and some thin Plates of Gold; let them stand in a Glass Retort in a pretty hot place, and so the  $\odot$  will attract the volatile Gold out of the added Minerals, and will thereby augment it self. And if so be that there be any thing sublimed up to the neck of the Retort it may be taken thencefrom, and be reduced to a kind of Tincture. And so we may here have a particular augmentation of  $\odot$ , and a matter whereout of a Tincture may be prepared.

NB. The vessel that is most fit for the fixation of the Tincture, is such an one as is made of fixt h.

NB. The  $\forall$  of h or  $\forall$  may be reduced by a secret fusion (or subtle matter) whereby it presently yields an aureous  $\forall$  or h; but especially this  $\forall$  of  $\forall$  or h, by the help of which, there hath bin a fixt or volatile Gold extracted out of the earth, stones, sand, and such like Minerals, is to be on this wise reduced, whereby we may receive (and get) as well the volatile Gold as the fixt.

Likewise too, the  $\forall$  of  $\forall$  or h may be artificially distilled, purified, and prepared for a singular Medicament; But yet let no body persuade himself that such a distillation is to be perfected after the common way with retorts or cucurbites, for it is a merely vain thing to hope for the separation of the pure from the impure that kind of way, for because the fire forceth up the good and bad alike, the which thing is not at all so done by my more secret Philosophical distillation; for by it, the most pure soul only of the Metal is driven up; as for the terrestreity that remains, it is separated of it self by that more impure (thing) to which it is conjoined, and makes a dirtyish slime. The purer part will be found (by the help of the Cementary Coppel) to contain both  $\odot$  and  $\forall$ ; as well the purer part of that which is prepared by it self of this (bare)  $\forall$  of  $\forall$  and h: as that which is prepared of such a  $\forall$ , as by whose help fixt and volatile Gold hath been educed (or gotten) out of the nitrous Water; which way also is a most compendious one, of reducing the (extracted) volatile and fixt Gold. For when we reduce this  $\forall$  of  $\forall$  or h by the help of fusing things, some part of the  $\odot$  may easily perish and evaporate: But now here, nothing at all perlieth: For that which does not remain (behind) in the said artificial distillation, and so separate it self from impurities, goes out (or passeth over) and yields a most excellent Medicament more excellent than  $\odot$  it self, which you are well to observe.

Besides too, it is a thing most easie, to be done to fix

the soul of  $\forall$  or h (that is carried [or forced] up, together with the volatile Spirit,) in the said instrument with  $\odot$ ; which to effect, there (otherwise) needs a longer time. Therefore even by this one only process is both made a most excellent Medicament, and withal,  $\odot$  is gotten too. These things we have here exposed in very few and plain Words most agreeable to the truth, and do most exactly answer to experience; nor is there any reason of blaming me because of my speaking somewhat obscurely, seeing it is evident that not one of my Predecessors did ever exhibit (or publish) any of those things. Well, what shall I say? Excellent Gold may be extracted out of all the kinds of Metals, by the help of Salt-petre; yea with so much facility; that it would seem an incredible thing to most Men, though I should clearly set down all the circumstances, word for word: But yet this (extraction is) not (to be done) without the benefit (or help) of  $\odot$  and  $\forall$ : For when we have a purpose of augmenting any thing, there must in the first place of necessity be the feed of the thing that is to be augmented, and according to the quality of the feed there must be a fit matrix in which it may take its growth or increase. For example; When we seek for the increasing of any vegetable feed, we prepare a convenient Earth for the same, to which Earth we commit that feed, and so the like sort of Herb buds forth, which doth again produce thousands of seeds; which seeds are again put into the Earth, and so are multiplied even to infinity. This multiplication of Vegetables is sufficiently enough known, and a most easie work it is to multiply a Vegetable, if we have but its feed, and that it be well conserved least it die. So likewise out of one Fire may be made many yet infinite other Fires, for one is always kindled by another. But when all the feed is dead, 'tis an impossible thing to produce a new feed.

Therefore the most Great and Blessed GOD, hath most excellently ordered it, so that the seed of Vegetables may be kept the year about; for if it should not be so, we might well fear the destruction of the chief Herbs in the Winter season, which now (by the benefit of their seeds sowed in the Earth) we are able to produce a new.

Now the progress or order of the seed of Animals is widely different from these, although that even they are committed to such like Animal bodies, as being their fruitful soil, for multiplication sake: But yet this sowing is done by a vastly different way from that of Vegetables; For we can keep the seed of the Vegetables, and carry it from place to place and so plant or sow it in any part of the Earth we please; which cannot be done with the seed of Animals for we cannot so conserve that, or transport it out of one place into another, or sow it as listeth us our selves. But it must be committed unto the matrix, in that very moment of time that it passeth out, for it cannot be fruitful and entire if it be but a moment of time out of the body. The sowing therefore and conception are performed both together by both bodies, viz. by the Male and Female. The cause of this thing is thus, because the feed of the Animals abounds with a volatile, invisible, and living Spirit; which once lost the work of multiplication is wholly taken away. Therefore like as one [Animal] multiplication is perfected so is the other, nor may we by any means transgress the course of nature.

In like manner are the Minerals also multiplied, and by the same manner that it is once perfected by, is it to be always after perfected by. The

The Multiplication of the Vegetables and Animals is well enough known to every one, and is every where done, nor (by reason of its being so very common) doth it at all cause in any one an admiration; But the multiplication of the Minerals is not so publick a thing, for there are but a very few that understand it, though it be as easie as the multiplication of Vegetables and Animals, in so much that I also believe, that there is not any one to be found, that is so stupidly foolish, that would not be able presently to apprehend and do the same, were the way but shown unto him. Now that there are so many that erre, and who walk in an unlawful or contrary path, this is not to be imputed to the art it self, but to those that meddle therewithal so inconsiderately, and do not imitate nature, who always keeps her course allotted her by God.

The Multiplication therefore of the Metals doth solely consist in the knowledge of the feed; for as the condition or quality of the feed sown is, like fruits will follow, such nature as the feed you sow is of, such fruits will you reap, and no other. For Example, I seek after  $\odot$ : Therefore I must first of all, of necessity have the feed of  $\odot$ , at hand, afore I can sow it, or multiply it. Now to have this feed, we must not set about it with words or imagination, but by (getting) the knowledge of nature; for she shews us the safest way, if we did not withdraw our selves from hearing her teach us. Now like as she commits  $\odot$  and  $\forall$  to the Earth, even so, and no otherwise must we also do, if we hope for any good success.

And as we said above, that there lies hidden in every Vegetable and Animal seed, a certain vital or procreating Spirit, without which it is wholly unfit for ought; even so, there resides a certain Spirit in the Minerals, which vivifies and effecteth all, which being absent, death it self follows. This Spirit is of no weight or form, and there is nothing to be seen by us but only the habitation or house wherein it dwells; so that scarce the thousandth part of the feed is life and spirit, all the rest is dead. The truth of this thing doth (among other things) appear even from hence, viz. if some Vegetable seed be kept beyond its due and naturally appointed time, whereby the Vegetative virtue and spirit vanisheth, it doth not yield any fruit at all, nor can it multiply it self, though it hath its former shape, bigness, and former weight. And therefore, there is not any thing in the three-fold Kingdom of either Vegetables, Animals, or Minerals, but is procreated and multiplied merely and solely by the benefit of this spirit and implanted Life.

Therefore, even as all the Metals were first wrought after a spiritual manner by the Stars in the Earth (in a convenient Matrix) by the Stars, and made fix; so according as the Matrix it self is pure or impure, so pure or impure Metals are generated; now the Matrix of all things is water or moist earth, in which the Stars are congregated (or united together) are made corporeal, grow up, and are multiplied. Here therefore, if Art would imitate nature, there are required Male-like Astrums and Feminine Matrixes, in which the Astrums may exercise their operations. Therefore by how much purer the metallick Astrum or seed is, and the Matrix purer, so much the nobler effect is produced; and so on the contrary.

But seeing that there is not any Star nobler than  $\odot$ , nor Matrix nobler than  $\forall$ , there is no more required, but that we make common  $\odot$  Altraby Art; and that we prepare  $\forall$  on such wise, as that it may be instead of a Matrix, wherein the Astrums of  $\odot$  may exercise his operations, and so without doubt, there will thence

come such Children as will be like their Parents. Nor is there any ground for any one to think that there is any other way allotted to augment  $\odot$  and  $\forall$ , besides that afore mentioned which is to be instituted in a spiritual manner: After this manner the World it self was Created, where the Spirit of God moved upon the Water and impregnated it; and even as we daily see that the Stars do impart to the inferior things their virtues, and they are thereby multiplied; even so may we do the same by art in these inferior things; for such as are above, are also beneath. Those above are beyond our reach; but the inferior ones, not so: For art can do the same with or upon the inferior things, as the Stars upon the superior ones. As *Hermes* doth clearly demonstrate in the *Smaragdine* Table. He that understandeth these my sayings, will also understand those things, which *Paracelsus* delivers in his Book of the *Excitation of Alchymists*, in the 5th. Rule especially of  $\forall$ ; and *Basil* (*Valentine*) where he treats of Sulphur.

It is a thing most easie to be done, but most difficult to be found out, to multiply even the most vile Metals, by the help of the Astrums, and by this secret way. He that well knows Salt-petre and can rightly handle the same, will by the help thereof perform a many profitable things; for as it is altogether impossible to get  $\odot$  out of the viler Metals, without it: So on the contrary it is most easie for to do by its help. Briefly, He that knows how to handle Salt-petre aright, he will excellently well understand the Writings of the Philosophers, and let him know, that he has a light given him, to arrive unto great Secrets.

For we may extract  $\odot$  and  $\forall$ , out of all the common meaner or viler Metals, so that an expert Chymist needs not seek after peregrine, or strange Materials. An excellent purification, fixation, and augmentation may perfectly be done by the help of Salt-petre, which being a thing that but few know of, so seems it impossible, and yet the things I proppound are most true. It makes bodies volatile and spiritual, and by and by again makes them fixt and compact: So that out of it alone is that saying of the Philosophers due, (*Make the fixt volatile, and the volatile fixt*) and to no other Subjects: Now if Metals be not spiritualized, there's no hopes of their augmentation. *Of something must a nothing be made, and again out of the nothing must something proceed*: So saith *Paracelsus*, which likewise is very true, though there are but a few that believe the same.

The melting together of variously mixt corporeal things, yields forth neither  $\odot$  nor  $\forall$ : But contrarywise a spiritual Union which is done with a most strong heat, is a notable author (or promoter) of Multiplication; for the Spirits do most notably penetrate, and by variously acting upon each other, do induce alterations and meliorations, which is denied to dead bodies to perform. The Spirit doth diversly bestow a life, and vivifieth, but the body is of no other use, but to yield an house or habitation to the Spirit; the which is well to be regarded.

Those metalline Spirits (when the work is finished) do infuse themselves anew into other bodies, which bodies they make far better than the former were, and all this by the help of Salt-petre.

*Basil* brings in Salt-petre speaking of it self on this wise. He that intends my death needs be a prudent Man, that so he may expel (or force out) my soul from me; when this is done, I adventure upon all the things I am able to do, but I can do nothing that has in it firmness (or substantially) in the bottom. (or radically.)



dically): *Veana* is my cheerful Woman, whom (in this place) I take to Wife, but the wedding is celebrated in the very inward parts (or center) where the sweat flows out of us both in a most plentiful manner. So the subtle (part) in us, expelleth all delilements, whence it is, that we leave behind us most rich Children, and do reserve (or keep in store) most eminent Treasures for the dead bodies, which we give them by our Will and Testament. Who would speak more clearly, and would not understand these words of themselves, (or as they are) without any interpretation.

The ancient Philosophers wrote, that at the rising of the Sun is a Bird found in those hotter Countries; which builds his nest with Gold; and when he is grown old, and can live no longer, he gathers together exceeding dry Wood, which being kindled by the heat of the ☉, consumes both the Nest and the Bird too; from the ashes moistned with rain Water, they say there arise Worms which will be again changed into other Phoenixes.

Thefe sayings are indeed Fabulous, yet nevertheless there is a most high secret disclosed by them: for if we rightly consider all circumstances, we shall find that Salt-petre is hereby meant, which gathers the Gold into his Nest, that is, extracts the Gold out of Metals, Stones, and Minerals, and doth afterwards increase his Family by the burning them. This to a wife man is enough.

Now that this Arcanum may be the more manifest, I will add over and above, another way of extracting the fixt and volatile Gold out of Stones and all kinds of Minerals, by the help of Salt-petre, and of making them corporeal.

We may very well compare this work to a fishing Trade, concerning which the Philosophers have written many things, but very obscure; *Sandivog*, hath more clearly treated of that thing, but *Isaac Holland* clearest of all. Verily this Philosopher was an excellent fisher of Pearls and an excellent preler of Cheefe, and for this reason he assumed to himself such a name. For *Iacus* by transposition of Letters is the same with *Cafius*, (or Cheefe.) So that it may be said to be *Holland* Cheefe; not that *Hollandus* was in very deed a maker of the usual Cheefe with milk, but that he bears some kind of resemblance (in his work) with such Men: For he bestowed abundance of labour about working on that Universal, that hath some Cheefe-like fashion in it.

Even as the *Hollanders* gather the greatest quantity of Milk more than all Nations besides, out of which they press their Cheeses, and so sustain them and theirs; so the more skilful Chymists do frame or make Cheeses after a Philosophical manner, and that out of Metals, Salts, and Herbs: and this very much agreeable to that method, according to which we see the *Hollanders* proceed in making their Sleep-milk Cheefe, where they boil in the Milk some green Herbs, and so do thence extract a colour afore they set about the coagulating or curdling of it. That is, they dissolve *h* or *z* in *Aqua-fortis*, and a Golden matter, though it be but *z* or *z* (if they have not at hand any better) in *Aqua-Regia*: They mix together both solutions having both of them the form of Virgin-milk, and they add as much Salt as is sufficient. (NB. 'Tis better to add Salt-water, or Spirit of Salt.) 'Tis better to see that milk to be coagulated, like as (when we pour on some Salt-water or Spirit of Salt upon Cow or Sheep-milk) we observe daily to happen: where the Water is partly separated by decantation,

and partly by expression from the coagulated or cheeily substance wrapt up in a Linnen cloth, that so a Cheefe may thence be made.

Just so do we proceed in the making of our metallick Cheefe; for when we pour Salt-water or Spirit of Salt upon the solution of *z* or *h* mixt with that (solution which is of a goldenish Nature, viz. of *z* or *z*: we presently see a precipitation made; which done we abstract the clear water swimming at top of the precipitated matter, by inclination or pouring off; the which we may keep for farther uses, principally for the solution of other Metals and golden Subjects. We put the Cheefe or white Coagulum abiding in the bottom of the Vessel, into a Linnen cloth, and by strong squeezing it free it wholly from the wateriness, which said water is to be kept as well as the former, for being used about making new Cheeses, it makes them of the better favour, and more aureous and vendible.

This Whey, or that water which is plentifully gathered in the making the Cow-milk Cheeses, though it affords varieties of Profit to mankind, whether they give it their Hogs to fatten them, or use it themselves for their daily drink, especially in Summer time, or apply it to other uses as we see daily done, yet do not I see any better benefit than that which it yields to the *Curriers*. For they put in it some old Iron, and when the solution is made, they moisten with that water the hide already perfect (or ready dressed) and when 'tis dry they moisten it therewithal again, and this they do three or four times, until it hath gotten a fixt colour, blacker than a Coal. They do also sometimes administer some of it unto Children (with good success) to kill and expel the Worms: Nay more, they are likewise wont to make a Bath thereof very profitable for those that are troubled with the Scabs or Itch, because it hath gotten a drying force from the *z*, and thereupon it makes the skin smooth and hard: and seeing that the Country Fellows, and Labourers can do so much with it, what hinders but that we may institute such a curing more perfect, and that on this wise.

Take sweet Cow-milk, or (which is better) Goats-milk, two measures, boil it over the Fire, put therein while it is yet warm *z*, or *z* of Spirit of Salt, mix it well, and you shall see the coagulum or curd presently separate from the whey; out of which Cheeses may be made by expressions, which are far better than others, by reason of the addition of the Spirit of Salt, whereto if you add some Cummine, Carraway, or some spices, they are yet better and more to be preferred. The Whey here separated is of a grateful favour, and by reason of the admixtion of the Spirit of Salt, is somewhat acidish, and a most certain and most safe loofner or absterger, being administered to Infants that are troubled with the Worms, or even to Elder ones that are feeble. How many Infants have we observed to die unexpectedly after they have been for some while and often afflicted with a burning Fever, the Convulsion fits, and other such like effects, and meerey because we will not perswade our selves that they have the worms: & so forbear the using any remedies to purge them out? Now in such a case this whey is exceedingly excellent, being used after this manner.

Take of the most subtle filings of steel as much as will lie upon a knife's point, mix it with as much honey as is sufficient, and give it the Children: and for their ordinary drink, let them use the said Whey, and so by this means, that filings being dissolved by the Whey kills the Worms, in the ventricle or stomach, and drives them out, and verily is a most excellent Medicament:

ament; especially if taken two or three days; nor have I hitherto met with a nobler, than this is. And so there will redound some profit to Children and Infants too, by this our way of making Cheefe, for which we owe immortal thanks to the Great and Glorious God.

Besides this, I have likewise observed the excellent use of this Whey, in the administration of my Panacea of Antimony, if there be taken a draught or two thereof, at the end of the Purgation; for it gently carries off the reliques that stick to the intestines.

He likewise that is so minded, may before his dropping in the Spirit of Salt, add some Anisee-seed or Fennel-seed to the milk as it boils, thereby to correct its Flatulency or Windiness.

And I do most courteously intreat the well-minded Reader to take it in good part, that I have been so prolix in declaring the virtues of our Whey; necessity it self, and the love of my neighbour forbid my concealing of them: For very many Infants are killed with the Fever, and Epilepsy, or Convulsion-fits, and so suddenly die, for no other cause but our not meeting with the Worms, which their bodies are full of, being ignorant of convenient remedies.

Now then to return again to our Cheefe, and to demonstrate the most eminent benefit, both of it, and of our water which is thence separated; we are first of all to know, that even it is also able to tinge (some) subjects with a certain colour, not with such a black colour, indeed, as the Whey of Milk, prepared as aforesaid, dyes the Curriers Hides with, but with a yellow colour, and more durable than that which is given to the hide, for that we therewith extract a Tincture out of *z* and other aureous Subjects, and with the Tincture, do sometimes anoint (or tinge) *Luna*. If now the water abound with such virtues; what virtues will not the Cheefe it self abound withal? And like as our Cheeses are diversly impregnated with spices, so are they of different favour, and price, and more or less wholesome. But now if that virtue which is in *z* is also added to our Cheeses, there will proceed from thence admirable Cheeses; and this, that Philosopher was minded to point at, who writes that by the help of the Saturnine net, he is able even in a clear night to extract the little Fish *Eschineis* out of the Sea.

The Ultimate (or extrem) letters of this word *Eschineis* i. and s. if conjoined together, so as that the letter z. be thereof made, and then the word read backward, it will found in the *German* tongue the same with *Ziweifch*, (viz.) the ashes of Tin; but yet let not any one perswade himself that those ashes of Tin are such as are made by means of the (bare) fire, but are prepared by the benefit of the spirit of Nitre.

Saturn does not only claim (or merit) the praises of being a husbandman, but also of being a good fisher, and hunter, as (among other writers) *Basil Valentine* doth egregiously shew.

When *z*, *z*, *z*, and *z* pursue (or hunt) the wild beasts, *h* is bound to carry the net: *N B*, the hunting dogs here are Salts, the hare that is caught, is much like the colour of the hares skin, being stript of the same, he will yield excellent flesh, which the Princes can as little want as the Subjects can. See the foregoing Figure of the Hares and Hounds, with a Flaming Heart, and the word *V E N U S*.

Common Vitriol, but that especially which is

found in those places where Gold is, is the green Sea containing excellent fishes.

Neither was *Isaac Holland* an excellent maker of Cheefe only, as we said but now, but withal, he was a singular fisher of Pearls; for with the net of *h* (the night being clear) we may catch most excellent Pearls, but yet 'tis a very hard thing to take them out of the net, nor can they be separated but with a great deal of prudence and art, from the threads of the nets, to which they do stick so firmly.

But yet this separation is best of all done in a clear Light, the Sun shining upon the Earth with his beams, and wholly dissipating the Vapours, least it should be hindered by their being present. For the parts being exposed to the Air in a (perhaps he means unseasonable) seasonable weather are corrupted, nor does any thing remain behind but the shells. And even these shells do in their infide shew forth such diversity of delicate colours, as that the most ingenious Painter cannot imitate them with his pencil, and such they are as with which the other shells of mother of Pearl or the commoner sort cannot at all compare: For in one place they represent pure *z*, in another pure *z*, in another they are of a Green colour, Sky colour, Red, Yellow, and variously coloured, so that they much exceed in beauty, the Peacocks Tail. If then the shells are so fair as that we cannot sufficiently enough admire them; what I pray will the beauty of the Pearls themselves be? Nor let any one perswade himself that I do here cast Pearls before swine by too much divalging secretes; (no) for there are yet many necessary things hereto requisite to make the Pearls come in light; and if so be that any one should know the way of dexterously extracting them out of the net it self; yet the fixing of them doth require abundance of labour still, whereby they may be able to defend their fairness and excellency, against all the Elements; however, in the mean time the lover of Chymistry, may delight his mind with those shells, and admire at the most admirable variety of the colours in them.

Some haply there will be, that when they have taken the said Pearl, by the help of *h* and *z*, will think it a most easie thing to separate it from the net, by the benefit of distillation; but let those good men know, that this is a thing impossible to be done; for I myself bestowed abundance of labour in vain on this operation, and this hath to my knowledge so happened to others too; for in the common distillation, that Pearl being commixt with the net, even the Mother together with the Daughter do jointly ascend and get out; and thus to do is not at all agreeable or helpful for the great work; though nevertheless an excellent particular Medicament may thence be made. Concerning which, I have spoken in the second and third Part of my *Pharmacopoeia Spagyrica*; nor may we expect (by such a distillation) the thing we wish for. But if so be you desire to see the Mother, wrap the net together with the Infant in pure linnen, first mundified, and wash in the fire; or put them in a glazed Stove, and put fire thereunder by degrees, and make the Net and Pearl to sweat largely, which being kept apart, yields a singular Medicament, for to quench all the Internal heat of the Body, and always to cool the burning Mercury.

The provocation of the sweat being finished, break the sweating glasses, and look for your Pearl, and you shall find that it is gone out of the shells, by the force of the heat, and is roasted (as it were) together

A a a a

ther with the Net, and cannot possibly be (as yet) seen; yet nevertheless it is brought to a farther maturity, and doth yield some profit in an especial (or particular) way. But the Sudatory it self, contracts incomparable Colours from the sweat of the Pearl.

Now then, live contented with the most beautiful mother, and delight thy mind by barely beholding it, until it shall please God to give unto thee, the infant also. When it was my hap at first to behold that beautiful mother, my mind, that was wearied with the long labour of searching thereinto, was so refreshed, that I can scarce declare it with words; yea I was so delighted, that I placed that delectable mother in such a place, where it might lie always open to my sight, and that so long, till she shewed me her infant likewise, which Infant verily was not unlike to *Capid*. Do you also seek, and you will find what you wish for: Implore God, and he will give unto you; Knock at his doors, and they will be opened unto thee, if so be that GOD shall find thee worthy; for he bestows his Grace and Mercy upon none, but such as are of an humble and thankful mind. Take for an example of this some Tinder, or Touch-wood, which being handled with dirty fingers, re-fuseth to take fire, though it be never so copiously smitten out of the Steel with the Stone (or Flint.)

All things depend on the mercy of GOD, nor can we effect any thing by our labour. Him only should we seek, and he will manifest himself by the works of nature, even as the nature of a man is known by Chiro-mancy, and Physiognomy.

Two contraries do always produce a third thing, and are the cause of every generation, and change of things; if fire be added to fire, there ariseth no new thing from thence; neither if you put water to water; but water and fire being conjoined, there are produced new Generations; for the fire acts upon the water, and impregnates it according to the nature and properties of (both) the water and fire; from whence there proceed things pure or impure, according to the purity or impurity of the water and fire.

The thing (or operation) it self, must be accurately known and handled, if you would have any good to redound from thence unto you. The Sun is in himself always good, yet doth he operate as well evil as good. If this same Sun bestows his Rays or Beams upon the Rain as it falls down, the Rain doth thence contract (or get) a honeyish dew, which falling upon the blossoming of Trees, makes them corrupt. Now we cannot rightly impute this evil to the Sun or to the honey it self; but we see that it proceedeth from hence, *viz.* because that honeyed dew is not due and speedily enough waft away with the rain, but is evaporated by the heat of the ☉; whence it comes to pass, that the blossoms wither, and worms are generated in them, and so the whole blossom is corrupted.

We will set down here yet, one more similitude for the sake of such as love the truth. Put case thus then; a diligent Gardiner walks abroad in his Orchard for his recreation, and if he happens to find a large, great and curious principal Apple lying on the ground, he presently takes it up, and does not only well view and consider of it, but tastes it too; which if he finds to be of an acceptable favour, he seeks out the Tree it self, with an intention to pluck off more such like conditioned Apples; having found out the Tree, he much sets by it, or esteems

it, because the fruits thereof do exceed all the rest in the Orchard, both in taste and fairness, and he takes care about that more than the rest, dungs the roots well, prunes off the withered branches with a sharp crooked knife, and artificially cuts off those that are unprofitable, and usually called suckers; that draw away the juice from the fruit-bearing boughs.

Even just after this manner doth a diligent Chymist act; if therefore, (as he walks in his Laboratory,) searching out the secrets of nature, he happens upon a Golden Apple, he seeks after the tree, that bears such fruit, and having found it, he very charily keeps it, and ministers unto it all such things as are necessary to its conservation, that so he may thence receive more such like-conditioned Apples; and therefore gardiner-like he puts dung to the root, that is, Nitre; he prunes off the dry barren wood, and also the hurtful superfluous boughs, that is, the superfluous Sulphur, with a sharp red hot iron, whereby that same tree may, for the future, yield egregious or select fruits, without any impediment, which thing he also finds to come to pass.

N. B. *Paracelsus* doth very openly set before us this labour in his *Calum Philosophorum*, in the sixth Rule of Mercury, where he saith, Sacrifice the fat Vervains (or superfluous suckers); and yet, these words of his, are only superficially looked on, most people not understanding what *Paracelsus* means by those words, though he hath clearly and perspicuously enough signed his writings.

It is a necessary thing here for the Chymist to know, how the case stands, as concerning the metalline tree, and what is to be accomplished its Root, Trunk, Blossoms, and Fruits; *h* is the Root; *♁* the Trunk or Body, *♃* the Bark about the Trunk; *♃* the nutritive Juice between the Bark and the Trunk; *♁* the green Boughs and Leaves; *♃* the pleasant Flower, or Blossom; and *♁* the ripe Apple containing in it self the seed of the Tree.

That Apple which yet sticks on the tree, doth, when it hath arrived to its full maturity, fall down upon the earth, of its own accord, if it be not gathered by the Gardiner; and then afterwards the leaves themselves, when the weather is somewhat colder, fall off, which do as it were bury the apple, which lying hidden under the leaves, is consumed by rotteness, by little and little; but the seed assuming to it self a natural humidity from the putrefying tree (or fruit rather) instead of nutriment, begins to take root in the spring time; out of which there grow up, in process of time, Apple-trees, which are to be in their fit season transplanted: this transplanting being finished, the Gardiner joins to such a wild tree, generated from the seed, the Scions of such fruit as he has a mind to, and that by either ingrafting, or inoculation. And so an industrious gardiner may get from the fruit of one tree, an innumerable company of great trees, and those of such a nature and kind, and grateful a favour as he likes best.

Even on this wise doth the Chymist do, joining fruitful Scions to wild trunks or stocks, by inoculation, so that he never wants good fruits.

He that cannot learn ought from these things, I cannot help him any other way, for I do not see how I can set down those things clearer than I have done.

But for the undertaking of this labour, there is required an Artificer, no less diligent than ingenious. And of how much the better quality the dung is, that

that is laid to the root of the tree, and (by how much) the knife which the boughs are cut off withal, is the sharper (that so it may not hurt the green (or growing) bark of the tree, and so the nutritive juice flow forth, so much the better are the fruits generated. As it is easie for a wife man to reap hence some things; so it's difficult for an imprudent man.

I doubt not but that there will be some, that being judicious men, will know that there is an opportunity given them by my writings, published out of a sincere mind, of making farther inquiry after a true transmutation, and consequently of esteeming it, more than we find to be usually done (because that most things are oft-times propoted craftily and cautiously).

But that such a noble art may be freed from any farther contempt, I have purposed, the next following Spring, to frame a convenient laboratory, and to demonstrate the truth thereof to my friends. And although my endeavours shall be to prohibit any censure by any means to the faithless brethren of *Farnernus*, yet notwithstanding, I know I cannot so prevent and foresee, but that one or other may adjoin himself to the number of the true lovers of Chymistry, and feigning friendship, lay snares for me.

But put case that such a thing should not happen, it cannot be but that the Arcana's will be divulged; for such things as this or that man sees, and writes down, may reasonably be thought, will come to other mens hands after they are dead; especially if the preparation of Salt-petre be afore instituted, or set up in divers places; for nothing can be done in Alchemy, saith *Paracelsus* without Nitre; Alchemy is found to reside in Nitre say I. Salt-petre shewed us Alchemy, or, Alchemy was found out by Nitre.

He therefore that has abundance of Salt-petre, can perform egregious things in Alchemy. Had not the *Aegyptians* been possessors of great plenty of Salt-petre, verily they would never have been so skilful in Alchemy; nor could they have had those riches, by which they were able to avert (or decline) the yoke of the Roman Monarchy.

As long as they knew the use of Sulphur (Salt-petre I believe he means) they enjoyed Monarchy (without servitude to others) (and this was even to the time of *Dioclesian* the Emperour, who knowing their power, commanded all the Books they used, to be burnt) and then their Monarchy and their Art it self perished together.

The Poets have feigned many stories of *Jupiter's* Golden shower; certainly did we but know the manner of due managing Salt-petre and *℥* together, we should be likewise able to produce the golden shower.

*Jupiter*, when stirred up with anger, doth with his Thunder and Lightning, strike a terrour into all the Gods, and into whatsoever is upon the Earth; and yet the rain that falls then, at such a time, is of an excellent Quality, and makes the Earth more fruitful than the rain that commonly falls is wont to do; because there is a certain tinging and penetrating spirit sticking in the Thunder, that tingeth the air and the rain, and animates it; if therefore we can (by the virtue of Nitre, and this same *℥*) produce such Thunders, & can give to the Thunder fire & air, by which it might operate: verily there would nothing hinder, but that we might (*Jupiter*-like) make a Golden shower too. The purer the *℥* shall be, and the more clear the Air, so much the purer will the Rain be, and the Air is more impregnated and fil-

led with the common Vital Spirit.

He now that knows how to separate the life out of the water and air, rightly animated, gets a true *aerum parabile*, or the Soul of the world: besides this too, there offer themselves apparently such things to be done, as are able to exhibit his daily food. And thus much let suffice for this time.

He verily that perceives (or understands) not these things so clearly propoted, surely he will not, though all the Gods themselves should relate them, understand ought of those things that are taught. In the mean time, I hope that my friends will see with their Eyes, and feel with their Hands, the most certain truth of these, and the like operations, and consequently of my writings, in a laboratory, which God willings, I will in a short time erect, and will then defend me against all envious, and carping men.

This one thing I will yet add over and above, that the Astrum of Gold doth tinge his own proper Mercury, or (the *♁*) of the first *ens*, (therefore) chiefly of all: The Astrum of *h* (tingeth) *♁*; the Astrum of *♃*, common *♁*; the Astrum of *♁*, *♁*; for those three superiours do always operate upon these three inferior (Planets); so that they are, as it were, upper men, and lower women: ☉ he is left in the midst, which whosoever adds unto the others for the completing of the operations, will perform excellent things.

But he that knows how to make that Astrum of ☉ corporeal and fixt, he may translate the Astrum of ☉ on this wise prepared, out of one place into another, and conceive it like a Vegetable feed, to be implanted into all the Metals, in time and place convenient; which blessing, we rightly attribute to the blessed great GOD, the giver of every good thing, in the first place, and then to Salt-petre as being the Northern Monarch.

It now remains, that we briefly shew, by what means that Nitrous water, out of which that most noble Pearl, ☉ and Gems are taken with the Net, may be prepared for farther uses, so that such a sifting may need but very small costs, and may nevertheless (besides the daily food which it most plentifully provides us) bestow on us a most excellent medicament.

We have taught in the foregoing directions, how we may by the help of *Aqua-fortis* or *Aqua-regia* most easily extract both the fixt and volatile ☉ and *♁* out of the Metals, Flints, Sand, Clay, and such subjects as are every where obvious, and precipitate, coagulate, dry, and reduce it into a fixt metallick body.

Now in doing these things, part of the separatory water here used, is as yet good enough, and may be kept for farther uses; but part thereof (*viz.*) that which is extracted out of the Metals by the help of common water, is, by reason of the mixing sweet or fair water therewith, rendered too weak for operating withal, and therefore must be corrected and amended by some certain singular way, so as it may be again used about doing the same work.

Were it not for costs and labours we might separate that fair water from the *Aqua-fortis* and *Aqua-regia*, by the benefit of a glass Cucurbit, but forasmuch as there is given us a more compendious way, we will make choice of that.

For he that intends to get himself riches by the benefit of this separatory work delivered by me, or by the extraction of ☉ and *♁*, will need a great deal of *Aqua-fortis* and *Aqua-regia*, for what profit is it if you would extract them out of (but) a few Metals

or Minerals? Seeing that scarce the one half of those strong Waters can be separated by pouring off from those Subjects upon which they are poured, but the chiefest (or biggest) part of them sticks to the said metalline Matters, and contains in it as much  $\odot$  and  $\oslash$ , as that which we have abstracted by decanting it, and requisite it is that we thence abstract the same by the benefit of fair Water by due boiling, from whence it comes to pass that there will be also gathered a great deal of (insipid or useless) Water, (over and above.)

Those *Aqua-fortis*'s that are poured off, and hold in them  $\odot$  and  $\oslash$ , when they are mixt together, the  $\oslash$  and  $\odot$  precipitates to the bottom of the Glasse like powder, so that there remains nothing of the Metal in either water, nor is that water arising from the mixing of the *Aqua-fortis* wherein the  $\oslash$  was dissolved, and of the *Aqua-regia* wherein the  $\odot$  was dissolved, at all the weaker, but it retains the virtues of extracting  $\odot$  but not of  $\oslash$ , because that the *Aqua-regia* being added to the *Aqua-fortis* converts it all of it into *Aqua-regia*.

This precipitation being made, and the clear water separated from the precipitation by decanting it, you may extract that acid Water, which yet adheres to the precipitate, with fair Water; but for as much as the virtues thereof are thereby much weakened, 'tis better to proceed after another kind of way, and we prefer this way (as best.)

Take the Calxes of  $\odot$  and  $\oslash$  as they lie at the bottom of the *Aqua-regia* (or the acid mixt Spirits) and put them in a Linen cloth placed in a Funnel or over a Glasse with a wide mouth, and the greatest part of the *Aqua-regia* will strain through into the Glasse thereunder; when no more water drops out, which we find is wont to be within half an hours space, tie up your cloth with a strong thread, that so nothing of the calx therein contained may get out; put it under some weight or heavy matter, that so all the *Aqua-regia* may be squeezed out, and the calx only may remain behind like Curd or new Cheese.

But for as much as the Calxes of  $\odot$  and  $\oslash$  are notedulcorated, hence it comes to pass that the Cheese thus prepared, after the manner now spoken of, is as yet corrosive, nor is it easily dried. Both of them ( $\odot$  and  $\oslash$ ) we may easily correct, if we only admix therewith (as 'tis laid in a dish) a fourth part of fixt Salt, for by the virtue thereof even the corrosive Spirits sticking as yet therein are mortified, and the exsiccation, cementation, fixation, & reduction thereof is promoted. The Reduction being made of  $\odot$  and  $\oslash$  which we are now made partakers of, that goldenish silvery Masse is to be granulated, and to be dissolved in new *Aqua-fortis*, and be precipitated with that *Aqua-regia* by the help of which,  $\odot$  hath been extracted out of the Metals; the Cheese is to be freed from the water by squeezing it, and is to be sprinkled over with a fixt Salt, and to be melted. And all these Operations are to be so often repeated as necessity shall require, and there shall be at hand any Metal whereout of Gold may be extracted; and so there may thence arise a continual Labour, which is beneficial, because that *Aqua-fortis* may (when the Labour or Operation is finished) be used about other such like extractions, and that which is the weaker sort may be prepared into Salt-petre: out of which may be made anew, excellent *Aqua-fortis* by the addition of Vitriol or Coppers, and so desfilling them. The Vessels wherein the precipitation of Metals is performed, yea and the presses too by whose help the water is squeezed out of the Cheese, must be

framed of strong Glasse or of glazing Earth well glazed.

But for as much as the Vessels of Glasse are very subject to be broken, and earthen Vessels, unless they have the solidity of Glasse, waste abundance of water, and so moulder away; it would seem more convenient in my judgment to make the expression of the water out of the Cheese, between two Plates of Silver, for the water of the Cheese doth not at all corrode the  $\oslash$ : Yea and if the Tunnels requisite to this work were made of  $\oslash$ , it would not be amiss, nor would there be any fear of their breaking.

NB. The Extraction also of  $\odot$  made with *Aqua-regia* may likewise be put into a Silver Cucurbit, whereby the work may be facilitated, and all loss and damage which otherwise may be lookt for (feared) from the using of Glasses, may be prevented. And suppose a Cucurbit, a Press and two Tunnels did cost one hundred imperials; yet notwithstanding the certainty and celerity of the Work will repay those costs very easily, seeing that all things are hereby done much faster, and much more speedily: Besides too, there's nothing lost but the price of the fashioning your Vessels, for the Silver is always of the same value, and may again be sold at your pleasure. But he that wants such like Silver Vessels or cannot buy them, he may make use of Glasse ones so long till he can get Silver ones; but it is necessary that the Silver of which these Vessels are made be very pure, and have no Copper in it; least the *Aqua-regia* extract the Copper thereout of, and so the Vessels (especially the Cucurbites) do in process of time get an undue softness.

The manner of extracting Metals by the help of this Cheese-water, is already disclosed in the foregoing (writings); however this I am constrained to advise here, that it is much more expedient, to use presently at the beginning for the extraction of  $\odot$ , rectified Spirit of Salt accuated with *Aqua-fortis*, than *Aqua-regia*, because that by thus doing there will be more plenty of  $\odot$  gotten in the reduction than when the operation is accomplished by *Aqua-regia*. It would be too long to reckon up the cause of this thing in this place: 'tis sufficient that I have shewn which is good, which ill. Nay more, Spirit of Salt is cheaper than *Aqua-regia*, if prepared according to my description: Nor is there any reason to give credit to that slanderous fellow, *Farnmerus*, as if such a Spirit made by Vitriol, according to the manner mentioned in the first part of the Philosophical Furnaces, were not of any use, or at least-wise could not be prepared in great quantity by the aforesaid way: For when all circumstances fall not out as is wish't, the blame is not to be imputed to my description, but to the ignorance and unaptness of the Chymist himself.

If now those good men cannot accomplish such operations which are word for word faithfully described unto them: how would they be able then to arrive by speculations and various trials to the knowledge of any thing, as I my self have done? I do therefore attest here too, that we are able most easily to prepare not barely 10 or 20, but even 30, 40, 50 pounds and more every day with one only Furnace.

Nay more, if men did more accurately ruminate upon this business, they would find, that out of one pound of Salt may be made in a Glasse cucurbit in sand, one pound of the best, most grateful Spirit of Salt needing no rectification, and that in one hours space: And by the benefit of a Furnace scarce a span wide, and with a very few Char-coal, scarce exceeding three pound weight. Verily if there be any artificial desfillation

this it: And now let the Find-faults look about them and see if they can understand these things we have spoken; we can at all times demonstrate the truth hereof: It is altogether inconvenient to shew such an artificial desfillation unto swinish Men, it is only due to the Lovers of the truth, of which sort there are to be found but a very few in this present age.

And that this is true, viz. that a most grateful Spirit of Salt may most easily be prepared in vast quantity, doth even hencefrom most evidently appear, in that there are some in these places who having followed my information, do, because of their making it in great plenty and without any great Labour, sell a pound thereof for an imperial. For my own particular affairs do not permit me to take on me that Labour, yet notwithstanding, I have bestowed the artifice on such Men as now know it as well as I my self do, and who likewise do make that Spirit in such quantity as may supply all Europe. But forasmuch as I did not heretofore find out so far, as to see it excel *Aqua-regia* in the extraction of Gold out of such Stones, Sand, and Clay as contain Gold in them, and which are every where obvious. I could not omit the commending of it in this place, most highly unto all Men; for that Spirit hath an especial delight in  $\odot$ , not only in that which is fixt, but also with that which is volatile, whereby it extracts it and renders it fixt. There are some Minerals, Stones, Sand, Earths, which have in them abundance of volatile Gold, which is not in the least durable (or fixt,) but is carried up (or forced away) in the form of a vapour and vanishes into the air, and so consequently not at all to be accounted for true  $\odot$ , seeing it cannot brook the force of the melting Fire. Besides this, there do oft-times occur most precious Treasures of no profit to any man, which may be brought to most eminent uses (or benefit) by the Extraction, Precipitation, Cheese-making, and Liquefaction delivered by me. For such Metals as the Spirit of Salt do not tie and make fixt in the extractions,  $\oslash$  or  $\oslash$  makes them such, with which we have taken or sift the Sol out of the *Aqua-regia* or Spirit of Salt; to the obtaining of which this is also of much conducement. If the Cheese now made be altogether fixt by the help of an artificial Cement, and the gradatory fluxing matter be especially reduced in such a Vessel, out of which not so much as the least volatile part can evaporate: by which it comes to pass, that not only the volatile Gold you have caught is made fixt, but even a part of the net of  $\oslash$  or  $\oslash$  is by graduation made aureous: For every volatile Gold doth exercise its operations in the Fire upon other Metals, and makes them aureous, so that the Sol ariseth thence to be of a greater quantity, than that was which by the help of the silvery or leaden Dart was taken out in a legitimate course, and you shall find such things as you cannot as yet conceive of. The Filling is clearly enough described in this place, and so is the Cementation and Reduction of the Cheese clearly propofed, and may be most easily perfected.

But God (if thou becomest acceptable unto him) can yet shew unto thee a much more compendious way of perfecting this work with less labour, and of obtaining greater things.

Be content for this time with what hath been at present taught, give God the thanks and forget not the Poor, and He will then shew unto thee more and more compendious ways, of cheerfully managing the work (here) described, to his Honour, and the Comfort of the Poor, and without any wronging thine own Conscience, or hurting of thy Neighbour.

You need not be much solicitous about such kind of Earths, Stones or Sand, from which you may extract the Gold, for every land is every where stored with such, nor need we spend much time in searching after them. Likewise it will be a most easie thing for thee by my

writings to make Salt-petre, of Salt-petre to make *Aqua-fortis* and *Aqua-regia*: One bare pound of *Aqua-fortis* may be sufficient for thee to begin the operation withal, for there is not much of it lost in the work it self; and what of it is wasted may easily be repaired by an addition of common Salt: And as for the extracting both the fixt and volatile Gold and Luna out of the Earth, and of perfecting it, thou hast no reason to hope of finding a more compendious way than that which I have here exhibited unto thee.

You may leave such Metals (or Ores) as have in them plenty of Sol and Luna, unto others; and take only the scoria as 'twere, and thencefrom extract your part, and none will forbid you that. But if so be thou canst be but a partaker of an aureous Earth (or Ore) then will all things fadge the better.

NB. The  $\odot$  and  $\oslash$  that is in the Extractions may be precipitated by the help of  $\oslash$ , but much more chargeably and more difficultly than by  $\oslash$  or  $\oslash$ , because the  $\oslash$  used in this operation cannot be used a second time.

NB. The  $\odot$  and  $\oslash$  may be also extracted from the water without precipitation; by abstracting the *Aqua-regia* from the  $\odot$  and the *Aqua-fortis* from the  $\oslash$ : but besides this kind of proceeding being full of Labour, we should receive but little fixt Metal, and scarce the one half of what is gotten by the aforementioned way: For the  $\oslash$  and  $\odot$  do retain with them some part of the *Aqua-fortis* and *Aqua-regia*, and thereby become sharp or four which is a thing contrary (or an Enemy) to all Fluxes, and which also does not only cause an evaporation of such Volatile Gold and Silver as is therein, (but withal some part of that which is fixt too,) in the melting. But now in this Filling trade that I have described, being caught it is eitheredulcorated, or the corrosive power is extinguish't by the addition of a fixt Salt; so that hereby the  $\oslash$  or  $\oslash$  holds with it self as well the volatile as fixt Gold and  $\oslash$ .

NB. He that shall institute this operation aright, will find that the volatile Gold will (in the secret Reduction) yet farther transmute part of the  $\oslash$  and  $\oslash$  into  $\odot$  by Graduation, and so will reap a double portion of  $\odot$  for which God is deserv'd to be thanked.

I have herein been more prolix than I intended, which I entreat others to accept in good part: It could hardly be that the things I have delivered, could be couched in fewer words. Wife Men indeed need not many words, but where are such? Better is it therefore to set down things at large.

Now it follows that we shew by what means we may have benefit out of theedulcoratory Water, and not be forced to throw it away.

WE have taught in the precedent discourse, how those waters which  $\odot$  is extracted and precipitated with, may be used for a farther extraction of  $\odot$ : For when the *Aqua-fortis* in which  $\oslash$  or  $\oslash$  is dissolved is mixt with the *Aqua-regia* wherein  $\odot$  is dissolved, there ariseth not any mutation or changing, but that  $\oslash$  or  $\oslash$  only which was in the *Aqua-fortis* settles to the bottom, so that this water wherein such a precipitation is made, may afterwards serve instead of *Aqua-regia*, and so consequently with it may  $\odot$  be extracted out of the Metals.

But seeing that the precipitated  $\oslash$  or  $\oslash$  must be excellently welledulcorated by often pourings out of water, afore it be dried, hence it comes to pass that there is gathered a vast deal of suchedulcoratory Waters. Now that even this may not be thrown away as useless, and that nothing may be lost in so noble a work, I have here determined briefly to declare, by what means we may likewise catch some benefit even out of that too.

To do this, 'tis necessary that the useless water be separated from the *Aqua-fortis*; now such a separation can be

B b b b not

not be effected in metallick Vessels because of the sharpness of the *Aqua-fortis*; least in length of time they should be dissolved: But to perform the same in Vessels of Glass would take up much time and fire; there is therefore of necessity another way here required to perform the same; and a better than this, which I will here deliver, I think can hardly be contrived. Make you therefore an Arch of Lime, Ashes, and Horse-dung, according to the afore prescribed manner, where we treated of making Salt-petre (about the beginning of the book) dry it by putting fire thereunder, &c. The Arch being dried, pour on, by little and little, so much edulcorating water, as the Arch is capable of attracting, and until you shall find it to be made thoroughly moist; the Arch being on this wise moistned, dry it again: and being dried moisten it again as afore, and so repeat this work of moistning and drying so long till the Arch will receive into it self no more water. This done, there remains no more, but to do thus, &c. Let the said Arch be broken to pieces, and be ground with a Mill into fine powder; upon the powder let be thrown fair water, and so let there be made a Lixivium, out of which by due boiling may be made most excellent and delicate Salt-petre.

But here must be very good heed taken, that you use about the building of the Arch, Wood-Ashes, and Lime made of Stone (or Chalk); whereby the sharpness of the edulcoratory water may be extinguish'd (or mortified) by the fixt Salt inherent in the ashes and lime, and the corrosivity be taken away, and most excellent Nitre may arise therefrom; for if *Aqua-fortis* be permixt with the fixt Salt of wood-ashes, both of them lose their Nature, and Nitre is made thereof.

But that the operation may more luckily succeed, and we may be the more certain of the event, it will be the best way, to put in, by little and little, some Lee of wood-ashes first of all, (afore the edulcorating water be thrown upon the Arch) and this putting on, to be so long continued till all ebullition and noise cease, whereby all the sharpness of that water may be taken away; this done, that water is to be poured upon the Arch, and you are to proceed on according to the afore-prescribed method; and so shall you have excellent Salt-petre, whether your Arch be made of Lime and Ashes, or of Mud and Ashes.

NB. If this taking away of the sharpness of the edulcoratory water by the benefit of a wood-ashes Lee, be not finished, and done before it be poured upon the Arch, it is clearly requisite that it be done in the Arch it self, by the goodness of the Lime and the said ashes, by which that sharpness may be extinguish'd.

It is, I confess, all a case whether that sharpness be extinguish'd with a *Lixivium* afore; or else be done in the Arch it self. Yet nevertheless, seeing that Operation is the safer which hath a foregoing taking away of the sharpness afore it be poured on the Furnace, therefore it is better so to institute it; specially, seeing it then matters not at all any thing, what condition the matter is of which the Arch is made with; because then such a water needs no more but an unfolding (or evaporation) and coagulation, and this may as well be done by the help of an Arch made of mud, as by one made of Lime: Otherwise if the sharpness of the edulcoratory water be not taken away by the *Lixivium*, an Arch made of mud is of no use, for by this means you would not get any Salt-petre at all, but rather all the water would be consumed by evaporation, which need not be at all feared, if we use an Arch made of Lime and Ashes, seeing that that water is by this means mortified.

And so, by this means, that edulcoratory water may be most commodiously prepared for farther uses, and the Salt-petre which is extracted thence, is exceeding good to make *Aqua-fortis* with; and we may gather as much in quantity thereof as the extraction of ☉ and ☽ out of the Metals, Stones, Clay, and Minerals requires.

NB. If any one be desirous of more excellent benefits, let him dissolve, in that edulcoratory water, (B.) or (C.) and in the Lixivium (let him dissolve) (D.) then mix both Solutions: When the fermentation is over, he will have double the quantity of Nitre, than what he would otherwise have from the bare mixture of the contraries together, and pouring them on the Arch; the reason of which thing is this; because (E.) is nothing else inwardly but Nitre, but it cannot come forth to light before the body be broken, and till that fait which sticks (or lies hid) within, be wholly freed (of its bonds) whereby it may be turned, together with the Corrosive Spirit into Nitre.

The like is to be understood of (F.) because even that also is broken (as I may say) to pieces by the Lee of the wood-ashes, and so the Salt that lies hid within, and which is nothing else but Nitre, hews it self to light, and passeth with the other Salt of the Lixivium into Nitre.

Certainly this labour, viz. the mortification of the edulcorating water by a Lee of wood-ashes, and the concentration of Nitre, upon the Arches made of lime or mud, is an egregious invention; nor do I think that this business can be better managed any kind of way, than by what hath been here shewn, especially if the Species here notified, be also thereto adhibited (or made use of) (I know not I say, any way) by which greater plenty of Nitre may be gathered; for the coagulation cannot be done in a Copper or Iron pan, because not only the Pan would be corroded and wasted, but the Nitre would be rendered impure. But if now the operation be instituted aright, we shall get more Nitre than indeed is requisite for the extracting ☉ and ☽ out of the Metals; so that we may get us ☉ and ☽ without any costs: which invention verily is a most noble one even in all parts of the World, and a most high gift of God: for which, we have good reason above all things to render Him deserved thanks, and next Him, to those who open such a Noble and Unheard-of Invention, and which is so profitable to all Men.

But this Invention will be especially profitable in those Places of the World, where *Aqua-fortis* is much used, and is presently after the first using thereof, thrown away as unprofitable, as it usually happens in the Mint houses, where a abundance of ☉ and ☽ is separated in great quantity, and consequently abundance of *Aqua-fortis* consumed, so that by the benefit of this invention of mine, we might get much every year; but most of all in those places where are found such Stones and Sand which are endued with Gold, but yet will not yield any by the help of the usual melting.

Besides too, this invention is exceeding profitable for such kind of Metals of ☉ and ☽, that have not as yet gotten their due ripeness or fixity, and so fly away in the melting, and yield either none at all, or at best but very little of Gold. For the common melting fire forceth away the Volatile Gold, and ☽ that resides in the Metals (or Ores) which is not at all so here, for all (of it) is made fix by the *Aqua-fortis*, and preserved.

I do believe that there is not a place to be found, where such kind of Stones, Sand, or Clay may not be gathered, as hold in them Gold and ☽, either fix or Volatile, and which may be extracted thence from most easily, and with exceeding profit according to the way afore-speaken of.

But, for as much as there are many, who pretend that such like Stones, Sand, Clay, and Minerals as have Gold in them, are no where to be found, and that consequently this invention of mine is altogether in vain: To such as these I thus apply, viz. That such like Subjects are therefore unknown, because few there are that seek after them, or are willing to experience ought, but remain contented with such things only as the Ancients have taught, and perfwaded themselves that ☉ and ☽ cannot be

be separated out of the Metals, but only by the force of fire, where as notwithstanding the operation may be far easier, and more profitably instituted, according to the method by me prescribed, but especially in those Metals (or Ores) of ☉ and ☽, which either require too much expence for their melting, or are as yet unripe and volatile, and so fly away in the melting; for a great quantity of ☉ and ☽ may be extracted with a little quantity of *Aqua-fortis*; yea the extraction being duly made, and to the best profit, there may be thereof made Salt-petre; so that such an extraction of ☉ and ☽ requires but very little costs.

If any one desires an easier way of extracting ☉ let him use Spirit of Salt prepared after the manner by me delivered, which said Spirit he may fortify by adding a fourth part of Salt-petre, which very same (when the Extraction is finish'd) may be reduced into Salt-petre, like as we have said of *Aqua-fortis* that hath been already used.

NB. An easier operation yet then all these, is this, which may be performed the dry way.

Take the Metal, Stones, or Mineral, reduce them into powder, mix them with the Salt (G) and make them with clay into Balls about the bigness of a little Head. Make these balls red hot, and by this means the Salt will dissolve the Sol in the Fire, and attract it out of the Metals. This done, grind the Balls or Pellets, and extract thencefrom in a large Pot or Vessel a Lixivium with boiling hot water, for the Salt which hath attracted the ☉ in the Cementation, mixeth it self with the Water: Out of this Salt-water mayest thou afterwards catch the ☉ by the help of a solution of h, added for the precipitation; now out of the Salt it self mayest thou make excellent Salt-petre. So that you may most easily extract out of the Earth both fixt and volatile ☉ and ☽ without any melting it. Nay not only ☽ and ☉ but even Copper too, whether we proceed the dry way or the moist way: For we may extract good Sol out of the scoria of Sol and Luna and Venus which are cast away, yea and out of Mars it self too, and by the afore-shown way.

NB. The reason is this, because the Iron being purged in a strong Fire is heapt up as it were into goldenish Scoria which few know of, and will believe, though it be most true. For when a Metal is so burnt with such a vehement Fire as to resemble glally Scoria, it hath gotten to it self a more noble nature, and thenceforth is able to exhibit or yield good Sol: Yea though they be the Scoria of ☉ or ☽, which thing that excellent Metallurgist Isaac Hollandus did also know, when he said, *If any one makes V, S, or S into Glass, and reduce it, it will not be V, S, or S, but ☉: And if any one shall turn ☉ into Glass, and then reduce it, it will not be ☉, but Tin-stone.*

Nor was this knack unknown to *Braccens*, who taught the making of the Philosophers Stone out of the scoria of Iron, but he is laugh't at, by another Philosopher, though undeservedly. Though I do not know the way of extracting the Tincture out of Iron, yet this I know; that there have been many who have extracted good Sol by *Aqua-regia* out of the very green Scoria of Iron, when notwithstanding the ☽ it self out of which the Scoria came was destitute of Gold; the cause whereof we shewed but now.

Now if they had but known my invention of most easie preparing a convenient Menstruum for the extracting of the Tincture, and then the manner of afterwards separating the Sol again, without losing the Water, certainly they would have been able to perfect that Extraction with a great deal of benefit, whereas (not having this) they only held the possibility of the thing without profit.

For if this Labour be instituted according to my invention afore-written, we may extract the Venus, which com-

monly is in the poorer Minerals) out of them, and that with much profit and in great quantity, and the extraction being made, (whether it be done the moist way or the dry) we may by the benefit of the solution of D or h, get out the ☉ thence whilest it is yet mixt with the water, yea and afterwards by the benefit of S the Copper it self. He now that well understands the reason of this Filing and reduction needs not to search after the Metals (or Ores) of Sol and Luna, for whatsoever Metals (or Ores) of Venus contain but even a very little portion of them, will be able to furnish a man with necessaries sufficiently enough.

But that the Reader may not think that these sayings of mine, viz. that there are subjects to be in all places found that are endued with Gold, are fictions, and are not founded upon any experiments, (for I doubt not but that abundance will not only account these sayings for fables, but deride them too) I thought it not much from the purpose, if I shewed some little place only, where you may find such Metals (or Ores) as are endued with Gold, which notwithstanding were never brought into use, that so it may hence appear that such Golden subjects must be likewise found in many places.

Let us therefore cast an eye to a part of the *Moene*, and let us get out those Treasures that are there hidden, and at present are not profitable to any, which nevertheless may be of mighty conducement and benefit to the whole Inhabitants of those parts.

The *Moene* is a River most abundant with Boats and Fish; it hath its rise out of a very high pine-bearing Mountain, it is in some sort conjoined with three bordering well known Rivers, *Sata*, *Adrana*, and *Nava*; which again spread themselves unto the 4 quarters of Heaven, as *East*, *South*, and *North*. (This pineiferous Mountain is not barely one Mountain, but consists of many which are exceeding full of Pine-trees, Beech, Oakes, Birch, and other Trees set very thick together, and so yields an Harbour for both wild and tame Beasts.)

This Pine-bearing Mountain, and which is the highest in all Germany (and of which *Gaspar Bruschius* wrote a particular Treatise, which is exceeding profitable for such as study metallick affairs to read,) is stored with many notable Metals (or Ores.) For there was not only Gold digged out plentifully in various parts of that Mountain, many years since, (and thereupon there's a City called *Golghamb* by the Germans, as if you should say a Vein of Gold;) but withal the other more common Metals that lie here hidden do for the most part all of them contain Gold, with notwithstanding is not at this day by reason of the ignorance and unskillfulness of Men separated from them. Nor are the bare Metals only of that place all of them endued with Gold, but almost all the Earths, Sand, and Stones have Sol in them. Yea even in this time even Antimony the first *Ens* of Gold is digged out in that place. Therefore it may most easily be proved, that this Mountain out of which the *Moene* flows for th is stuffed with Sol both in the outside and inside parts, with which proof I must at present in this place rest, least I should be too tedious. All such as are skill'd in metallick Affairs do well know, that all the metalline Ore, that they get in and about this Mountain, is endued with Gold.

The most studious searcher of nature *Mathesius* in *Saxeptra* testifies that he saw an Iron Stone or Ore endued with Veins of fixt and malleable Gold.

The afore-mentioned *Gaspar Bruschius* in the description of this Mountain, mentioneth amongst other things, that in a little Town called *Einstdel*, situate near the said Mountain, was a Tin mine heretofore found, by the Treasures of which the aforesaid little Town was built. There did a certain Metal-man called *Steyfand* learn from an Italian Woman, whom he married after the death of her former Husband, how Sol was to be separated from *Jupiter*: From whence he got him so much riches, that even afore he died, he caused an egregious Hospital

spital to be built, and withal contributed thereto many thousands of Crowns, with which twelve ancient Men, and three Priests should be always nourished; to the performance of which there is verily a great deal of Gold required yearly.

This now is not to be at all accounted as a meer fable, but the very pure truth: For in that edifice, the Effigies of the Founder *Stigmund Willans*, and the Foundress *Barbara*, are yet to be seen even at this very day. Of which likewise *Matthew Merianus* in his Description of *Franconia*, maketh mention. But it is sufficiently enough evident (besides these Testimonies) that this Mountain is repleat with Metals (or Ores) and especially with Golden ones, both within and without, and hence arose that Proverb of the ancients, *viz.* That the Country-men doth in this Pine-bearing Mountain oftentimes throw a stone at an Ox (or Cow), that is more worth than the Ox it self. Strangers give credit herunto, as *Italians* and others, and do yearly visit this Mountain, and dig the Gold out of those places where they know there lies much hidden, and take it up at their backs, and carry it away with them: And many such there have been with me, who have afforded their help to strangers in digging out Gold: Who forasmuch as they knew not the manner of extracting it (and that they understood by others that I also dealt in Metals,) brought me various kinds of Earths, Stones, Sands, Clays, that I might try whatwas in them: and they did all of them abound with Gold.

The Country-men that live about that Pine-bearing Mountain do daily for Gaine's sake carry such earths and stones, endued with Gold, unto *Norimberge*; which one or other likewise buys, extracting thence by melting excellent Gold.

But now if so be these men did but know the extraction of it by the help of *Aqua-fortis* only (without melting) out of the earths and stones (as is here taught): the needy Country-men might live like the rich Citizens, the Citizens like the Nobles, and the Nobles like Princes; which seeing it hath not so pleased God (to have it) all (these) things have remained hidden. Every one may easily believe the things I here utter, seeing it is already granted that this Mountain doth abound with egregiously Metals (or Ores) and especially with Golden ones. Upon this account therefore the most Noble Marquis of *Aspach* who is Lord of this Pine-bearing Mountain hath prohibited any Foreigner from exporting such Earths (or Ores) thence for the time to come; and though he hath thereby done something to it, yet he cannot wholly hinder it, forasmuch as that Mountain is too vast and large.

But now when I pass down from this pine-bearing Mountain along the *Athene* downwards, to such places as are more plain (or even ground) where Wine and Corn grows, there's nobody seeks after *Sol* and *Luna* there, but each man professeth himself well enough content with the Wine and the Corn, nor hath there been any Metal digged thence or there sought for many years: Because they thought that no plains can produce Metals, which thing I judge to be false, and do gain-say it; and contrary-wise affirm that there are some parts in plains, that as to the production of Metals may be compared with the most high Pine-bearing Mountain. Now, elsewhere there ly high Mountains of each side of all the *Athene*, out of which there comes a mighty quantity of Wine, but the Metals ly hid to all.

Besides these, I my self tried, that there are Ores of all kinds to be found on both sides the *Athene* throughout all the East of *Franconia* even to *Maguntia* where the *Athene* runs into into the *Rhine*, but yet as far as I know, there is not any Metal anywhere digged but Iron only; and therefore neither can I positively shew and direct to such or such Mine-pits; out of which you may apparently get

Gold and Silver, but as is said, there are every where found some footings (as 'twere) that contain Gold and Silver, and that such Stones in the *Athene* are rarely without Metal: But no body proves or tries them, or puts them to use.

At *Bamberg* (which is an Episcopal Metropolis) men are become more diligent, inasmuch that they have found out several places wherein is to be had the Metal (or Ore) of *Sol*: Such as this Metal (or Ore) of *Sol*, hath been very oft-times brought me by the Inhabitants of that City, but all of it in a manner did contain a fluxile and immature Gold, which cannot be extracted by the common way of melting, but vanisheth away into the Air, and so I did not at that time much esteem it, but left it as an unprofitable Ore. But now I have found that such fluxile Metals (or Ores) of *Sol* may be brought in use, not by the help of a vehement melting, but only by a nitrous Water, in which this kind of fluxile Metal (or Ore) of *Sol* is fixed in the extracting it, and then stays in the melting, and yields perfect *Sol*.

Concerning such a fixation of fluxile *Sol* in stones, by a nitrous Water, I did not at that time know it, otherwise this knowledge of mine would have been extraordinarily profitable to the Inhabitants of those places. Yea and the Bishop of *Bamberg* himself who is a great Lover of the Metals gave me some proofs of his Clemency for services of no moment that I did him, so that I would then gladly have bestowed my utmost power in lieu of his favours, but nothing could be effected by the way of melting, because of the volatility of such a Metal. But now there may be gathered very considerable Treasures by the benefit of nitrous Water. For not far from *Bamberg*, there is found a Stone of great bigness that is exceeding full of Granates, which are about the bigness of Miller or Hemp-seed: Besides too, all the Mountains of that place do most plentifully abound with Metal (or Ore) of *Sol*.

There is such a Vein of unripe Gold, not far from *Bamberg*, that lies thwart the *Athene*, which much hinders the Vessels, and especially those Boats which are wont to bring vast quantities of Boards, Beams, &c. yearly; inasmuch that they cannot always get over it, but at such time only when the waters are increased. Now in the Summer time, when Rain hath not fallen awhile, this Vein is seen bare, when the water is fallen away some Ells height; and hereupon the Mariners have smote against it with force, and Tools thereby to remove it, if possible, but all in vain.

But for as much as I never was minded to run thither, nor yet am so conditioned, as that envious Dog, who having hay under his possession, could neither eat it himself, nor would suffer the Ox to eat the same; therefore I was willing to lay open these things: I cannot at present say any more of this fluxile Ore of *Sol*; yet if any one desires more, let him repair to an Inhabitant and Citizen of *Bamberg*, by name *N. N.* a Farrier, who many times delivered to me that kind of ore during my aboad at *Kitzing*. This man will satisfy every ones request, and will shew where it is to be found.

There have verily been others that have brought unto me various kinds of Ores; but I have long since forgotten their names. If you only seek, you will find in that place, abundance of such Golden Metal (or Ores) but all of them in a manner, fluxile (or crude,) and possessing but little fixt Gold, and although they should not have in them any fixt *Sol*, and that not any thing could thence be extracted by the way of melting, yet notwithstanding it is now known to *D. G.* by what means (by the liquid way of Nitrous water) all the fluxile (or crude) *Sol* may be abundantly extracted out of the stones, be fixed, and be turned into good *Sol* with abundance of profit.

The *Athene* near *Bamberg* is occupied with Vessels or Ships, and I my self have sailed along the *Athene*, and on both

both sides of the *Athene* from *Bamberg* even to *Wirtzberg*, did light upon various kinds of Metals (or Ores) which were not void of *Q* and *D*, out of which much *Q* and *D* may be extracted by the help of this invention of mine, by the moist way by Nitre water, if men would but only apply themselves to the work.

But indeed the Corn and the Wine which God hath so abundantly vouchsafed to those Countries, is the cause that no body minds any thing else, for they have enough to suffice them, and therefore leave the Metals (or Ores) of *Q* and *D* untouched.

Without doubt, the whole Wood that reacheth from *Wirtzberg* or *Kitzing*, even almost to *Bamberg*, is full of Metals (or Ores) and yet (as far as I know) there is not digged any of the Metal (or Ore) of *Sol* or *Luna* therein.

It is reported that there was *Sol* and *Luna* digged up heretofore at *Cassel*; at the other side of the *Athene*, towards the Town which the *Germans* call *Boninghofen*, in the Mountain they call *Hagberg*, there was heretofore, Copper digged, which now is left, because the Copper is not full enough, nor hath it any sulphureous flint joined with it, by the help of which it is made fluxile (but is) inclosed in a Sandlike Stone. Now out of 100 weight of this, there can hardly be extracted, by the help of a strong melting fire *iiij*. lb. for the Sandy Stone being destitute of a sulphureous flintiness, doth in the melting turn the Copper it self together into *Scoria*; yet notwithstanding we are able by the help of Vinegar to extract above *xij*. or *xvij*. lb. of Copper, and this I have tried more than once. But whether or no that Metal (or Ore) of Copper, contains in it any Volatile Gold, I never tried, but that there is some *D* therein, is true; yea, and the Copper is very malleable, and we can thence extract by the help of Vinegar, that which is most fair, and this I humbly declared to the most noble *Magistrate* Elector, he being at this time Bishop of *Wirtzberg*; but by the *Triers* (or Refiners) of that place, it is haply accounted of as unprofitable because it yields but little by the help of Fusion.

I must needs confess that but little can be gotten out by melting, but such Copper may be profitably extracted by the Acetum of the Wood, which Grows in the places all about in abundance, and may be had for nothing.

The *Athene* doth every where yield such kind of Flints as are endued with Gold. Near *Carlsbad* there offers it self in a Wood a certain white and fat Earth, and after some fort silverish, otherwise firm (or strong,) and is fit for making of Crucibles, and other Instruments (or Vessels) to be used about the Fire.

You may likewise find such conditioned Earth at *Klingenberg* upon the *Glaß-makers* of *Spechar* use to make the Crucibles or Pots in which they melt their Glaß.

It hath not as yet been known that there hath been any Ore found in the County of *Wertheim* where great plenty of *Rufflein* Wine is gathered; yet nevertheless I have proved several Earths, which I found about *Breirg*, which is the inexpugnable Cattle of the Lord *Charles Ferdinand* and the Count of *Wertheim*, in which I found there was contained much Gold.

Besides these, I found opposite to *Wertheim* where there are Vineyards, an Iron Stone (white like snow, covered over with other stones) which is endued with *H* and *Q*: as to the external shape it resembles a white Flint, very weighty, soas that it scarce yields to the weight of a piece of Iron of like bigness: But it is nothing regarded, and is accounted of as a common Stone.

The County of *Erbach* doth indeed yield plenty of Iron, but there is nothing at all found of other nobler Metals; yet my opinion is, that even in this Iron are contained both *Q* and *D*: because that there is found in several places thereof which yields good Gold, as I have observed more than once; the extraction of which may be excellently well performed by the benefit of Saltpetre.

Likewise Talk of sundry kinds is found in the said places, which is endued with *Q* and *D*: and it would easily yield them forth, were it but rightly handled, and dealt with according to the way by me prescribed: which hitherto we never heard to have been done by any.

The County of *Erbach* and likewise of *Wertheim* do abound with Iron Metal (or Ore) and all kinds of Minerals, which contain in them, *Q* and *D*.

Nor are the Metals (or Ores) of less goodnes that are in the *Specharten* Wood, and the bordering Countries; and yet notwithstanding 'tis evident that it yields nothing at all save this, *viz.* That there is excellent Salt made there and Glaß, in great plenty. It is a thing well enough known to all men that here are various Metals (or Ores) found, but never hath any so procured as to have them wrought upon, and thereby to enjoy them.

We find in several places, an Earth impregnated with white, black, and yellow Talk, especially (in that part) which is near to *Aichsburg*, and which contains both *H* and *Q*: which notwithstanding by reason of the smallness of the quantity thereof have never hitherto been thencefrom separated.

Not far from a Village which the *Germans* call *Schiltkrop* there offers it self a stony Talk, somewhat ruddish, which besides Copper contains also volatile *Q*, and of no use at all because there's but little *Q* therein contained, and that the *Q* is volatile and cannot be obtained by the means of melting. Perhaps this Talk was known even of old time, for the place where it is found in plenty is by the Inhabitants of that place called the Gold-pit even to this day: for it is not incredible but that there was Gold found there.

However there is not at this time any extracted out of that Talk. I have very often extracted thence most beautiful Verde-grease by the help of distilled Vinegar. For seeing that there is plenty of Wood to be had in that place, and consequently requires no costs, we may get us vast quantities of Acetum gratis, (or for nothing): and by the help thereof extract the Copper out of the said Talk: Verily many noble Men would have (thencefrom) whereon to live honourably.

NB. But if we make a Spirit of Salt, and with it being fortified with a fourth part of Nitre, extract the Copper and the *Q* out of the said Talk, and then first catch the *Q* by *H*, and then precipitate the *Q* by *S*, we shall not only have very malleable Copper, but shall likewise receive even pure *Q*; and this I testify upon my own knowledge.

He that hath determined the experimenting of these things, and yet sees that he does not rightly perceive the things we have here mentioned, I advise him to come unto me in a friendly way, and I will not be wanting unto him to serve him and the Country by any farther information.

Verily there lie hidden incredible Treasures in those places, which none know of, and which yield nothing at all by the help of Liquefaction, and which we are constrained if we would have them fixt and metalline to make them so by the benefit of a sharp Water, and this I was willing to open and notify for the Countries sake.

O thou Zoilist or Carper that understandest not this knack, pass not thou thy judgment hereupon, but rather examine thy Wines, and tell us which is best, either the *Hunabach*, *Klingenbergick*, or *Wertheim* fort: Verily neither of these Liquors though they are strong, are convenient for the extracting of Venus and *Sol* out of that Talk: There is a far stronger required, to wit, some nitrous Spirit of Salt, or Spirit of Nitre acuated with common Salt. When the extraction is ended there may be gathered plenty of Nitre out of the remaining Menstruum. Inasmuch that there is nothing else required but labour, for the costs expended on the work are not at all considerable: And thus in a little space of time, we may get a great quantity of Copper and *Sol*.

After the same manner as we have shewn that it is a thing

Ccccc



thing possible to extract Volatile Sol by the help of Salt-petre out of such a disregarded Talk and other Stones, and to make it fixt, so we can also extract the same out of several other Minerals, that are plentifully enough lying on both sides of the *Albion*. So that now, no body hath any ground to say that the Ores cannot be found in this or that Country, or such convenient Minerals, as out of which we may extract the volatile and also the ripe Gold according to *Glanber's* prescription.

If now such may be found in those places that are adjacent to the *Albion*, which we always judged to be void of such treasures, what shall we not find in those places, which have already yielded us various kinds of Metals for some hundreds of years successively, and do yet daily exhibit them; such as are *Hassia*, the Dukedom of *Brandenburg*, *Saxony*, *Thuringia*, *Moravia*, *Bohemia*, *Hungary*, and that such like parts of the Earth abound with Metals. Therefore, Friendly Reader, do not thou persuade thyself that there is any place in which we are not able to extract many good things out of the Earth.

I have likewise found various Metals in our *Holland*, and yet never, did any one ever hear that there was the least particle of them therein found, especially in that place that they call *Velauw*; yet notwithstanding it yields Veins of Iron, and a Yellow Sand which hath in it  $\text{O}$  &  $\text{S}$ .

Neither doth that, place afford only such Sand Stones, & Earth, out of which volatile  $\text{O}$  &  $\text{S}$  may be extracted, but withal there offer themselves at the Sea-shore in those Sand hills, which the *Hollanders* call *Duynen*, which the Iron Sea heaps up, Stones of a Sky colour, which contain  $\text{S}$ . They are called by the *Hollanders*, *Ultramarine*.

In this place, is likewise gathered plenty of *Oliocolla* it is about the length and thickness of ones Finger; yea and sometimes is as big as ones Arm; and as in a clear Season it is easily noted, (or met with) so in a Rainy Season it is not to be seen: It is in some sort hollowed in the inside; it is of a white colour, like stone-lime, and thereupon the Chyrurgions use it to consolidate the broken bones of their Patients.

Some (as they have related to me) have extracted  $\text{O}$  thereout-of. There is not therefore, any place that does not contain some Metal, and especially  $\text{O}$  and  $\text{S}$ .

Thus Friendly Reader, you see that there are in all parts of the Earth, such Subjects, as do contain, if not fixt, yet at least fixt volatile Gold; inasmuch that no body may on good ground, complain that nature hath denied him  $\text{O}$  and  $\text{S}$ , so he but knows how, and be willing to extract it.

Did *Germany* but know those Treasures which the Earth contains, and did use them aright; certainly they need not give place to the power of any Monarch. But it seems as if God had cast a blindness upon men, or at least keeps them blind, even until the due time approacheth of helping those that are his.

I have here shewn the way for the Country to get riches and power by; but as concerning the way by which we may extract both the volatile and fixt Gold out of Stones, Sand, and Clay, without any considerable labour & costs, according to this invention of mine; I will shew it in my Laboratory, which by Gods permission, I have begun to erect for the sake of Friends.

But whereas I have omitted some words in the description of this invention; you are to know that it was done upon this account; least otherwise such a noble Artifice should fall into the hands of my enemies; I will never be wanting to illustrate (or explain) such things as are somewhat more obscure, unto my friends. The main things are delivered clear enough, to such as are in any measure skill'd in Chymistry, but the unskillful may not hope for any thing else (thereby) but labour in vain. The thing in it self is easie, and without rubs, so as that any one who hath but once seen the way, may understand it, and manage it.

I could have exhibited the things I have delivered, in a briefer stile, but upon consideration of the common good I would not; he that cannot from these things perceive and learn ought, let him think that God is not willing to vouchsafe him the Grace of understanding them.

And now, if I had been minded to have exalted this work with mighty praises, I should not have done unseemly at all, for as much as this labour shines even in the dark, and makes many doubtful things firm and clear.

For by the means of this labour, we may get us, not only abundance of  $\text{O}$  and  $\text{S}$  very easily, but likewise most excellent medicaments; and which are not to be accounted common; may, even the off-drawn Salt-petre it self, is a most excellent medicine for all Vegetables, because it is capable of multiplying them abundantly, in so much that he who is skillful in this kind of work and does not forbear from setting about it, will never want any thing.

What greater things can a man desire from God, than a sound Body, daily Bread, and as much  $\text{O}$  &  $\text{S}$  as necessity requires? now these gifts of God do abundantly flow in upon us by this labour; if it were not for the wicked Farnesianists who are not worthy of any good thing, and do contemn every thing that they understand not, and (so consequently) refrain me from treating of these things, with any longer and clearer discourse. The whole world would be amazed to see the so exceedingly easie method of bettering of the Metals, and of making them perfect, and which method but few there are that know. But whatsoever we have omitted here, shall, God willing, be shortly delivered in my work of  $\text{h}$ , where we will demonstrate by what means  $\text{O}$  and  $\text{S}$  may be extracted with exceeding profit out of vile (or common Lead, so that we need not any other subject, but Lead and the Salt of the Earth or a Mineral fire (by whose help, nature bringeth (or advanceth) all Metals to maturity) for the performing this work; and hence the word Alchemy (which signifies nothing else but the melting of Salt) seems to have taken its original.

He therefore that knows how by the help of Salt, to make Metals volatile, and again fixt (which is not to be done but by solution and coagulation) such an one knows the true and unsophisticate Alchemy, and follows the universal exhortation of the Philosophers, where they say, *Mate the fixt Volatile, & the volatile fixt, Dissolve & Coagulate, &c.*

He that hath in any measure meddled with Salt-petre, easily perceives what my meaning here is, and what I drive at. He whom Nitre obeys, him do all things else obey. I have determined (by Gods permission) to erect a Tryumphphant Chariot for Nitre, & to set it thereupon, as the greatest Monarch of the Word & to exhibit it to the ignorant.

Whereas now I had written down this most noble way of compendiously extracting volatile and fixt Gold out of Stones, Sands, and Earths, and of farther augmenting other  $\text{O}$  and  $\text{S}$  thereby, I found nothing pretermitted of what may any waies help to the profitably accomplishing the Work, save this, *viz.* Whence such aureous Subjects are to be taken, out of which we may extract volatile and fixt Sol, or by what means they (*viz.*  $\text{O}$  and  $\text{S}$ ) may be prepared by such like labour in great quantity.

To fatishe such as these I neither will nor can defer it. So then, as touching the Golden Materials, there hath been enough shewn already to prove that they are every where to be found, and put case there were none to be found, is there not a Golden Silver every where to be found, and that Silver may be separated from the Gold, be Cemented, and again made aureous, as often as one shall please. Yea, and Gold may be profitably extracted out of a certain (sort of) Tin, especially the *Geyersbergs*; and so likewise out of some Iron too.

Now that such, (*viz.* Gold) may be made in great quantity we may dissolve the  $\text{O}$  that riches in Stones, with Spirit of Salt, acuated with a little quantity of Nitre; for such a spirit will not be so coltly as Nitrous water is, and

and besides this too, it will (after it hath been used in the said separation) yield excellent Salt-petre, of full as much price and value as the Spirit of Salt it self was of. So that by this means we may extract the  $\text{O}$  without those colts (too): And this moist extraction may be excellently well performed in a Vaporious *Baino*.

But if we seek after the dry way (of doing it) then the Stones are to be mixt with Salt and a fourth part of Nitre, and being mixt are to be made up into little balls by the help of some fat Earth, so as to stick together: Then are they to be dried in a peculiar Furnace, or else even in the open field, with a Fire of Wood, the which may be done in ones hours time. The Cementation being made, they are to be powdered, and out of the powder is a Lixivium to be extracted by the means of Water, and you shall have the  $\text{O}$  permixt with the Lixivium, which is to be thence extracted by the help of the solution of  $\text{h}$ , out of the Lixivium may Nitre be afterwards made. And now by this means may a moist easie and no ways coltly operation at all, be instituted with some hundreds weight.

But as concerning the melting and reduction of the  $\text{h}$  which contains in it the  $\text{O}$  which it caught, it may easily be done, but 'tis by the benefit of a peculiar \* Tigil or Pot, \* Mentioned in the Second Century. the making of which is known only unto my self; which said Tigil or Crucible lasts a long time, and doth not at all let any thing of what is thereunto put, run out, because it has its cover made of the Lute of Wildom.

But now again here may arise another doubt, and it may be demanded, how we may have so much Spirit of Salt for the moist way, or so much Salt and Nitre for the dry way, as is requisite to make this extraction of the Metals. Salt-petre is chargeable, and the Spirit of Salt will be difficultly gotten in such plenty; and haply they will stand us in more than the Gold thereby extracted would be worth? To such I answer, it is not so precisely necessary to buy Salt-petre for this work, seeing that the said dissolvent when it hath done what you would have it, both in the dry and moist preparation, may be again turned by the help of common Salt and other mean Subjects, into excellent Nitre: so as we may thence have more Nitre, than it was afore. And farther, as concerning the Spirit of Salt it may be made in great plenty, inasmuch that (by the benefit of one Furnace) there may be daily made 50, 60, 70, yea 100 pounds thereof, and out of every pound of Salt may you extract a whole pound of rectified Spirit of Salt with the help of two or three pounds of Coals: So that, that spirit will in a manner cost nothing at all save Salt and Coals, which doth again after it hath been put to its appointed use, yield more Nitre than the Salt and Coals cost. This operation therefore may be done without any colts as it were. The things I here mention are true, although I well know that scarce one of a hundred will believe what I say; however I matter it not, but it is sufficient to me that I know these things, and can exhibit (or demonstrate) them to any Friends.

Albeit that this be a most easie Labour and of no expenses to extract volatile and fixt Gold out of Ores, Sand, Clay, according to the prescribed rule; yet I question not but that many men that are given to slothfulness will desire here, a yet easier way, whereby they may heap up a great deal of Gold without any trouble at all. To such as these, I verily could shew an easier way of extracting  $\text{O}$  out of the Minerals without melting, did I not count it wholly an unbecoming thing, to detect all these secrets both to Friends and Enemies alike without any distinction. I will not be at all wanting to communicate my more secret way to those who deserve well, & thankfully acknowledge towards me and mine, the benefit they have received.

But yet, that the knack may be in some sort manifested, and it may be somewhat known by what means  $\text{O}$  and  $\text{S}$  may be gotten even out of the Ores and Minerals them-

selves, I will a little stretch out the thred of my discourse, and will in some sort delineate the very work it self.

You are therefore to know, that all those Minerals which contain fluxile (or unripe) or volatile Gold, whether they be Iron or not, do for the most part contain in them some Iron: Now then, when a man would thence extract the  $\text{O}$  by the Spirit of Salt, it cannot be but that together therewith the Iron would be dissolved too, to the doing of which there is much spirit required: And albeit you may make the said spirit moist easily according to the way by me delivered, yea and may besides, by the addition of some even the most mean matter again make excellent Nitre, so as that the Nitre thence extracted shall be of more value, than the colts expended about the operation; yet notwithstanding, this business is not void of all kind of labour and trouble, and it requires diligent men (not drones) of which sort there's more scarcity than plenty. But now this which we treat of at present, may a beardless Country Boy of about some 10 or 12 years old perform: It requires but little Fire, and all the (Metals) may be extracted in great plenty. Which to do, you must know that where the Metals (or Ores) are sulphureous, that Sulphur must be taken away by the force of the fire, for else the Spirit of Salt leaves all untouched.

NB. However it is your best way not to force away by the fires violence the Sulphur out of the goldenish Flints, because that so, there goes off part of the spiritual  $\text{O}$ : but rather extract every such aureous Sulphur with a strong Lixivium made of fixt Nitre, and precipitate it with  $\text{S}$  dissolved, and so the aureous Sulphur goes to the bottom, and is to be edulcorated, and  $\text{h}$ ,  $\text{S}$ , or  $\text{S}$  is to be thereto added, and so they will seize upon the volatile Gold (and the  $\text{O}$  is by the means of the Lixivium made in some sort fixt, and is to be separated by distilling of the  $\text{S}$ : The edulcorating waters do again yield Nitre. So that the extraction requires no colts at all, at least but very little.

NB. When we have extracted the aureous Sulphur (by the help of fixt Nitre, or some other very strong Lee of Wood-ashes,) out of the Flints, and have precipitated it with the solution of the  $\text{S}$ , and edulcorated it, and sublimed it by a Retort, there is thence made an elegant (or delicate) Cinnabar, which by the addition of the filings of Silver may be changed (by Cementation) into fixt  $\text{S}$  which  $\text{S}$  is aureous, by reason of the volatile  $\text{O}$ , which was permixt with the Sulphur. Whereas otherwise, other Cinnabar is by this way (of proceeding) wont to yield only  $\text{S}$ : For the filings of the  $\text{S}$  thereto added, become volatile, and vanish away into the Air, for the Cinnabar hath extracted the soul thereof, and hath by it made it self fixt; so that there redounds no profit at all thencefrom, save only that the possibility of nature is laid open. But now when the Cinnabar of this place (or mentioned in this place) is mixed with fusile  $\text{S}$ , edulcorated and precipitated with Salt, or with the Calx of  $\text{h}$ , either alone or else both mixt together (*viz.* the  $\text{S}$  and  $\text{h}$ ) they do greedily betake themselves into each other, and there ariseth thencefrom a black Stone, which being kept in an apt (or suitable) Fire by degrees, and that for a due time, doth daily more and more acquire a fixity: Yet do I believe that it needs a long time, to make it wholly fixt: which thing seeing I have not as yet any experience of, I will not here mention ought of certainty concerning it, perhaps some particular Tincture may thence be extracted, because that the subjects which constitute it are excellent ones, for as Sulphur is said to be the Father of all the Metals, so is called the Mother. 'A'har may not a burning Sulphur not unlike the common Mineral Sulphur that is in all Metals, be extracted by Art out of any Vegetable? which (said Sulphur) I have implanted in mercurial subjects more than once, and have fixed it in them; yea and by the help thereof have so extracted natural Gold thencefrom.

Verily it is to be wondered at, that this science or skill hath been hitherto unknown to the Inhabitants of the world



world, and that no body hath committed the fame to writing.

But indeed all men may cease to admire, when they shall consider that the Great and Blessed God bestows his gifts, and the knowledge of Nature to such only as it pleaseth him, viz. to such as bear a humble, and pious Mind; and contrariwise denyeth them to such as are impious and proud.

And here falls in a thing highly needfull to be known; by him especially, who would effect ought in Chymistry with profit (and that is this, viz.) That there can be no bettering of the Metals at all (be it either in the universal or in a particular way) but by the benefit of Sulphur (which is the father of all the Metals) & this both in the moist and in the dry way. (NB. The Spirits of Salt, of Nitre, Vitriol and Sulphur, serve instead of a sulphur though a moist one, and perform their office in the moist way.)

If therefore all the Metals were at first a Sulphur (for no Metal is there wherein it may not be found, and besides too, it is known to be in all the Vegetables) by what means possibly can it be, but that being by the help of a Sulphur, Salt, and apt Fire, reduced to fixity, it (viz. any Metal) should yield good  $\odot$  seeing that it (viz. Gold) is nothing else but a fixt pure Sulphur. But for as much as Sulphur (as being of the Masculine kind) cannot produce any Metal alone, but that there must necessarily be  $\ddagger$  thereto adjoined, (as being of the Feminine kind); every one is bound to seek after an apt or suitable  $\ddagger$  (as being the Female) for his Sulphur (as being the Male) and to join that  $\ddagger$  to this Sulphur, and let these two celebrate their Nuptials in Hell, where Vulcan is President.

Now then, when the Agent hath acted on the Patient, and perfected the operation, whether by the moist or by the dry way, it shews it self to be a pure product, and so much the purer too, by how much the Agent and Patient were more or less pure.

When we sow fruitful Seed in a fat Soil, good Fruits do thence proceed. Now then let Sulphur be the seed there, and  $\ddagger$  the field it self, yet so as that your Sulphur (or seed) be pure, and that the  $\ddagger$  (or ground) have no Tares in it; but let it be duely endued (or dunged) with Salt, and so let it have the fruition of the solar beams, and patiently wait for the thence proceeding fruits. Now if you meet with such a subject as hath both Sulphur and  $\ddagger$  already joined together by nature; you are there only to begin the operation where nature left off, and so by the help of Fire and Salt, bring it unto its due perfection, which nature was constrained *valens volens* to leave imperfect, by reason of the defect of Salt and fire.

I could here present the Student of *Hermesick* medicine, with such a foundation, as out of which abundance of commodious conveniences might be expected; but the ingratitude of the men of this Age, prohibits the divulging such things.

Therefore do I herein follow *Paracelsus*, who saith, *We could verily lay open most mighty Arcana in a very few words, if it seemed good unto God to grant unto all men the same (equity of) Riches.*

Turn over and over his Writings, Reader; and thou wilt easily attain the foundation of the truth; but especially, view well such writings as he hath left us concerning Sulphur and Vitriol, which we will here rehearse in this place (because of the affinity of the matter) for thy sake and benefit, which writings of his if any one can make nothing of, verily neither will he understand those things which we shall add.

And now are all things (requisite) sufficiently laid open to such, to whom God vouchsafes his blessing; and contrariwise, the same will always remain hidden and unknown to the impious.

Thus much I add (viz.) That neither can any Tincture be obtained without Sulphur, nor any Sulphur fixt without Salt; both these now are found conjoined in Vitriol,

from which the noxious superfluity is to be separated, and the pure is to be made fixt.

Now follow *Paracelsus* his words, concerning SULPHUR and VITRIOL.

*I Will present unto you, as one well skill'd, my experience in all respects concerning Sulphur, viz. what is contained in Sulphur, both as to Medicine and Alchimy, and to other things, and unless God be against it and hinder, the operations of Sulphur are so suspensious and admirable, that the natural Light in man cannot enough admire them. Now if God himself doth not hinder, then the defect is in the workmen, that so handles the Sulphur as that the operation answers not to the implanted Virtue.*

*Now seeing that every habing fellow is a Physician, and every prater an Alchymist, this is the cause why (in plain Terms) the Sciences (of Physick and Chymistry) cannot be brought to light.*

*This now is the Foundation or Basis, viz. That in Sulphur are contained such great Arcana and Virtues relative to both Faculties (viz. Medicine and Alchimy) that no body can ever search them out sufficiently: I say that there lies such excellent Virtues hidden therein, as may very deservedly cause in all Men great admiration. For after long experience gained in both Faculties, such are the Virtues of Sulphur found, and known to be, that there are not many other things that are either its Superior, or which may therewithal compare in Medicine and Alchimy.*

*Sulphur reproves Aristotle, when as he saith that the species of things cannot be changed: For Sulphur is transmuted; did Aristotle live now adays he would wholy be ashamed and blush.*

Thus far he, as for the many more additions that he makes every one may read them in his Works.

As concerning my self, I say thus, That nothing at all can be done in Alchimy without Sulphur or sulphureous Salts; like as without seed, neither Vegetable nor Animal can; as is clearly evident, be possibly generated. Sulphur is instead of Seed, and Mercury instead of a Matrix: But you must not think that I do here speak of common Sulphur only, and common Mercury: [No!] I do comprise under them such as are far more excellent, and this you are well to heed. If now a metal be not sulphureous, it must be brought to a due softness by the force of Fire, which is done thus, viz. Making it red hot and quenching it some times in water. But if so be it is already soft enough, then bare powdering it is sufficient, without so much as ever heating it red hot and quenching the same. Put this powder in Pans of cast Iron, and that there may be the less waste of Fire, let it be encompassed with a wall or mured in a Furnace; fill them half full, and pour thereupon (whether it be Metal or Ore, or Sand, Stone, or Clay, or golden Mineral,) so much of the water which we shall by and by describe, as the Iron Vessel can contain, yet so that the said Vessels want of being top full the breadth of 3 or 4 fingers, least as you stirr it about some of it spil over. This done, put to an hundred pound weight of the Metal or Ore, about one pound of an areous, silvery, Magnet. Then put Fire under the Pans or Cauldrons, and make the water boil, continually stirring the matter contained in the Iron Pans, with an Iron Spatula.

Now so far as this water is of such a quality as that it can neither dissolve  $\odot$  nor  $\ddagger$ , it leaves both the  $\odot$  and  $\ddagger$ , and by reason of the admixtion of the Magnet, it attracts only the Iron or the Copper. When the water hath attracted as much  $\ddagger$  or  $\ddagger$  as it can, it is to be drawn away, and more new put on in the room thereof, and you must proceed on to boiling as afore-mentioned, and thus are you to reiterate this work, until all the  $\ddagger$  or  $\ddagger$  hath be extracted out of the Metal, and nothing remain behind save a dead Sand, which may most easily be separated

separated from the Magnet, by the pouring on of common Water, for the sand mixeth in self with it, and the Magnet remains pure in the bottom of the Vessel, which hath received into it self the  $\odot$  and  $\ddagger$ : This  $\odot$  now and  $\ddagger$  is again easily separated from the Magnet, which said Magnet may be again used for such another work.

Thus now, one only person can by this means daily separate a great quantity of Metal from the  $\odot$  and  $\ddagger$  it has in it; all the artifice consisteth in the preparation of such a water as extracteth  $\ddagger$  and  $\ddagger$  out of the Metals or Ores: And therefore must it be of such a nature, as to dissolve neither  $\odot$  nor  $\ddagger$ , & be nevertheless strong enough to dissolve  $\ddagger$  &  $\ddagger$  and to separate them from the  $\odot$ : For that the Magnet cannot extract the  $\odot$  out of the  $\ddagger$  and  $\ddagger$  unless they be afore dissolved. But as touching the quality (or composition) of this water; 'tis no ways expedient to divulge it, so far as the whole business dependeth thereupon, nor can any thing at all be effected without the knowledge thereof. When now Venus and Mars, or else Venus alone, or Mars alone, are extracted out of the stone (or ore) by the benefit of the said water, the precipitation of them may be made by the addition of some contrary thing, whereby it comes to pass, that not only its sharpness is taken away but also excellent Nitre may be thence prepared afterwards, which is to be separated from the Mars or Venus: The precipitated Mars may be reduced with a strong fire, and so it will be made fixt, and which easily melts in a Crucible like Venus, and becomes malleable; yea, and of more worth than the best Venus, because it performs very many profitable things in Alchimy, which we forbear to speak of here, for some certain reason.

He therefore that knows such a menstruum or dissolvent, and which requires no costs to make it, and yet notwithstanding doth very well dissolve Mars and Venus (and leave the Sol and Luna): Such an one verily may in all places find plenty of Mars and Jupiter (Venus I believe he means) which contains plenty of both fixt and volatile Sol and Luna: neither need he be much sollicitous about Golden Metals or Ores.

So far as the whole Artifice consisteth in the knowledge only of the water, and in the manuals (or contriving) of the placing of the Magnet, and in the separating all the unprofitable matters from the  $\odot$  and  $\ddagger$ ; he that does not know such a Magnet and how to prepare such a dissolvent, by whose help  $\odot$  and  $\ddagger$  may be concentrated, and  $\ddagger$  and  $\ddagger$  be separated from them, let him search hereafter even as I my self have done: But if so be he cannot find out or invent either of them, let him get from me what he desires to know, and I will not omit to satisfy his request; provided it may be done without my detriment and disquiet. But now you must not think that therefore I will give answers to all such as trouble me with their tedious Letters, for my time permits not the doing of such matters.

There is yet another way by which we may expect profit out of such Minerals as contain in them much  $\ddagger$  if we deal with them on this wise. Let it be reduced with the strong blast of bellows, and you shall find either a greater or lesser Regulus in the bottom (according to the muchness or lessness of the  $\ddagger$  that the stone contains) which Regulus compriseth in it self the  $\odot$  and  $\ddagger$  which was in the Mineral or Ore, if such an Iron be malleable, Plates may be made of those Reguluses, with are to be dissolved (in the Cauldrons made of cast Iron) with that secret water, out of which solution, the  $\odot$  may be extracted by the benefit of the Magnet, according to the afore-prescribed manner. But if the said Regulus be brittle, and not malleable, then may it be granulated: Nay, it would not be much amiss to make large Cauldrons and such like Pots thereof by melting, that may be of 2, 3, or 4 Fingers thickness. Nor must we suppose that what the said water dissolves of the Cauldron and takes from it,

besides that which it receives from the Plates or Granulated Iron put therein to dissolve, is meerly lost: No, for even it doth in like manner exhibit its Sol too; so that by this means a most rich Mine-pit may be made.

But some will say, whence shall we have such Minerals that yield  $\odot$ , and that bring such great profit? We have said before, that such Minerals or Ores containing such Iron, are every where to be found: Nor can you light on any common  $\ddagger$  which has not  $\odot$  therein, which may easily be extracted from thence, and that with most great profit. This now is known unto most (Refiners) that there is plenty of corporeal  $\odot$  to be found in the Iron that we commonly use (said corporeal  $\odot$ ) is far surmounted (as to quantity) by the volatile  $\odot$ ; but if a man would separate it thence by the help of fusion and the addition of  $\ddagger$ , it requires too much costs, and therefore men never attempted any other way of extracting it.

All Germany affords this sort of Iron (that is thus endued with Gold) in a most plentiful manner, & I could here very many places in which it may be found, if some pregnant (or notable) causes did not prohibit me from so doing.

But that all men may know, that I tell the very truth, and do not like a vain man tell you of great Treasures, and that they are every where to be found in Germany, and yet notwithstanding by reason of their not being known are not of any use; I will show some of them with my very Fingers as it were, which haply in respect of other some that I know not of as yet, will be but a very few, and these very vile or poor, too.

First of all then, all the Iron that is in the Pine-bearing Mountain and about it, doth contain both fixt and volatile  $\odot$ ; and this I have often experienced some years since, when I lived at *Kitzberg* in *Franconia*, and extracted thence from by the help of a melting Fire excellent  $\odot$ : For as then, the manner of extracting  $\odot$  from thence by waters only, without any melting fire, was to me unknown: For at that time those most eminent Men *Mr. Christopher Herbig*, the chief Physician of the Prince of *Aspach*, and *Mr. Adam Reming*, the said Prince's Lieutenant, and chief of his House, (or Governour) in the Castle of *Blasensberg* near *Chimbach*, presented me various kinds of minerals, to try what was in them contained: And amongst these Iron ones I find all of them to be endued with Gold, which might be exceeding profitably extracted thence by the afore-disclosed moist way. There were likewise given me such like conditioned stones and metals (or ores) which were found near *Bamberg*, of which we have said somewhat afore. The truth of this thing is the more confirmed by the Lord *Fleishman*, Governour of the Province of *Bamberg*, my singular Friend, who wrote unto me some few months since, that an excellent Gold-mine is found in the Province of *Bamberg*, but yet that the Gold thereof cannot at all be separated from the Iron by the force of Fire; which volatility of Sol I signified to him in my answer might most easily be amended.

Now like as all the Minerals and the Iron it self which are found near the Pine-bearing Mountain, are very much endued with Gold, so those which are found in *Misnia*, *Saxony*, *Thuringia*, and *Bohemia*, do abound with  $\ddagger$ : both of which may be extracted thence by the way by me delivered, with very great profit. I know by good experience that in the *Hungarian*  $\odot$  and  $\ddagger$  Mine-pits much volatile Gold and Silver is forced away into the Air through meer ignorance.

Certain I am, that the Metals (or Ores) throughout all *Carinthia* and *Styria* do possess much volatile and fixt Gold; especially the Iron Metal (or Ore): For I have many a time made experiments of that thing.

Moreover, the *Hercynian* Wood, *Braunswick*, and *Hassia* yield such kind of Minerals. Nor is *Suevia* destitute of such Iron as is impregnate with  $\odot$ ; and amongst other things I think good to declare, that some few months since, a certain *Basilian* Ruler sent me a potion

D d d d



(or age) requires it, and best of all known it is to God, why he now delivers these things to be divulged. Forasmuch as mention hath been made in the foregoing Treatise of Spiritual  $\odot$ , which might be perhaps very willingly know what is to be understood by the name of Spiritual  $\odot$ ; I think it not much amiss a little more largely to explain these things for the sake of the Ignorant.

Every Spiritual thing is invisible, and void of a palpable body; but now if a body be given thereunto, in which that spirit may be made corporeal and visible, then the spirit is not any more a spirit, but is changed into a body; if therefore the Spirits are good, they do likewise make good Bodies, and so on the contrary. For all the Philosophers tell us, that the Spirit or Soul in Iron and Copper is more noble than in  $\odot$  it self, because the body which it dwells in is good, terrestrial, and impure.

The case then standing thus, it is no wonder that if these spirits are separated by art and force, and expelled from such gross bodies, and joined to other purer subjects, they then produce some good thing. Would not the other Beasts reverence the  $\text{As}$  clad in a Lion's skin, as if he were their King, and thus mearily by reason of his skin, though inwardly he were an  $\text{As}$ ? If so be any man be but clothed in silken rayment, and go gawdily; do not every body put off their hats to him, and honour him, though inwardly he be a thief or a knave; and for the contrary, if a most honest and most learned man go in tattered apparel, or at least in mean rayment, is he not rejected, and despised by all. From hence it sufficiently appears how fitly the common people judge of all things, and neglect the inside, and only look to the outside shew. 'Tis the external Shape, according as tis good or bad, that makes a man esteemed by the vulgar either good or bad, contemptible or honorable, though his nature (or education) possesseth other properties.

The like is to be understood, concerning the contemptible Metals,  $\text{Mars}$  and  $\text{Venus}$ , which according to the report of all the Philosophers have more Tincture in them than  $\text{Sol}$  it self hath; but yet by reason of the grossness of their bodies are they rejected: now therefore, by how much better the means or way is by which this noble Spirit is extracted, and added to the pure bodies, so much the better is the product.

When therefore the gross bodies of  $\text{S}$  and  $\text{Q}$  are artificially broken, and the spirit dissolved, and thence forced out, it seeks it self another body wherein it may dwell and be at rest. Therefore when we do by art disturb (as I may say) the gross bodies of  $\text{Mars}$ ,  $\text{Venus}$ ,  $\text{Jupiter}$ , or  $\text{Saturn}$ , and dissolve the pure Soul, and expel it by antipathy, out of its impure houses, and contemptible garments, and set before it a pure  $\text{S}$ , it possesseth it, and so assimilates another nobler body than it had before, and which then is  $\odot$  and  $\text{J}$ , according as 'tis managed. This is my opinion, and after the same manner is the thing to be understood concerning Spiritual Gold.

But what business have we here with the Spiritual  $\odot$  of Metals? Let us be content with the Corporeal, and leave the Spiritual to the Philosophers, to make the Tincture with. But forasmuch as upon the occasion of my teaching the means of extracting Corporeal  $\odot$ , I could not leave the speaking of the Spiritual wholly untouched, I made also some kind of mention of the same; and it will be beneficial to some or other, who till they do understand my meaning, may be content with the Corporeal  $\odot$ . But such as have open, and attentive Ears to consider what my drift is in this discourse, my doctrine will be more profitable unto them, than either  $\text{Sol}$  or  $\text{Luna}$ .

There is yet one thing more to be added. In some places they are wont to reduce the  $\text{Sol}$  and  $\text{Luna}$  into a powder with  $\text{V}$ , that so the Corporeal  $\odot$  and  $\text{J}$  may be separated and extracted from the Stone (or Ore); and this is no new or unheard of thing.

But this is more rare (or seldom used): a Metal which hath not as yet arrived to his due maturity but is as yet conjoined with his first ens, and consequently it flies away in the melting, and neither yields  $\odot$  nor  $\text{J}$ , when it (viz. such a Metal) is commixt with  $\text{S}$  salt and vinegar, and let lie to rest upon each other for some days, it comes to pass that the Mercury attracts the immature, Spiritual  $\odot$  and  $\text{J}$ , and makes it corporeal and fixt, so as it may thenceforward be molten. If then the Spiritual  $\odot$  and  $\text{J}$  doth to easily enter into the  $\text{V}$ , and make it Corporeal, it is yet much more facile to be done by my way, which is effected by the help of more strong (or powerful) instruments, than by bare  $\text{V}$  only, and Salt and vinegar, with which they mix the Metal with the  $\text{V}$ , nor can they possibly do so much as my secret mercurium which penetrateth all things.

When now the Matter, together with the Salt and Vinegar is duly separated from the  $\text{V}$  by the help of fair water, they pass the Mercury through a skin of Leather, which is again serviceable for the same uses; but that of it which adheres to the  $\text{V}$ , is thence separated in an Iron Retort, then is tried the weight of that which is separated, and as much as there wanteth of the weight of the  $\text{V}$ ,

so much of  $\text{S}$  do they receive in its stead, which is a thing well worthy thenoting, and deserves a farther inquiry, and is not here set down in vain.

Let not any one despise these few things which I have here adjoined, for they comprise in them most great mysteries; yea and greater than most will believe.

Neither let any one imagine that I will presently communicate this most noble Secret (which clearly shines in the dark) to every stranger; no, no such matter, I will (God permitting) shew these things to my honest friends, that so it may not perish together with me; but however I will well think on that much used Proverb, *Fide, sed cui vide*; Trust, but see whom you trust.

The *Farmers* have given me this document; many there have been who have come unto me and declared the miserable state they were in, that what by the Wars, and by other misfortunes, they have lost their Goods, and have begged me for the love-ration, whereby they might sustain their lives, promising that they would requite this kindness by their earnest prayers unto God in my behalf.

These and such like words have sometimes moved me that I have given some secret to one or other, and have bestowed on them an overplus too; yet I obliged some of them, that they should convert it solely to their own use, and not communicate it to others without my privacy, which thing they promised largely enough. But as soon as they have been gone from me, they have presently sold those secrets of mine to others, and which is more, to my Enemies. Now when by reason of their ignorance, they did not know how to institute the operation aright, they falsely affirmed, that they bought this Art of me at a price, and that they have been cheated; whereas they well know, that it was pure affection induced me to bestow these things upon them without any reward.

These and such other like *avilshaya* (or Gift-hinders) have deterred me from communicating any thing to others for the future; and this I would have every one to consider, and not trouble me with either Letters or Vilts.

Yet nevertheless I will communicate some of my secrets unto my Friends, that so they may not clearly perish with me, nor be thrown to my Enemies, and finally men.

I have done as much as in me lay, nor will I omit to do more where I shall see a grateful mind; in the next place I will (for the service of my Friends) treat about and shew in the fourth part of the *Prosperity of Germany*, the Secrets of *Saturn*, by what means any one that is but a little versed in managing the fire, may seek (or make) some Country fellows, his tributaries, who may pay him an appointed tribute every week, after the Example of Kings and Princes, who bestow upon their faithful servants (that deserve well of the Country by their valour against the Enemies) Kingly gifts as whole Cities, Towns, Villages, and many Subjects as an inheritance, of whom they may afterwards receive Tribute and live very abundantly or plentifully.

Now by how much the more Country-men there are that be Subject to a noble man, so much the richer is he supposed to be, for they pay the more tribute. And the more Ploughs the Country-man hath a going, the greater is the tribute he pays his Lord, which thing the governance of States or Common-weals induceth, as being a just thing.

Now after the same manner as these things are in use in political governments, are they also in Alchemy, for it doth likewise when we have for some time faithfully served under her, bestow on us tributary Country men (as 'twere) by way of recompence, from whence we may have Food and Rayment.

The more Fields and Ploughs that we give to these country-folks, the more Tribute do they pay. Neither do these forsake their Masters, for they are shut up in a stall, and when their bellies are filled with Coals, and that they are safe from the Rain (or Weather) they are contented, and do perform the businesses that are imposed upon them.

By how many more the Ploughs are which we give unto them (though one Country-man can hardly manage above two or three, so much the more do they give.

Such Country-men as these doth the true Alchimy distribute amongst her Servants, whereby they may thenceforward lead a quiet Life.

If God shall vouchsafe me life and leisure yet a while longer, I have purposed with my self to bring most mighty benefits unto my Country.

In the mean while, let these things be accepted in good part. Those same tributary Country-men may be shewn my Friends, together with sundry other profitable Inventions, in my laboratory.

# THE FOURTH PART OF THE Prosperity of GERMANY.

In which are revealed many excellent, usefull Secrets, and such as are serviceable to the Country: and withall, several Preparations of efficacious Cates extracted out of the Metals, and appointed to Physicall uses; as also various Confections of Golden Potions. To which is also adjoynd a small Treatise, which maketh mention of my Laboratory, in the which there shall be taught and demonstrated (for the publick good and benefit of Mankind) wonderfull Secrets, and unto every body most profitable, but hitherto unknown.

## The PREFACE to the Friendly READER.

**A**lthough I promised, above a year ago, in the Preface to that Book which I published of the Nature of Salts, that (besides Salt) I would likewise adjoynd some Broth and Jugared Sauces and Seasonings to the other Meats dight out upon the Table: yet notwithstanding such as are searchers after good Arts, would not in any case allow me so much time as to prepare those Sauces; and being prepared, to dish them forth upon the Table: but earnestly requested this boon openly, viz. that I would not forget to furnish the said Table with Cheese and Butter. The satisfying of whose request, I confess my self very ready to yield unto, nor doe I find any other obstacle, save onely the scantness of time, which I am constrained to employ about other affairs more necessary.

But however, seeing it is esteemed a very praise-worthy action in a Man, by diffusing his kindnesses in many places to benefit many, I have deemed it a thing well worth while, to adjoynd (setting aside other things) unto the afore-dight-out Meats those promised Sauces, with Butter and Cheese, in to boot; but yet, with as much brevity as conveniently may be.

Had a longer space of time been permitted me, I would have clarified the Sugar better, and made the Sauces more savory, which the hasty posting away of time hath hindered the performance of.

Besides, forasmuch as I have promised a Fourth Part of the Prosperity of Germany, together with a disclosing of excellent metallick Medicines, it hath seemed good unto me (for the fulfilling of my promise) to publish these my most efficacious Sauces under the Title of the Fourth Part of the Prosperity of Germany; and the rather, because I have not time sufficient for the description and detestation of other Secrets.

Now by how much the wiler and more contemptible cloathing these present Arcana's do come abroad in, so much the greater and more noble virtues do they hide under their sordid or despicable rayment. I was of the mind, I confess, to have kept yet longer by me this Fourth Part, that so (being sent abroad to publick view in a more convenient season, it might have been more adorned with Secrets of greater moment afore its being exhibited to every ones view. And amongst those Secrets,

E e e e

one

THE

one eminent one, is the Concentration of Gold and Silver, and their reduction into such a form and figure, as that it cannot at all be known by our Enemies (who sometimes rush in upon us unlookt for, (which [sore affliction] God (of his mercy) keep us from.) And so by this means may it come to pass, that such kind of Bodies being thus hidden under an unknown Garment, will not be robb'd and taken away.

And whereas I have demonstrated in the foregoing Third Part, by what means great Treasures of Gold and Silver may easily be gotten in all places throughout all Germany, by the help of my Inventions; I make no question, (nor indeed can it otherwise be) but that such as are diligent House-holders will listen unto my sayings, and put in practise many of those things, especially seeing I will both counsel and assist them, as much as in me lies.

If now the searching after so great Treasures be [not] too securely and negligently handled, it will undoubtedly come to pass, that our Country will (by such a notable Medium, and such great Treasure) be rendred even wholly invincible. History maketh mention, that the Egyptians (by their skill in the Meliorating of Metals) enjoyed such vast riches, and so great a power, as that they cast from off their necks the Yoke of the Roman Monarchy, even until that time in which their Books comprising the Art were burnt by the Emperor Dioclesian, whereby they were enforced to be subject to the Empire of Rome. For the most noble Art of Printing Books was in those days unknown, and their Sciences were wont to be written in Parchment with great labour and much cost; and undoubtedly they were not thoroughly stored with such kind of Books, whereby the Romans did the easilier get them into their hands and burn them.

Now when once a Writing is committed to the Press, it may be printed off in an almost-infinite Number, for a Printer will doe more in one day, than a vast multitude of Scribes would be able to write. And being it is so, who could possibly be able to scrape together out of all the places of a whole Country such a multitude of Books, thereby to root them out in these our times, and by burning annihilate them, as the Romans did.

This one thing I here say, viz. Did I but know and find that those things which I have hitherto published, would not only be acceptable, but be also put in use and practise, it would be as a spur unto me to stir me up to adjoyne to what is already done, more and greater Secrets. Mean while let what is at present offered be well accepted, and what is promised, be patiently expected.

Of the word Sawce, and what is meant thereby.

I Have obliged my self by promise, to adjoyne unto those my Meats which I have hitherto distill out upon the Table, some good Sawce and Pickle; which Meats, seeing they appertain not unto the plain common ways, but belong to a very excellent Skill or Science; it is altogether needfull, that the Sawces be correspondent thereunto, and that even they as well as the meats themselves, be by reason of their favouriness, gratefull unto the Palate. Now therefore as in the Feasts of great men, the Pickles are not set on the Table afore the Guests have fill'd themselves with Flesh and Fish, and so allayed their hunger, but are set afore them (afterwards) as so many Vehicles to drill down the Wine with the greater delectation, for such Pickles do for the most part communicate a sweeter (or toothsome) tast to all kind of Fruits, Seeds, and Spices, and Sugar: So likewise must I, in the making and dishing out such Sawces for this Feast of mine, mind only this business, viz. to take care of providing my self of the best Sugar, and choice Spices; and these are extractable only out of the Metals; Saturn affording Sugar, and Sol and Lune yielding most sweet Spiceiness.

But afore I distill out my Pickles, I have thought good to set afore them a sweet Broth or Seasoning, [together] with Butter and Cheese, that haply one or other of my Guests are minded to dip a piece of Roast-meat therein, or else to tast of my Butter and Cheese, whereby they may with the greater delight tast the sweetnes of the following Sawces.

And although I was minded to exhibit in this place some excellent and efficacious Metallick Sawces: yet notwithstanding I could not chuse but first present you with a fore runner as 'twere, signifying unto you, how that by the help of Salt good Broths and Sawces may be made out of the Vegetables, and Sawces, serving for the bettering of Cheese and Butter made out of Animals: that so my Treatise of the Nature of Salts may not be at all defective, and that every one may see what a most noble and most excellent Creature Salt is, which is capable of exalting the Animals, Vegetables and Minerals to a far more worthy degree by so excellent a Melioration of them.

Salt and Vinegar are commonly reputed to be the best Sawce, and 'tis most truly spoken: For amongst all the Sawces and Seasonings put unto Meats, Salt and Vinegar bear the bell; now the Vinegar is for the most part made of Wine, Fruits, Ale, Honey: But as for Salt, if it be turned by distillation and rectification into a sweeter and acid Spirit, it becomes a sweet and strong Vinegar, and to be preferred before all others: so that there's no need at all of the Vinegar of Wine, Ale, Honey, and Fruits. We will therefore shew unto such as are desirous of sweet or favoury Sawces and Picklings needfull for Flesh and Fish, and of well tasted Cheese and Butter, the way of preparing the same by the help of Salt; whereby a Man may make himself for his own Kitchen use or Cookery, various Sawces as him listeth. And having shewn this, we will proceed on to the description of metallick Sawces.

He that is desirous of a good Sawce or Pickle fit for Flesh and Fish, will not find any thing that is more fit or proper than a well-prepared and rectifi-

ed Spirit of Salt, the which he may prepare with whatsoever Herbs and Spices he pleaseth, according as is agreeable to his Palate.

For example, Like as otherwise most acceptable Broaths or Sawces are wont to be made with Wine, Vinegar, Pepper, and other Spices, and are put unto the Boiled or Baked Flesh or Fish in the same Dish, or set by the fame in little Sawcers, that so all those Meats may leave the more gratefull tast upon the Palate: Even so may the fame be effected with Spirit of Salt, and that far more commodiously, and to better profit than if Wine or Vinegar were made use of to the concoction of those well tasted Sawces. But it is my Spirit of Salt I here speak of, (which being prepared according to my prescription, is of a most delicate pleasantness,) and not of that which is most an end sold in the Apothecaries Shops, and in other such like places, and is for the most part ill prepared, and not at all rectified, and consequently by its ungratefull sharp and harsh tast, it provokes to Vomit, if it be taken into the Stomach; 'Tis likewise of a yellowish colour, and with its sharp contraction draws up the Tongue, whereas it should be more clear and transparent than Fountain Water, and by the pleasantness of its acidity excell the Juices of Apples, Grapes, or Limons. And being furnished with such a sweet or pleasant Juice of Salt, I need not any Wine, Vinegar, or other sharp Juices of Grapes, Limons, Rasp Berries, Sorrel, and the like, to give a pleasant and favoury tast unto my Flesh or Fish: for it may be done far better with this good Spirit of Salt, than with Wine or Vinegar: For, that Spirit of Salt serves instead of them all, nor is it at all subject to corrupt as other Juices are, but conserves its sweet and pleasant essence without any decay.

But if you would make use thereof singly or alone, then must a little Water or Sugar be mixed therewith, that the acidity or sharpness thereof may be a little allayed, and thus may it serve instead of a Sawce to be added to either baked or boiled Flesh or Fish. But now if a man be minded to add green Herbs for alterations sake of the tast, such as are Parsly, Garden Cretles, Spanish Pepper, and the like; he may beat or shred them small and moisten them with Spirit of Salt allayed with Water, and so put them instead of a cold Sawce to Flesh and Fish. But if now the Sawce is to be poured warm to the Fish and Flesh, then must a little Butter be thereto used, and that on this wise following. Take some pure and clean Water, and make it somewhat sharper (with good Spirit of Salt) then strong Wine, Vinegar, put thereunto some good Salt Butter or Fresh, at your pleasure; and likewise such Spice as (besides Pepper, Ginger, Nutmeg, and such like) you list to add, as also Salt if need be; put it in a little Earthen Glazed Pot, and not in a Copper or Iron Vessel, for they are altogether unfit for this Operation; set the Pot over a few Coals and heat it gently to melt the Butter, then stir it thoroughly about without ceasing, with a Wooden Spoon, and then being molten it assumes to it self the saline Vinegar, and the Sawce becomes thickish, the which must be then poured out to the boild and seasoned Flesh or Fish. But if green Herbs, as Chervil, Parsly, Cretles, *Piperitis* or Spanish Pepper, and such like are to be adjoynd thereunto, you may bruise or chop them small, and then put them into the Pot unto your hot Broath or Sawce, and mix them well together, and then pretently pour out your Sawce to the Flesh or Fish, for by this means

the Herbs retain their tast and greenness, and so delight the Eyes with their lovely aspect, and please the Palate with their pleasant tast, which would not be if they boild much with the Liguour, for then they would lose both their subtil tast and green colour. Moreover, you are warily to observe in this thing, that this Broath or Sawce be not let lie upon the Coals too long, and so the *Acetum* separate itself again from the Butter; which to prevent, there may be mixt with the Sawce one, two, or three yelks of Eggs, which being well stirred with the fame makes it the thicker, and better to stick on to the fopping when you take it out of the Dish where the Flesh or Fish is.

Such Sawces do give the Fish either boild or fried, a most acceptable tast, and probably if some Sugar be thereto added it would do very well for Flesh too. But yet, sharp Juices or Broaths are better and more agreeable for Fish. Now after this manner may every one make his own Sawce as he listeth, and render the fame with some Herbs and Spices, the more favoury unto his Palate; and consequently needs not either Wine or Vinegar, nor any other acid things.

If any one has but any pure and clean Spirit of Salt at hand, he may (by the addition of certain Herbs and Spices) prepare his Sawce as best listeth him, and make it far more pleasant and delightome than if it were made with Wine, Vinegar, or Ale-Vinegar, nor can you get these every where neither. But the Spirit of Salt may be prepared and so had every where, and therefore on that account too is it deservedly to be preferred before all other seasonings.

Now in the Winter Season, when green Herbs are not to be gotten, the pounded Roots of Spanish Pepper may serve, or Mustard Powder reduced with Sugar and Spirit of Salt into hot and cold Sawces. Nor would I have any one to be so bold [and foolish] as to contemn these: My Sawces afore he hath tasted of the fame; for I doubt not but that if he once comes to tast the delightome pleasantness of the fame, he will prefer them afore all other, and will give the Vinegar of Salt its due honour.

And now to give an experiment, taken out of the Treasury of Salt, unto those that are delighted with the tast of good Butter and Cheese; let them listen unto those things which here follow. If thou art desirous to prepare a durable Cheese of Cows Milk, and such Cheese as hath all the tokens of a good Cheese, viz. such as is weighty, compact, close without Eyes, and putrifying Holes, void of sliminess and bad smell, thou mayst be a Master of thy desire by observing the following Operation.

Take of Cows Milk, Sheeps or Goats Milk, or of either of these which thou hast at hand, as much as thou pleasest, or as much as is sufficient, (but amongst these Milks, Goats Milk is the best, Sheeps next, and Cow Milk inferiour to the other two both in goodness and excellency: ) Heat it at the Fire, and pour it into a wooden Vessel (N.B. Iron and Copper Vessels are not to be used in this way) and reduce the Milk into a Curd by the pouring on of Spirit of Salt. Now one Spoonfull of this Spirit is enough to curdle ten measures of Milk. This done, and the Milk and Spirit of Salt having been well stirred about with a wooden Ladle and curdled, put the same into Hair Strainers or in very clean Linnen ones, that so the Whey may drain out and be separated, then gather up the ends of your Strainer,

ner, and lay thereon heavy weights and squeeze out all the wheyish moisture. Then take your Cheefe out of these Strainers, and put it into wooden Vessels, and there break it into small bits or pieces; which being thus broken, sprinkle some Salt, and some of your pure Spirit of Salt too thereupon, and mix all well together with a wooden Ladle or with your hands well cleanted: Being thus mixed, fill your Vessels or Cheefe Fats [which let be] greater and lesser [as need is,] and squeeze and compress the matter well in, as they are wont to do in making of Cheeses. Then expose them to the warm Air, and dry them, and it will give you compact and durable Cheeses, not unlike to those they call Parmesain, and such as will be void of Eyes, and of foetid and putrid Holes, Slimyness, and such like defects usually incident to the common Cheeses, may they never be obnoxious to those faults.

The reason is, because the first Coagulation or Congelation of the Milk is made by the help of pure Spirit of Salt, which defends from all putrefaction, and not by the help of the foetid putrid Renner, from which nothing can proceed but Rotterness and Worms.

Then farther, the Spirit of Salt being together with [Crude] Salt sprinkled thereupon (after the squeezing out of the Whey) doth in an especial manner resist all that putrefaction that is wont to be in Cheeses, and condenses the Cheeses, and impedes any fermentation, which dilateth the said Cheeses and makes them spongy and porous; and by thus condensing them, it makes them remain safe and free from all putrefaction.

Such Cheefe therefore as is brought to this perfection, doth well deserve the preeminence above the rest, and is extolled by the praise of those Ancient Verbes, viz.

(*dalen*,  
Good Cheefe must neither *Argus* be, *Largus* nor *Mag-*  
*Meluhelal*, nor *Habbauck*, nor *Lazarus*, [Amen].)

That is, it must not be eyed like *Argus*, nor tough like *Largus*, nor hairy and crying like *Magdalen*, nor hoary like *Meluhelal*, nor light like *Habbauck*, nor full of stinking holes and rotten fores like *Lazarus*: which defects if Cheefe wanteth, it well merits the title of goodness: and such are those Cheeses which are made by the help of the Spirit of Salt; do but make such a Cheefe and try whether or no it will not be of a more pleasing relish than all others are.

Such Cheeses are never corrupted, they never become tenacious, limber, full of holes, and worms. The Spirit of Salt being poured into the holes of Sheep Milk Cheefe, or Cow Milk Cheefe, doth either kill all the Worms or cause them to get packing, it contracteth the holes, and turns the bad Cheeses into good ones, and this my self have tried.

Thus friendly Reader, hast thou learned how to make a fir Sawce for Fish and Fleish, and likewise good and durable Cheefe; it now remains that we teach thee how also to make good Butter.

If you are desirous of making good Butter by the help of Spirit of Salt, and such as is dainty, pure and yellow, and of a most delicate tast, and such as will not easily contract a ranck tast, you may obtain your desire by proceeding on this wise. Take off the Cream from good Cow Milk, and make it into Butter, afore it be any thing mouldy, or of an unpleasant tast, and separate the Butter-milk accord-

ing to the usual custom, then put the Butter in a wooden Vessel, and wash it so long in pure cold Salt Water, untill there be no more Wheyishness left, and that the Salt Water do come off thencefrom, as clear as it was at first putting on, and that the Butter appears sufficiently clean, which wash it once agen, on this wise following. Dissolve in pure and rectified Spirit of Salt, as much Salt as it will dissolve in the cold: And herewithall wash your Butter anew, yet several times, and work it well with that Spirit, and by thus proceeding will it absume the residue of the Wheyishness which is the cause and rise of rankness, and which common Salt Water could not remove. This done, the Butter is to be seasoned with common Salt according to the usual manner, and thus will it abide perfectly good for a long time. But now the big Sea Sale is accounted the fittest for this purpose, which being a little heated red hot in the Fire, comes to be of a very delicate whiteness, and doth the easier admit of reduction into fine Powder, and is better than that which is boiled up in Iron, or Leaden Pans or Cauldrons.

N. B. But he that can get such a pure fort of Salt of a hexangular shape like a Dye, as is prepared in my Laboratory, he may use that, as being by far the purer: As for the Vessel itself whereinto the Butter, prepared and cleaned after the aforementioned manner, is to be put, it must be ordered on this wise following. You must get you a new Oaken Barrel, and so steep it in strong Salt Water, not the common [Sea Water,] as that it may well imbibe the Salt into this Vessel must the Butter, waite as aforesaid, be prest and thrust in so tight and close, that there may not be any hole or gaping place left therein; but you must leave two fingers breadth in the Barrel at top of the Butter, which is to be filled up with Spirit of Salt, glutted with good and pure Salt dissolved therein, that so the Butter may be well covered over, and all Air being excluded, it may keep fine and favoury a long time. Now when you would Dish out some of this Butter on the Table, you must take it out of your Tub with a clean Wooden Spoon, and not an Iron one, and wash the same in pure and clear Water afore you eat it, if you would not have it retain the sharpness of the Spirit of Salt.

Well, here is yet a better way still, viz. Take new Butter and let it melt very gently over the Coals, and it will be covered over with much frothy Cheefyness, let that froth be nearly scummed off; which being so done, it will look in the Pot like to a pure and clear Oil, pour it out very clearly into another Vessel, that the sediment at the bottom may abide behind. This Butter when its cold looks just like yellow Wax, but yet is it a little softer than it ought to be, and therefore it must be well wrought its due time with Spirit of Salt impregnated with new Salt, that it may obtain the hardness of common Butter, and then be salted, and barreled up, and kept for use, which will be far better than the common Butter. For although this purging it by the Fire takes from it all its Cheefyness, from which it had its hardness; yet notwithstanding the Spirit of Salt gives unto it a far different and much better hardness, and causeth it to excell all other sorts in goodness and long keeping.

These things was I willing to take out of my Kitchen and set afore you, namely Sawce, Cheefe, and Butter of good and exquisite tast, which if they please not the Palate of some or other, I would have him

even

even forbear to use them. It is not without some weighty cause that I have done these things, which I well know will undoubtedly undergo the perverse Centures of Spies and Mockers, who probably will say, what Womanish Toys, and Childrens Baubles doth *Glauber* here Tattle about, making himself a Laughing Stock to the Women, and Female Sex, who will say of him, that by his teaching to make Butter and Cheefe, he hath thrust his Sickle into the Womens Harvest. VVell, let them prate as please them, Geefe are not wont to utter ought else but a Goose-like Gagling. For my part I minded nothing else but to have this Treatise be a meer Womens Work, and Boys Play, [but yet] it will reveal to the Ignorant more good, than [is attainable] by the perverse instructions of all such Authours whose Writings are Spinn'd out to that height of futility as to exceed every ones Capacity.

'Tis not every one that will easily apprehend those [Knacks] which I teach and reveal under this Cheefe-making Trade, and these Kitchen Operations; nor indeed doth it much matter that they should understand. God will open the Eyes of such as he shall judge worthy of such great gifts, and will conceal and hide the same from the Proud and Wicked Crew.

Having thus finished this Cheefe and Butter-making: Let us in Gods Name enter upon another Work of Women, and Boys Play, which Kitchen-like Labour, and Cheefe and Butter-making, is meely metallick and doth far excell in excellency and nobility the hitherto described Operations, although it be performed by the help of the self same Salt. For without Salt no imperfect Metal can be really bettered, the very title of the Art it self witnessing as much, which being filed Alchymy, signifies no other thing than a melting of Salt: but yet I do not tell what kind of Salt is here to be understood, [or, that any kind of Salt is here meant] but thus much only do I averr, that the transmutations of the Inferiour Metals must be effected by Salt.

Now then, sofar as this Treatise of mine depends on a former, intituled of the nature of Salts, as being an overplus; so it is likewise altogether necessary, that instead of Fruit and Sugar, I use Salts and Metals about the preparation of these my Sawces.

And whereas the making of the Sawces [or Sweet meats] with Sugar, doth not only belong to the meane Sex, but also to the more noble, and yet nevertheless the Operation it self is nothing else but a meer washing and boiling, and a true Womens Work, we will therefore in our description bring the same upon the Stage under the Title of the Work of Women, and Play of Children.

If we rightly look upon the Work of VVomen, and compare our metallick labour therewithall, there presents it self unto us, a very notable agreeableness betwixt them. The VVomens VVork is to boil and wash, and when they are about to boil, they set their Pots over the Fire, and having waiste their Fleish, they strow thereon some Salt and Spices, and boil the same in the said Pots with VVater, VVine, or Vinegar, till it be tender, and become fit to be eaten. They likewise feed the Fire they boil withall by putting VVood thereon, whereby the heat may be kept up, and no impediment may betide their VVork: And this is the way and method observed by the Female Sex in their boiling.

But as to their washing off the filth from their Cloaths, they are wont in the first place to pour hot Water thereupon thereby to wash off the more gross part of the Dirt: and then they use a sharp Lee, or some Sope, or even both together to take away the remainder of the filth, and to wash out all the Sposs and Dirt, then do they agen wash off the Sope and Lee with fair and hot Water: But as for the odour that the Sope leaves, and which by no washing how much or how oft soever it be done can be carried off, to get that off I say they are wont to lay their Linnen out in the open Field, and sprinkle and moisten it with pure Water, which being dried by the Sun, Air, and Wind, they do agen repeat the same labour, untill all the stinking smell of the Sope be drawn forth by the Sun and the Air, and a better and more wholesome Odour come in its room. Then at last they dry them at the Air and Sun, and being dry, they fold them up and put them in their Chefts and Trunks, and keep them for their use.

Iust so do we deal with Metals, when we wash off their defilements, and do by boiling turn them into wholesome Food or Medicaments; but yet we do not use common Vinegar, common Salt, and common Spices, but mineral or metallick subjects, as also a duplicate Fire, viz. one of them is a secret, philofophical, moist, cold, and vaporous Fire; and the other is the elementary and common Fire, by which we stir up the former Philofophical Fire to display its virtues, and render it powerfull and efficacious.

The elementary Fire we make with Wood, Coles, or Oil: The universal Agent, or Philofophical, Cold, Moist, Digesting, Penetrating, Mundifying, Betwering, and not Burning, but Conserving, and vaporous Fire, we seek for in Salt, and leave the Operation to the vivifying Sun and Air; which being well done, we obtain wonderful Plants, and most efficacious Food, or Sawce for our Life.

And sofar as my purpose here is, to treat of such metallick and medicinal Sawces, I will here in Gods name adjoyn some of them, which being as so many fampiers or patterns, every one may at his pleasure imitate in composing and making of the like. And he will here find a way of conceiving some good Medicament, as clearly and evidently demonstrated by me as was lawfull for me to do, nor was it in my power to discover the same more perpicuouly: And therefore I beseech every one to take in good part what is here presented, and to forbear to trouble me for the time to come with needless questions.

So then, seeing I am about to treat in this place of metallick Sawces, it is also behovefull to have a metallick Sugar and Spice, and this, *Saturum* will afford us in the steed of the common [Sugar] by whose help we reduce *Sol* and *Lane* as being most excellent Spices, into most effectual Medicines.

Nor would I have it seem strange to any one that I use Lead here instead of Sugar, for the inmost juice of Lead, doth exceedingly outgo the sweetness of any Sugar, which thing *Isaac Holland* doth very evidently testify in his Treatise of *Saturum*. The Chymists do frequently extract a sweet Sale out of Lead, with distilled Vinegar, and call it the Sugar of Lead, and do very well know and find that there is such a sweetness in Lead as is not in any other Metal beside. From it therefore will we prepare our Sugar to make our metallick Sawces withall, as follows.

F f f f f

Take



Take of Lead ashes one, two, three, or more pounds, which put in a strong well glazed Earthen Pot, then pour thereupon some Wine or Ale, Vinegar, or Vinegar of Honey, as much as may over top it an hands breadth. Set your Pot upon the Coals and make the Vinegar boil.

N. B. The Ashes are to be incessantly stirred, in the boiling with a wooden *Spatula*, lest they gather into one entire solid Mass: After that the Vinegar has boiled for about half an hour, and is become yellow, and as sweet as Sugar, you must decant it from the Ashes, and pour on more, and again boil it, and extract more sweetness, and this labour must you repeat so often until the Vinegar can extract no more sweetness; then having put all these Vinegars together, pour them gently off from the Faces that settle in the bottom of the Vessel, and being thus separated, filter the same through Cap Paper or by a filter, that so the Liquors may be very clear, and may give you by separation, that sweetness of the Lead which they hold up in them.

Into these clear Vinegars, therefore being put in a Glass Vessel, pour therein (by little and little) as much rectified Spirit of Salt, that so the yellow Vinegar may be turned into a white Milk, and may by little and little settle to the bottom like curdled Cheese, from which the Vinegar being now become again clear is to be removed by decanting; then put the Saturnine Cheese in some strong Linnen Cloth and tie it hard up, and squeeze out the residue of the moisture, and so dry it and lay it by for use. It is a most tender Powder, of a bright snowy colour, and void of all taft; for in the precipitation, all the sweetness being introverted by the Spirit of Salt, hath hidden it self within, which doth again afterwards (when that mass shall be reduced into a Sawce) shew it self, and discovers its former taft, as we shall hear anon.

I would have the friendly Reader know, that I am not minded to produce here many and divers Operations, for I am straitned in my time, which stops me from giving you a more prolix and circumstantial description: I do only propose some few, and leave every one to his fancy to make the rest of the Sawces or Medicaments, according to the ways here prescribed, according to his liking, and that as many as he will, and out of such subjects as best please him.

But that I may contract these things concerning my Sawces into a narrow room, I suppose it is well enough known, that Sawces and Junktens are differt out in the second course for this end, either to close up and strengthen the Stomach, or that if a swelling storm be at hand it may drill the readlier down into the Stomack by these kinds of Vehicles.

But yet my purpose is not directed to this end as to teach the making of such banqueting Dishes in this place, as may allure Wine into the Stomack by such an unprofitable Prodigality, and so detriment the Body it self too. No, but the main drift of my Sawces should rather be this, *viz.* to remove that evil which is stirred up in the Body of Man, by the common Junktens and the overmuch guzzling in of Wine, and to strengthen the Stomack, Heart, Brain, and other Members of the Body, to heal the parts that are hurt, and in particular, to restore them to their former health: And finally, to be as a kind of guide and manuduction to lead on the Ingenuity of Men in such wise, as that they may by an easier way

arrive unto the Knowledge of the universal Medicine.

To begin therefore, I confess that of [all] fruits preserved with Sugar, none have a more gratefull taft on my Palate than Bar-berries, and Ribes, or St. Johns Grapes as they call them; which fruits, preserved up with Sugar, do not only get the Stomach an Appetite, but do withall allay Thirst, and do extinguish all the internal heat stirred up and kindled by overmuch drinking: The like metallic Sawce or Junket shalt thou prepare on this wise.

Buy some Steel filings of the Needle-makers, and take thereof as much as you please, dissolve them in rectified Spirit of Salt, which Solution will be green, and be of a sweetish taft; abstract the insipid Phlegm, insipid I say, for although it be a very strong spirit of Salt that is poured upon the Iron, yet nevertheless no Spirit comes off, but only an insipid Phlegm in the abstraction and distillation, and the Iron retains all the acidity of the Salt, and remains a red, sweetish, astringent Juice.

Take of this, and of the Saturnine Powder which we taught you the making of but now, of each a like weight, and put them into a well coated Retort, and the *Saccharum Saturni* will presently drink up the Juice of the Steel. Put the Retort in a Vessel fill'd with Sand, and augment the Fire by little and little that all the insipid Phlegm may be wholly drawn off. When 'tis all come off, and thar acid drops begin to come, then must you apply thereunto a Glass Receiver, and the Fire is to be encreased by degrees until the Retort be throughly red hot, which must continue so about an hour, or half an hour a least. By this means, the Spirits of the Salt which were in the Steel, do almost wholly come over into the Receiver, and do carry over with them [the Spirits] of the *Saccharum Saturni*, and oil of *Mars*, in the form of a red sublimate, which settles it self in the neck of the Retort, which sublimate when the Retort is cold and broken you must take out of its Neck, and keep it from the Air, for in the Air it will dissolve into a red, sweet, and Astringent Oil, of no small virtues in Medicine and Alchymy. In the bottom of the Retort you will find a molten Mass, resembling *Lapis Hematitius*, which being separated from all drossments, will give you a red, brittle, fusile Stone, and in some sort astringent, of great virtues in Medicine, and without doubt in Alchymy too, if it were but first made constantly to abide in the Fire. And even this too, must you keep from the Air, for it is still impregnated with the Salt, and therefore is easily resolved.

Now when you would make use of this Stone in Medicine, break a little bit thereof into small Powder (for it is no harder than other Salt, and therefore doth easily admit of grinding to Powder.) This Powder heals both internal and external Wounds and Ulcers, being administered in the quantity of two, three, four, five, six, or more Grains, according to the age and condition of the Sick, and being taken in a convenient and proper Vehicle, it is highly Sanative and a stopper of Blood. Being applied externally to Wounds, it wonderfully forwards healing; hinders all Symptoms, and fundamentally dries, and cures all Ulcers and Fistulae, if used outwardly and inwardly too.

It doth most safely and most certainly help all the overflowing of the Menfes in Women, and is so excellent a Medicament in the *Dysentery*, *Lientery*, and other *Fluxus* of the Belly, that its like is not to be found. Thus

Thus have we that true and genuine *Hematitius* of the Ancient Physicians, of which they have written so many things, but what through the carelessness of the Physicians that succeeded them, and what through the length of time it became wholly lost, instead of which there hath been hitherto used the insoluble and hard Stone of Iron.

The Ancients imposed upon their more noble Medicaments, Names deduced from similitudes or resemblances, as may be seen in this our living *Hematitius*, and in the dead *Hematitius* of the common Physicians, which is call'd for at the Apothecaries, and administered to stop Blood withall; But yet it is nothing else save the Stone of Iron, and such Oar as is very rich and abounding with this Metal, the fragments of which appears [either] in the form of spear-like Stria's or Streaks, or like a cleft stone. This our live *Hematitius* is of the same form, but soluble, and is of a very pleasant and astringent sweetness, and containeth most efficacious virtues for the allaying of all bloody Fluxes both outward and inward. Now that common and well-known *Hematitius* doth not possess any more virtues than that Iron Scinder-dust which the Smiths smite off at the Anvil, doth. And as for that red Sublimate which ascended up in the neck of the Retort, it is twice stronger in subduing the afore-mentioned diseases, but it is not of so sweet a Taft as is the Stone it self, which is refused in the bottom of the Retort. And being externally applied in cleansing and mundifying old Fistulous Ulcers, it works much stronger than this our *Hematitius* (which is more pleasantly administrable in internal defects) doth. But whoever he be that knows how (by many Solutions and Coagulations) to make this Stone constant in the fire, will obtain a far more excellent Medicament: concerning which, we will speak more in the end of this Treatise.

This now is such a Sawce or Junket, as every good Physician and Chyrurgeon hath just cause most highly to esteem in all Fluxes and Sores, both old and new, if he would obtain that repute which he thirsteth after; for it is endued with great Virtues, whereas on the contrary, the Juice of Sloes, the common *Hematitius*, and *Crocus martis*, are, in comparison of this, to be accounted of as meer dead Medicaments. I could tell you of more virtues that are in the red Sublimate, and this in an especial manner, *viz.* that without being either bound on, or inwardly taken, but sympathetically and at a distance, it is able to cure any issues of Blood whatever. But I shall doe better to pass these things over in silence, because to the greatest part of unskillful Men, they will not only seem wonderful, but impossible likewise. However, I commend to every ones acceptance this so excellent a Medicament, for all internal and external issues of Blood, in all wounds and hurts, as also in all the obstructions of the Spleen, Liver, and other members of the body.

After such a manner as this, may any one easily turn all the Metals into Sugars, and into most excellent Medicaments. But so far as the Metals are not all of them indifferently fit to be administered inwardly to the sick, I will make mention of Gold and Silver only as being the best of all, and pass by the others, and will teach the preparation of yet more Sawces and Junktens; Copper, Tin, and Argent-*vive* are somewhat cruder bodies, and require greater care and diligence, to have the Title of good Medicaments. We will therefore let them

pass, as having Gold and Silver at hand, which are more ripe.

The manner of Preparing a good Sawce or Junket out of Silver, which helps the Distempers and Diseases of the Brain.

THE skillfull Chymical Physicians have assigned Silver for a Medicament for the Brain, which Affignment of theirs I acquiesce in, and doe here present you with such a Sawce or Junket as is of most especial use for the succouring of the Brain.

Take of common *Aqua Fortis* (such as is commonly used about the dissolution of Silver) one pound: In two ounces of which you must dissolve one ounce of pure Silver; Dissolve likewise one ounce of Lead by it self: Put both Solutions together in a glass with a wide mouth; and being thus mixt, pour thereupon as much rectified Spirit of Salt as is sufficient for the precipitation of both the Metals. Pour off the clear water from the precipitated Metals, and pour upon them some fresh water, and stir them well about; which done, and the precipitated Calx settled to the bottom, the water is to be again decanted off, and more fresh water poured thereon: and this Labour is to be so often repeated, until that precipitated Powder be void of all Acrimony: then put it in a pure linnen Cloth placed in a Funnel, that so the remaining moisture may drain from it. Then tie the cloth very firm, and squeeze out, in two balls (or squeezeings) all the residue of the moisture out of that silvery Cheese, and lay the same upon Cap-paper, and that will drink up all the rest of the moisture, and will soon dry your Cheese. This Cheese (or precipitated Powder) is to be put into a well coated Glass-retort, and to be forced with a gentle fire of Sand, that so all the superfluous moisture may be separated. Then, at last, the Fire being augmented, will force out part of the Silver and Lead in the form of white Flores, ascending up in the neck of the Retort. Now when the Retort hath been thus kept red-hot for one hour, let the fire go out of its own accord, and take out the cold Retort, and break it, and you will find in the bottom of the same a white and sweet Stone, which will melt (upon a red-hot Plate of Meral) like Wax, and penetrate the same, and is volatile like *Argent-vive*. Two, three, four, five Grains, even to eight or ten, of this Stone ground into a Powder, being administered (respect being had to the Patient's age and sickness) yield a most present comfort in the diseases of the Head and Brain, and so are those white Flores wont to doe likewise: but in Chymical operations they are of eminent use. Now although this Stone be it self of a fugacious nature, yet notwithstanding in progress of time it makes *Mercury*, together with it self, constant in the fire; of which thing I have elsewhere already mentioned in my Writings, so that I need not say any more thereof in this place.

However, I cannot omit to tell you, that, although, otherwise, there is no familiarity at all betwixt Silver, and Lead, and Salt, yet nevertheless these three may be so prepared as (by a certain mixture) not to refuse each others society. Hence it comes to pass, that if the Salt be rightly fitted for this operation, it puts forth more powerful virtues, and for that reason doth the Silver suit the more, and doth by so much the sooner attain to a constancy in the fire: and so 'tis evident, that the name of Alchymy or fusing of Salt, was not imposed on this Art for nothing. For



For by the help of Salt, are the Metals to be molten and meliorated, which thing you may take notice of.

*Another Sawce or Junket made of Gold and Silver.*

Take some pure Silver, and dissolve it in *Aqua Fortis*, and precipitate it with Spirit of Salt, and free it from its Acrimony with common water, and squeeze out the water, and lay your matter upon cap-paper to dry, and deal with it in all respects as we spake afore in the Process of *Saturn*. Of this Calx take three parts, and one part of Gold dissolved in the Oil of Salt; and first put your Silver Calx into a strong Glass-retort, which must be well coated, then pour thereto your yellow Solution of Gold. Place the Retort in Sand, and, first, force out your Spirit of Salt, in which forcing out, the Calx of the Silver will retain with it self the Gold; and of them both will be made a purple Stone, inclining somewhat to redness, fusile, and volatile. But the Oil of the Salt will carry up with it something of the Gold and Silver into the neck of the Retort; which, together with the aforesaid Stone, you shall take out of the broken Retort; but yet you must keep each apart, for a medicament of great moment: [both] which (if they were turned (by Solution and Coagulation) into a fix Ruby,) would doubtlesly perform their work, in the metallick Operations, with greater benefit and profit.

So have you here, briefly described, the third Junket, which, should it be described with all its Circumstances, the Process it self would in good sooth be more prolix and tedious than is fitting. And forasmuch as my Writings may seem unto many sufficiently tedious, tis but fit that I aim at brevity here in this place; though (on the other hand) they will seem (I well know) too short and brief unto others. But *Jupiter* himself pleaseth not all alike. And the birth-day of him who can satisfie all, is yet to come; for he is not as yet born. For behave thy self as thou wilt in thy actions, either in briefly delivering thy self, or in uttering thy mind in a longer discourse, thou shalt not at any rate fulfill the expectation and desire of all men. I doe therefore here dish out this Junket, and commit the care of eating the same to the Guests. Every one that will, may more accurately weigh and consider of the same, that he may come to find, how great the Efficacy and Utility of this Process is, though delivered so very briefly.

*Another Junket or Sawce, viz. A Confection of a Mineral Alkermes.*

There is in the Apothecaries shops a Confection made of the Berry or Grains of *Kermes*, known by the name of *Confectio Alkermes*; in which composition, there are added to the said Berries some Pearls done into Powder, and Leaf-Gold, and Amber-greafe, and other such-like corroborating Simples. This medicament being confectioned with Sugar, is lookt on as the chiefest amongst all those Medicines which are wont to be administrated for strengthening the Heart, and it merits the praise ascribed to it. But now instead of the Leaves of Gold, (which cannot be digested or concocted by the stomach, and are therefore carried forth with the Excrements without any operation,) I will substitute another Gold, which being made fusible, and accommodated unto nature, shall

be able to put forth its virtues, and supply the place of foliated Gold, in the Confection of Alkermes.

And if any one be so minded, he may omit even the grains or the berry it self (for they are not to be had every-where) and make use of this Juice of Gold, which I am about to teach in this place, and mix it with Sugar and other Powders that are strengtheners of the Heart. For this Golden Confection of a purple Colour, doth most notably strengthen the Heart by its corroborative virtue, and the Gold it self gives a far more excellent purple or scarlet Colour than the Grains of that berry doe, which are brought us from *Mompeller*. The way of preparing the said Gold, is as follows.

Dissolve the Calx of *Sel*, or of Gold, in strong Spirit of Salt, and pour upon the Solution some three or four parts of water more than the Solution is, that so the Acrimony of the Spirit of Salt may be somewhat allayed. Being thus prepared, put thereto a bit of Tin, and such as hath no Lead commix therewith, which said Tin, the alloyed Spirit of Salt will seize upon; and dissolve part thereof. And being also debilitated thereby, it will let fall all the Gold that it contained, in the form of a purple Powder, adhering partly on to the Tin, and part will be of its own natural colour, and fertile to the bottom, but as fusile as the Atoms that fly about in the Sun-beams, and resembling little stars. When therefore the whole body of the Gold is precipitated into a most delicate and fine Powder, out of the Spirit of Salt, which will now be clear and bright: Pour off the Spirit, and take the Tin out from the Golden Powder, and wash the Powder with clean and pure water, that no none of the Spirit of Salt may be therein discerned; and being now thus prepared, it may be used instead of Gold about the Confection of Alkermes.

Moreover, if you are so minded, you may take some pure Sugar-candy, and make it up into a Syrup with weak Spirit of Salt, and then put thereto this Golden Powder with a little Amber greafe and some Powder of Pearls, and so make full as good, nay a better Confection than that common *Confectio Alkermes* is; because a greater corroborating of the powers of the Heart, and a delicater purple Colour cannot be found in any other thing than in Gold. If now you operate aright, it cannot otherwise be but you must needs attain to this purple and golden Confection.

N. B. The Tin must be very pure and clean, for by how much the whiter it is, and the acuter found it has, so much the fitter it is for this work. And in the Composition it self you may use this following weight or measure.

Take of the Calx of Gold one Lot [or half ounce] and dissolve it in three or four Lots of strong rectified Spirit of Salt: Pour unto the Solution twelve or fifteen Lots of pure water; then to all this, put two Lots of Tin, and set the Glass that the Solution is in, upon hot Sand, and heat it scalding-hot, but let it not boil. When it hath thus stood for one or two hours, all the Gold will be turned into Powder, of a Purple and Gold-like hue, and fertile to the bottom. Then having poured out the Water, and separated the Tin, separate all the Acrimony from the Powder by several washings, and so will you have it fitted for the Confection. This done, take twelve Lots of Sugar-candy, and one Lot of rectified Spirit of Salt, and as much pure fair water as is sufficient to reduce the Sugar into a thick Syrup; Hereto add

add one Lot of that purple and tender golden Powder, and it will tinge all the Sugar with a Purple or Scarlet-colour. Then add likewise thereunto, two Lots of Pearls made into fine Powder, and one Quintula (about two drams and an half) of Amber-greafe, mix them well together and set it by for use, as being a most efficacious Confection. And if you please, you may add to the former ingredients other strengthening and refreshing Powders. The Dose of this Confection is from 3, 6, 9, 12, 15, to 20 Grains, according as the persons are. It corroborates the Heart, Brain, and the whole Body, and doth likewise (by reason of the Spirit of Salt) allay thirst, and stir up the appetite to food.

And thus much may suffice this time about Sawces or Junkets. It now remains that we likewise search after some select and harmless Purges out of the Metals too, and adjoin them to the former. When in feasting (or merry-meetings) the Guests are wont to drink Healths to their Lords, and top of off many Cups, and store of Glasses full of strong Wine, it cannot possibly be, but that their Stomachs must be fluff with tenacious and clammy humours, and the Head much oppressed with Carthars, and the Bowels fill'd with store of wind. Now here cannot be a better and more profitable way of succouring these Stomachs and Heads, thus beset with so many renacious humours, and of helping the whole body thus corrupted by so often repeated draughts, than by a purgative Medicine, which by expelling all the evil and offensive humours opens all the passages of the Body, and again brings the so necessary respiration. We will therefore present you here with three such purging Medicaments, and those very good ones. One is of Antimony; The second of Silver and Antimony; And the third of Gold and Antimony: Each of which, by it self, doth far exceed the other purging Medicaments made of the Vegetables.

For Metals do penetrate the Body far better, and do perform their Operations with less hazard than the Vegetables do, most of which abound with a resinous clamminets, which doth often stick to the Bowels, and cause great gripings, which is not to be feared at all from metallick purgative Medicines: which (upon this account) are to be preferred before those that are prepared of the Vegetables; nor do I condemn these Vegetable Purges, for they are good, and may be made use of, where better are not at hand.

Therefore, forasmuch as I have in my time, made trial of many such Medicaments, and have in very deed found, that metallick Purges do excel the Vegetable ones both in pleasantness and efficacy, and are far safer; I could not but commend the same above all other Purges to such as come after me, but yet leaving every one at his pleasure to make use of either these or them.

#### A Purge of Saturn.

Dissolve two ounces of Lead in pure *Aqua Fortis*, and pour upon the Solution one ounce of Butter of Antimony, that so they may be precipitated together into a white *Coagulum* or Curd, whereto you must put a good quantity of fair water, and stir it very well about, that it may imbibe the Spirit of Salt which was in the Butter.

Then pour off this water, and put on more, and repeat this labour so long, until all the sharpness be

wash't out of the precipitated Powder. This white Powder being dried is a most excellent Purge, educing all evil and hurtfull humours out of the Body without danger, and being administrated from one Grain to ten, according as the Patient is, doth work downwards, especially when it is given in a lesser Dose. But if there be need of vomiting too, then the Dose may be encreased, especially unto those that can brook vomiting, and cast with ease. It may be used without danger as a good and safe Purge, in all such Diseases as purgative Medicaments are, and may be administrated.

#### A Purge of Lune.

Dissolve two ounces of pure Silver in four ounces of *Aqua Fortis*, and pour upon this Solution one ounce of the Butter of Antimony, which together with the Silver will go into a white Curd, as we said but now of the Lead in the preceding Process. Wash this Powder with common water, and dry it and administer it in the same Dose as the Saturnine Powder is to be given; and it will perform its part in all Diseases, but especially in those of the Head.

N. B. The Butter of Antimony must be made of the *Regulus* of Antimony, with rectified Spirit of Salt, and not with *Mercury* sublimata, as the common custom is.

#### Purging Gold.

In the first place, you must make a most strong Spirit of Niter thus, viz. put equal parts of calcined Allum and good Salt-peter into a well coated Retort, out of which is to be drawn ( leisurely and by degrees into a very large Receiver luted on to the neck of the Retort) a Spirit, which will make the Receiver look red. All the Spirit being distilled, let the Fire go out of its own accord, and leave on the Receiver so long till all the Spirits are fetled, and that the Receiver be become clear agen: Macerate the Lute, which joyned the Receiver on to the Retort, with water, and have an especial care when you take off the Receiver, that none of the Lute fall into the Spirit. Put the Spirit in a strong Glass, and shut it up well with Wax, that it may not exhale, for it is very strong, and is red as Blood, because it had no water put into it in the Receiver.

Pour two ounces of this strong Spirit upon one ounce of the Butter of Antimony, and it will presently pass into a red Solution, whereto put one ounce of pure Gold that it may be dissolved, which Solution will be redder than Bloud. Then pour in thereupon some common fair water, and the Antimony and the Gold will precipitate into a Purple Powder, which is to be wash't well with water, and so dried.

Its Dose is from one, two Grains to six, (according as the Age and Party is,) it may be given in Wine, Ale, Water, or any other Liqueur, which may be as a Vehicle unto it. It works without any danger, and doth safely and pleasantly (beyond all other Purges) drive out all offending Humours out of the Body of Man.

#### Aurum Diaphoreticum, or Sweating Gold.

If no water be poured upon the just now-floken of red Solution, thereby to precipitate the same, but that

G g g g g

that that strong Spirit of Niter be drawn off by a Retort, it then takes from the Antimony its purging and vomiting power and makes it Diaphorical. Nor needs the Purple Powder, when it's taken out of the Glas, any washing at all, because being administered in two, three, four, five, six, or ten Grains Dose it may be safely taken, and it provokes Sweat. It is therefore very profitable in all the Diseases that are to be expelled by Sweat; yea in the Leaprofie, Gout, Dropfie, French-pox, Plague, Scurvey, and in all Feavers doth it play its part even to admiration, for (by reason of the Gold which it contains in it) it doth both provoke Sweat, and strengthen the powers of the Body.

The former Powder or purging Gold, being mixt with an equal weight of purging Lunc, or purging Saturn, and molten in a Crucible, turns into a red Stone or Glas, of which little Tablets or Pellets somewhat bigger than a Pea may be again cast or molten, and kept for use. And now when there's need of purging, let one of those Tablets be put in to some spoonfulls of Wine and lie therein all night, and let the Wine be drunk off in the morning following, just after the self same manner as other purges are wont to be administered. For there is so much virtue extracted by the Wine out of the glazen Tablet as to give several Stools. If one Tablet or Pellet be not sufficient, then may a second, or a third, or more be adjoynd thereunto, and so left all night in the Wine, that so the Wine may work more effectually if need requires. The Tablets or Pellets remain good a long time, and may be many times applied to the self same use.

But if any one should be desirous of performing this labour even yet better, he may get a little Pot or Cup to be made for him of white Earth, and may have it glazed both inside and outside with this same Glas; for two or three Spoonfulls of Wine infused for a night in such a Cup, and drunk off next morning, are capable of purging you even as doth the other.

These are the effects of these purges in Medicine. They likewise do some good in Alchymy, if all three of them, viz. the Saturnine, the Lunar, and the Solar are reduced by melting into a Glas: this Glas being Philosophically cemented somewhat of the Silver, Lead, and Antimony will be meliorated, and turned into Gold by the Gold.

Now for a Farewell, take this which follows. If the God *Apollo* the Inventer of Medicine, would bestow his light upon any one, and by his hot Beams melt the waxen Wings of the untamed, flying, and (to his Father *Dedalus*) disobedient Son *Icarus*, (and flying out of the Isle of *Cret*, over the *Icarian* Sea,) that so he might fall down into the sweet and sulphureous Sea of the Sun, and may remain drowned therein: Then from this dead Body (which is not wont to be subdued by any other means) may a most excellent Medicine be prepared. For what way soever he is handled by otherwise, whether he be turned into a white sublimate, or be reduced into a yellow or red precipitate, he is notwithstanding always corrosive; and brings more hurt than good, and therefore may very deservingly be eschewed.

Or if we did but know the way of fixing it without any corrosivity, by those three principal Columns of all Medicine, namely Vitriol, Sulphur, and Antimony, he would undoubtedly be administrable

without any fear, and be withall capable of performing great matters. For then he would not stir up and cause so many purgations, and such vehement Salvations, and other hurtfull symptoms as usually comes to pass, but would bring a most speedy help to the Sick by his gentle operation by Sweat and Urine, and get the Physician a most eminent praise.

This I would have every one know, that Sulphur has a power of killing all Corrosives, and reducing them to a sweetness, whether it be done by the dry way or by the moist. And of all Sulphurs, a Vegetable Sulphur is the fittest, which being freed from its inflammable nature, is capable of reducing [any] Corrosives, though never so great, unto a sweetness in one hours space. Nay more, any Metal being first dissolved in such like Corrosives, doth together with the same become a sweet Medicament: And so when Gold is dissolved in Spirit of Salt, and Silver, Tin, Copper, Iron, and Lead are dissolved in *Aqua Fortis*, and that that Corrosive Dissolvent is transfused by a sweet Sulphur, it so comes to pass that the Metal together with the Corrosive is made a Medicament, and becomes potable. Such potable liquor of the Metals, (but especially of Gold and Silver,) and void of all Corrosivity, will you meet withall in my Medical-shop; which liquor, as well those of Silver, and Copper, as that of Gold, are red. The Liquor of Gold may be used instead of *Aurum Potabile*, and it guilds Quicksilver and the other Metals with a golden Colour, like as the Silver-liquor guilds Mercury, and Silver [or Copper, probably] with a Silver Hue; and the Copper-liquor guilds Mercury and Iron with a Coppery Colour.

*N. B.* *Aurora* being inflamed with the love of *Jupiter*, and withdrawing him together with her self into Heaven, if both of them be again thrust down headlong by the other Gods into the *Salt-Sea*, they come forth out of this Bath, so delicate and so white, that the resemblance the fairness of *Diana*; and he, the comeliness of *Apollo*: but not as yet constant in the Fire. But when the time of bathing is over, *Mars* coming to the Sea Shore, draws both of them out upon a dry Island called *Irony*, from Iron; where they are yet once more washed by *Vulcan*, (who makes use of *Saturns* help) in a dry Bath, who washeth off the Defilements far more accurately than the *Salt Sea* could, for he leaves not off washing and purging them, untill all the Defilements are separated from both their Bodies, and that they be made like unto *Diana* and *Apollo*, in Constancy and comeliness.

*Mars* seeing that his Sister *Venus*, and Brother *Jupiter* did come forth out of the *Salt Sea* with so lovely a fairness, leapt thereinto himself, that so by spending some time in washing, he might rinse off those black Defilements from his black Body. But there was such store of filth washed off, as made all the Sea green and sweet, and it hid [or swallowed up] *Mars* himself, being now much diminished, inasmuch that he could never have escaped out of that Sea, had not *Sol*, out of meer pity on him, dried up the water of the Sea, for old limping *Saturn* to come unto him, and to take poor wretched him out of the Dirt and Mire, which he also did.

But because there was such a deal of Mire and Filth as that this (lim) lame, (hopping Fellow) could not get out agen, he even there stuck fast with *Mars*, and so lost his Life. Of the dead Bodies of these two, viz. of *Mars* and *Saturn*, *Vulcan* did at length

length make one Head having two Faces, or a double Countenance, one resembling *Apollo*, the other *Diana*; and upon this account was the name of double-visaged *Janus* bestowed upon it by *Vulcan*.

By these few and short Operations and Processes, may any one make and devise many more such like. I am not at this time, for my part, minded to buse and trouble my self about any more tedious a description of such matters, for I guess that in what I have already said and disclosed to the unthankfull, I have too much exceeded my bounds. Every one may choose to himself those things which he shall deem most profitable, and forbear to despise that which he shall not be capable of apprehending the meaning of.

'Tis a usual Proverb, *That a Cup of generous Wine must accompany Dainty Delicacies.*

Because therefore we have in the three precedent Sawces or Junkets, presented you with fine favoury Cates, it is but fitting that we accompany the same with three dainty draughts, and those drawn out of the best of Metals too, namely out of Gold and Silver, because the Cates or Sawces themselves were composed of the same. Our Ancient Predecessors called those Drinks of old time *Nectar*, or the drink of the Gods, which in our days are known by the names of potable Gold, and potable Silver.

Concerning these two, do many of *Ignoramus* his Fraternity babble many Stories, and fallily boast that no true potable Gold can be prepared, or be in Being without the Philosopher's Stone. This conclusion of theirs is clearly untrue, for a Man may easily make Gold and Silver potable, though he hath not any knowledge at all of the universal Medicine, which is to be thus understood, viz. when the Gold and Silver either alone or conjoynd, are dissolved in a sweet and not Corrosive *Menstruum*, and redred fit to be administered to the Sick in Water, Ale, Wine, or any other Liguor. For those kind of Solutions may be taken for a simple potable Gold and Silver.

But now for any one to dissolve Gold in that corroding *Aqua Regis*, or Silver in *Aqua Fortis*, and then to imagine that he hath potable Gold and Silver, he is altogether in an Error. Potable indeed they are, because they may be drunk like other Liguors: But so far from that kind of Solutions do corrode all things, and bring extreme Detriment, they are justly rejected, and the rather because being poured into Wine or Ale, they defile and thicken the same; which, no true potable Gold dissolved in a Not-corrosive *Menstruum*, will do, but when 'tis mixt with Wine, Ale, or Water, it remains bright and clear. Besides too, true potable Gold must be of such a property, as to have no visible corporal Gold producible thereof, and yet notwithstanding, be able to indue the meaner Metals, yea and Mercury it self with a golden nature, if they be therein boiled, or to coagulate and transmute them into Gold by the dry way in a Crucible, whether it be done with profit or without profit [it matters not.] Now this tinging virtue comes not from corporal and dead Gold, but from a spiritual living and tinging Gold.

If therefore the common and corroding solution of Gold, cannot be accounted for a true *Aurum Potabile*, and that the spiritual and tinging Gold, which is dissolved without any corrosiveness should not come under this Title neither, whence I pray should it be sought for, and where should it be inquired

after. I confess, I do easily persuade my self, that as for the first Ens of Gold if we did but know how to wash and purge it in such wise, as that being turned into a bloud-red liquor, it would admit of Distillation by an Alembick or a Retort, we should have a better potable Gold. But where shall we find such an Artificer, as can teach us the way of preparing such a potable Gold? 'Tis therefore our best way to content our selves with such Medicaments as we have at hand, so long untill God bestoweth better upon us. This likewise I believe, that if we did but know such an Artifice as to wash and purge Mercury, in such sort as that it might pass into a ponderous and sweet Water, and if we could so adjoynd some pure Gold thereunto instead of a ferment that they might lift up [or sublime] themselves together, and again become constant and fix: that then, from them would arise a red and soluble Carbuncle, or true potable Gold. But these are only my simple thoughts and conceptions, no dispraise to those suppositions which other men have entertained concerning this matter. So likewise if spiritual Gold, and the spiritual Sulphur of the Vine be conjoynd by the help of Salt, they give a good potable Gold, which contains in it Gold potentially, but not actually or palpably, as may be seen in my Treatise of the true *Aurum Potabile*, which being clear like Water, and a bright or fair potable Gold, I do adjoynd to my Cates or Sawces instead of White-wine.

But even as White-wine the longer it is kept, the yellower it grows, so likewise white *Aurum Potabile* doth not retain its whiteness above two or three months, but becomes more and more yellow, and is at length turned into a redness, but still retains its tinging faculty. He therefore that shall not be well pleased with the taste of [my] Wine or potable Gold, let him tarry till being more old they become yellow or red, for then they are of a pleasanter taste, as having (through long Process of time) lost their Sulphureous Taint.

But as touching the manner of making that potable Gold, as also all other unpleasent, fugacious, and unripe metallick Potions, pleasent, ripe, fix, and sweet Liguors, that shall be revealed afterwards.

Furthermore, I do here serve out instead of good drink, the golden-coloured Soul, or my Tincture made of Niter, of which I have spoken in the second part of my Spagyricall Dispensatory. It is of as much virtue in Medicine as that potable Gold is, which I made mention of but now, but performs nothing in Alchymy or in the Transmutation of Metals; but what it would do if it were made fix and constant in the Fire, I do not as yet know, for I have not as yet brought it to that pass. But how it may be made fix shall be presently shown. This very Tincture in the degree it is at present in, produceth great effects in Medicine, yea and greater too than those which I published about it, in the second part of my Spagyricall Dispensatory. It is of a delightfull Taste to the Palate, it removes the obstructions of the Liver, Lungs, and Spleen, it provokes Urine, expels the Stone, prohibits Obstructions with the Excrements, it may be most safely used by old and young, yea even by those whose strength is much debilitated, and it is wont to afford them present help; it wonderfully Corroborates, and makes all Animals, Minerals, and Vegetables fruitful, and this will easily appear to be, if you do but take some Vegetable Seed and macerate in the same, and then put in the Earth, it grows far speedier

dier and ripens much sooner than other Seeds are wont to do.

I have sometimes macerated Wheat, Barly, Peafe, and the Seeds of such-like Corn in this Liquor for a night, and being thus steeped, have sown it in pure Sand, and they have grown ripe far sooner than those which have been planted in good and fat Earth: which is such a thing, as hath made many Men extremely to wonder, when they saw Corn grow in bare Sand without any other Earth or Dung, and be able to arrive to such perfect maturity.

Many other Salts there are of no great cost, and such as are to be had in vast quantity, with which, Corn being macerated and sown in barren Lands, and in such as are not dunged doth come to perfect maturity; and this I have tried not only once, but oftentimes; and have also purposed (if God please) to bring it into public use, in these United Provinces: to which end, the most Supreme Orders, General and Provincial, have granted me a Privilege (or Patent) for many years; whereby it is forbidden to sow or plant barren, sandy Grounds and unduged, after this kind of way, without my consent. The main Basis of the knack lies in Sea-salt, which may be plentifully had in these places, and be easily prepared and made use of (to fatten lean and dry Grounds with) instead of Dung.

But amongst all such like Medicaments, the Tincture of Nitre bears away the Bell, for it causeth many Stalks to spring up out of one Grane, and to yield fruit, a thousand fold. Nor doth it only make the Vegetables fruitful, but Men too, and the terrestrial Animals, and even the Birds themselves that live in the Air. And by the same reason also may it be brought to pass, that even the Metals may be multiplied by the help thereof, as we shall declare anon, in what follows.

Both these Wines or efficacious Drinks doe very well suit with the metallick Sawces or Junkties, they heat the Body, help the concoction of the Stomach, corroborate the Spirits, give good Nourishment, drive forth out of the Body the superfluous Excrements, in a due manner by Stool and Urine, they cause Cheerfulness, bestow a prosperous Health, give a comely Look, and change the Complexions into the Sanguine and best Complexion; in the accomplishment of all which things, that pure and golden coloured Tincture of Nitre excels.

And here I must make a little digression, and set somewhat more clearly afore your Eyes, the four primary Complexions; from which the other mixtures do arise, according as a Man partakes the more of this or that Complexion.

Therefore as touching the Complexions, the Ancient Physicians judged thereof according to the form and colour of the Hair, and were of this Opinion, that the Sanguine Complexion which of all others is the purest, produceth red Hairs and a white Skin full of small and bright Pores, such Men being induged with hot and moist Blood, and of a sound Constitution are diligent, learned, pious, prone to Venerie, Ingenious, Cheerfull, and for the most part long lived, but are subject to hot Diseases, as Feavers, the Plague, and the like; and do in their nature resemble the Sun, amongst the Planets, and Gold amongst the Metals.

The Cholericke have very black Hair, a yellowish Skin, and their Blood is hot and dry, and they are wrathfull, quarrelsome, strong, bold, Warriors, addicted to Whoredoms, sutable, wicked, false, mer-

cilefs, rejoicing at others harms, as is wont to be in War. They are tormented with raging Feavers, as also with the overflowing of the Gall, and they are of the nature of Mars and Venus amongst the Planets; and of Iron and Copper amongst the Metals.

The Hairs of the Melancholy Complexion are for the most part betwixt a white and black colour, and their Skin is white. They are of a cold and dry nature, quiet, laborious, musing, industrious, sincere, pious, and mercifull, inclined rather to weeping than laughter, if they hear of any mischances, they aim at Justice, and fear God without Hypocrisie, or esteem of Men. They are subject to all kinds of Diseases, are afflicted with a debility of their Limbs, and are compared to Saturn and Jupiter amongst the Planets, and to Lead and Tin amongst the Metals.

The nature and property of the Phlegmatick is moist and cold, the Hair and Skin white, the Wit dull, a dreaming sleepy quality, negligent, carefull of nothing, obliquate, envious, slow, and gross, and unteachable, the Body consists of thick or homely Limbs, and is wont to be troubled with the Scab, Ulcers, and cold Feavers. 'Mongst the Planets the Moon, and 'mongst the Metals, Silver, are supposed not much to differ from their Disposition.

These are the marks (as is believed) of the Complexions in Men and Beasts. But yet you are to know, that one [single] Complexion doth very rarely bear absolute sway in any Man, but they are for the most part mixt, and so the denomination is given according to the predominant Complexion.

A Man that consists of a sanguine and phlegmatick property, is as it were double complexioned, and both the colour and denomination are divided, so that from red and white, yellow hairs arise, and the Men themselves are of a good, temperate and fruitful nature; and thus is it to be understood of other Combinations.

But so far as a pure and sanguine complexion is esteemed the best and whollonest, the Ancient Physicians in their Cures were wont to call the superfluity of any phlegmatick scabby person, Phlegm and watery Blood: [the superfluity] of the Melancholick, sad and irksome cogitations [or pensive dumps]; and [the superfluity] of Cholericke, a mad raging brain. Now of this Phlegmatick, Melancholy, or Cholericke [person] do we make a Sanguine one, that is, a Man of a sound and pure blood. Upon this account have they ascribed this property unto their Universal Medicine, viz. that it does not only change all the imperfect complexions of Men, as the Cholericke, Melancholy, and Phlegmatick into the Sanguine; but doth also transmute all the imperfect, unripe, gross, and volatile Metals into pure Gold. For if a Medicine be of so much virtue as to convert all the Complexions into the Sanguine one, it will necessarily transmute all the imperfect Metals likewise, as Saturn, Jupiter, Mars, Venus, Mercury and Luna into Sol or Gold.

Now so far as I have often found by the frequent Experiments that I have made, that my said Medicine, or Tincture of Nitre is wont to colour all kinds of Hair, as white, brown, black, (black I say, which may seem impossible unto many, but nevertheless is very true; for to dye white Hair with a yellow colour is a thing commonly known, but to tinge black Hair with a yellow or red colour, is a great secret) and even all other colours, none excepted, with a golden colour; and this it does while

it is as yet of an unripe and flying nature: Upon this account I dare persuade my self, that if it were but brought to a fix and constant nature, it could not possibly be, but that it would bestow upon the imperfect Metals, a golden nature and perfection. But by reason of its too tender a nature, which is extremely impatient of a Fire of Coals, I pondered upon the business more accurately, and perceived, that it is indeed a thing possible to be done, although that hitherto I never had a convenient time of perfecting the same. And as concerning the manner how it may be done, I cannot but out of Christian Love, discover the same to my Neighbour.

During the time that I considered not the Words of the Angel in the Sepulchre of Christ, saying, *Why seek ye the Living among the Dead?* and therefore search'd about in filthy Sepulchres, in which I could not find the Life. God at length vouchsafed to look upon me with his gracious and mercifull Eyes, and brought me into the right way, inasmuch that leaving the Sepulchres and Monuments or Tombs of the Dead, I began to look for Life amongst the Living, and not amongst the Dead.

God only is the alone and eternal Life, who bestoweth upon us the so much desirable Sun, (as being the Servant of God) by the help of the Air. Let us boil, roast, bake, and labour as much, and in what manner soever we please; yet shall we never find any liveliness, save from the Sun, the Servant, Minister, or instrument of the Omnipotent God. [For else] we [doe but] prepare us Medicaments destitute of virtues, of fine out-side Colours, but within, dead and full of poison, because from things wanting life, no help can be expected.

Forasmuch therefore, as we gave not life unto our own selves, neither can we defend the same against death without that one only life coming unto us from above: it is very expedient, that, omitting the sinking dung, we bestow our selves to the pure and living fountain of God, as being the Centre of all life; and doe seek for life, from the Sun, as being the great master of all the created Palace [or World]. The way of effecting this, will I reveal unto you in a few words.

If we accurately weigh with the utmost of our discretions this whole business, we clearly see it afore our Eyes, that there is no other life to be any-where found, besides that universal life which God hath implanted in the Sun, and which the Sun sends down unto us by the help of the Air. Let any one make trial, what way soever it likes him, and he shall find this most true.

If you would putrefie an Herb or Animal in a flut glass, so that the Air cannot penetrate [into it,] there will indeed be Magots generated, but they will want life so long, until the glass being opened, they receive life and motion from the Air. If you put Herbs, or the Flesh of living Creatures chopt or bruised in a glass, and shut it close, and keep the glass for a while in hot Horse dung, or else in warm water, there will Vermine [or Maggots] be indeed generated, but yet void of life, which (the glass being opened) will begin to stir of themselves; and so having gotten life, creep out, and become greater, and will get other forms or shapes. Place likewise in a warm place, some little Barrel half full of Wine, and let the bung-hole be open, that it may putrefie and begin to wax fowre; The ascending vapour will gather it self about the said Bung hole into a tenacious matter, which will yield small little vermine [or

Mites,] much like those which are engendered in Cheese; and which at length will, by reason of the Air, live and creep forth. If you put a Cover over the hole, all these little Mites will again dye, because they are deprived of the Air from which Life doth proceed. Then the Cover being again taken off, and the Air admitted, they doe agen creep; and following after the Air, endeavour to get out of the Barrel: out of which, if they doe but stay some hours only, and feel the full Air, they attain to another form, and get wings and fly away, which cannot be done without the Air, seeing that without it they can have no life.

Let such Earth as hath Seeds sown therein be so covered over, as that the Air cannot penetrate into it; which being shut out, nothing will be brought forth: or let it be some Plant, which hath already sprouted up out of the earth; if you doe but take the Air therefrom, it will cease growing and plainly wither and come to naught.

From whence it is clearly evident, that the rise of all Life is to be imputed to the Air, which very Life it self, the Sun hath first wrought in the Air, and Art knows how to extract the same again thereout of, by a certain Magnetical way, and make it visible, palpable, and sensible.

But all the Air is not meer life, but contains this same life dispersed, or dilated in it, like a great deal of water containing in it but little Salt, it self being visible, but the Salt which is therein, invisible. And just so is the life dispersed in the bodies of Men, and other Animals, and being invisible, hath its habitation in the blood, so that, without it, the whole body would be immovable and remain dead. Now when either a Man, or any other living Creature is conversant in the open Air, he attracteth to himself by his breathing, (by a certain Sympathetical power and property) as much Air as is requisite for the Heart, (which is the Centre, Receptacle, or House of the Life) for the nourishment of the [spiritual] Life, and as for the residue, and unprofitable part, it casts it away by the Antipathetical virtue and property of the out-blowing (breath or) expiration. So that no Man, no Animal, no Herb, no Mineral, can possibly enjoy a living and growing faculty, if this food of Life were withdrawn therefrom. Which seeing it is so, and cannot be otherwise, it doth necessarily follow, that the true universal Medicine cannot be prepared in any shut up (or close) Vessels as is commonly done. Do but look I pray upon the Birth and Generation of Salt-peter, the Body of which is nothing else but the essential Salt of the Vegetables, Animals, or Minerals, which attracteth to it self the Fire out of the Air, as is well known.

Therefore, whereas all Salts are wont to be turned (by the help of the Fire and Air) into burning and live Salt-peter, and that no body can bring the same to pass without Air: we should by good right learn from thence thus much, viz. to endeavour to make our Medicaments too, alive by the Air. For a Medicine that is destitute of life will subdue and destroy a Disease even just as much as common Salt will overturn a Mountain, and throw it out of its place, without being animated as it were by the Air, and transmuted into burning and living Salt-peter. Truly therefore and by experience do I say, that all the faculty of growth, all Transplantation, and every life owes its birth to the Air, and without it they all become dead and do remain.

The Air receives [its] vital food from the Sun, and the Sun derives its Original from God, the Center and Beginning of every Life. And therefore when we are desirous of extracting that vital food out of the Air by the help of Art, and of reducing it into a visible body, it is behoovefull and expedient, that we expose thereunto a certain Magnet, which may draw the same unto it self, and be by little and little augmented therewithall, and may grow both in quantity and virtue, even as an Herb out of the Earth; or as an Animal gets it self growth and encrease by meat and drink, and adds to it self an augmentation of strength and greatnes, and at length associates it self unto [or couples with] its like, and multiplieth its kind.

Man himself doth without intermission attract to himself the Air, by the help of his Lungs; but the Heart retains onely the vital food thereof, and rejecteth all the rest like so much excrement. The Body it self also doth daily assume food and sustenance by the Mouth, but the Stomach transmits the nutriment that is separated thereof of, to the Liver, to be reduced into blood and flesh: but the Excrements, as the Dung, Urine, Sweat, and the like, it banisheth out of the body by the usual passages. Thus like wife stands the case with our Medicament. According as the Magnet is, that we expose to the said Air, so accordingly doth it attract its like out of the said Air, whereby it may get to it self, Life, Virtue, and Power. But it cannot possibly be, that it should extract that virtue and faculty simply pure and clean; No, but it gets to it self also a certain, unprofitable, and watery Effence, which is associated unto that [virtue,] which acquiesce doth again go off, as a superfluous Excrement, and must necessarily beflow the Life onely upon the Magnet, that it may be therewithall encreased and strengthened. If I desire to have a Vegetable, then must I sow a Vegetable Seed; or such a Magnet is to be placed there, as may associate or adjoin unto it self its like out of the Air. If you would have an Animal, then an Animal Seed, or Animal Magnet is to be used. But if that which I seek is to be more pure, and more constant [or lasting:] a purer Magnet must necessarily be exposed; for like doth always seek its like; love, overcome, and conferve it: according to the testimony of the Ancient Wife men, *Nature rejoiceth with Nature: Nature overcomes Nature: Nature retains Nature.*

And therefore seeing our purpose tends to this, namely, to extract the invisible faculty of Life, the power and virtue of the Sun out of the Air; to concentrate it, and make it corporeal, visible, and palpable; it behooves us to provide our selves with a fitting Seed or Magnet, which may earnestly attract, overcome, and hold the same. Now such Magnets are pure Gold, and the most pure Soul of Salt-peter, both of them being the true offspring of the vivifying Sun.

Because therefore like desires its like, loves, and seeks after it, a poisonous Magnet must not be exposed [to attract] a vital food: For as is the nature of the Magnet, so likewise doth it attract good or evil out of the Air. It is a thing that Husbandmen are well acquainted withall, namely, that Wheat produceth nothing else but Wheat, and from Tares do Tares arise. If the Seed or Magnet be aurous and pure, it will also acquire to it self pure and golden Virtues, and be encreased by them.

*The manner of so placing the Magnets, that (by Solutions and Coagulations) they may receive the Alfral and vivifying Rays of the Sun, and may render them visible, corporeal, palpable, and durable in the Fire.*

**Y**OU must get made some flat and strong glass Dishes or Platters, in which you must put your Magnet the thickness of half a fingers breadth, and expose it moist to the Sun, that the unprofitable humidity may vanish by evaporation. Which done, (and in the Summer-time it will be done in a few hours, especially if there were not too much of the Golden Liqueur put into the Dishes) expose the same Dishes, which contain in them the [thus] dried Salt, in the night-time, open to the cold and moist Lunar Beams, that the Salt may by its magnetic virtue associate unto it self from the Air, the Water, which carries in it the universal food of the Air, and consequently may be dissolved. This Solution is to be agen set out in the day-time to the Sun-beams, which will again dry up the unprofitable moisture, and leave in the Salt, that vivifying and golden Seed, which it contracted in the cold Night and Air, together with the humidity, which is void of any virtue. The Salt being freed by the Sun from its superfluous moisture, must be again exposed at Night to the Lunar beams, that it may again imbibe the Alfral virtues, and may be agen dissolved in the imbibed water, that, being the next day, as the day afore, exposed to the Sun, it may be animated anew with those same virtues: These exposings by turns [to the Sun and Moon,] must be so long and so often repeated, until the said Magnet, (after its being dried at the day-time in the Sun) will, at the night-time, hardly admit of any moisture from the Air, and that being dry and put upon a red-hot Plate, it readily melts without flame. For then may it be applied to use, as being a constant and fix Medicament.

This interchangeable Solution and Coagulation must be repeated some hundreds of times, and every Solution and Coagulation is to be accounted for a Philosophical day.

If now in the Summer-season the heat of the Sun be not strong enough in our Countries for the effecting of this operation, the said heat may be concentrated by Glasses, or metallick Instruments, and be made more efficacious, that the Coagulation may be ripened [or hastened.] But in defect of such Instruments, and want of the heat of the Sun, which is frequently over-cast with store of Clouds, you may easily forward the Coagulation with our Common Fire, and that too with a more unfailable and speedier operation than that is, wherein the drying up by the Solar heat is always to be waited for. And although this operation, which is performed in the Sun, is to be accounted of as far the better, yet notwithstanding the Sun doth operate together with our Common Fire after an invisible manner, when we cannot make use of the Sun it self. For where-soever the Air is, there also is to be found the invisible Sun, and the occult virtue and power of life. He that can have the opportunity of using the Sun in this operation, needs not any other Fire. But the using of our Common Fire requireth a peculiar Iron Furnace, whereon the Dishes or Basons are to be placed to dry. But yet the heat must not be underneath, and strike at the bottom of the said Basons,

but

but it must be such as may strike the heat downwards at top of the matter onely, and may gently and by little and little consume the humidity: For else there would be hazard of the Liquors boiling over, and of being lost, if the heat should be placed under the bottom of the Dishes. The Iron Furnace may be made of Iron Plates, resembling Arched work, [or Oven like] and be placed within a Stone Furnace, and have a Door fitted thereunto, that so neither Dust nor Athes may fly thereinto, and by this way will the Salts be dried in two or three hours time. And now, that you may not need to wait till the night approacheth, you may have a wooden Box or Chest made, and covered over at the top, but pierced full of holes all round about the sides, which (with the Basons placed therein) may in the Winter-season be set abroad to the cold Air, and in the Summer-time may be placed in some moist Cellar, that the Salts may attract from the Air the food of Life. For in all places of the World doth the Air contain in it (though in one place more plentifully, and better, than in another) that occult faculty and virtue of Life, without which, neither Men nor Animals are able to live. But by how much purer the Air shall be, so much the purer and more excellent is the acquired Medicine. As for the Transmutation of Metals, it matters not much what Air it is that you get, for every sort of Air is fit for this operation. We doe in this place manifest onely the way of fixing it: Now every one knows that a pure and clean Air is better than a gross and an impure one, and that the heat of the Sun is better than the heat of Coles, or of a Lamp.

Thomas Aquinas writes, that God with his Angels cannot want our fire, and therefore is he reproved by *Paracelsus*, because he saith that God cannot want the Elementary fire. Alas, Good man, he did not so accurately weigh this matter, for this proposition tends onely to this end, namely, to set afore our eyes the purity of the Fire necessary for the Coction of our Medicine. From whence it is sufficiently manifest, that a Medicament will be so much the better, by how much the purer the Fire shall be. For a gross Air begets a gross Blood. But in this operation, the Air is the Meat and Drink of our Golden Salt, but the Water or Phlegm is to be driven away by heat, it being a superfluous Excrement adhering on to that Air. Now in those manifold Solutions and Coagulations, the Magnet doth always retain some good thing, and encreaseth both in weight and virtue, and attaineth a constancy: like as Men and other Animals are encreased with Meat and Drink, and doe grow in stature, and multiply themselves. The whole work therefore of making this kingly Medicament by the help of the secret Solar fire, doth consist in a good, pure, and golden Magnet, and afterwards in a true Solution and Coagulation: Which if it be too speedy and strong, the over-much heat will burn up and consume the attracted food of Life. If therefore a Medium be not used, it so happens, as 'tis wont to be in any Earth that is too moist, and therefore not [capable of] bearing fruit. So that nothing is more necessary than to have a due regard of mediocrity, not onely in the Solution, but in the Coagulation likewise.

And this is that way by which the Solution done in the Air, and the Coagulation made in the Sun, doe reduce the Mercurial water, and the Minerals prepared with Salt into fusible and tinging Stones;

which thing the Common fire will never perform in a glass closed up, and without the Air.

Note this, and believe it, and doe it, and thou wilt find what thou hast believed, come to pass.

Supper being ended, and the Drinking-bout over, 'tis time for the Guests to go to Bed, unto whom the custom of some is to present a closing Cup, made of good and profitable Herbs, amongst which, such as are more bitter, are for the most part in greatest esteem, because they close up the mouth of the Stomach, and beget a quiet Sleep.

Now to parallel this Custom, I will here set one down, for those that are desirous of such like bitter Potions, and such an one as they may prepare according to their pleasure, and apply to use.

Take of common *Aqua Fortis*, which you must rectifie by a Cucurbit, or by a Retort, that it may be bright and clear. Dissolve therein, by boiling in hot Sand, as much cupellated Silver as it will dissolve; but you are to note here, that there must not be any Copper at all in the Silver, for it would spoil the Medicament. Into the Solution pour strong and well rectified Spirit of *Sal-Armoniack*, so long till the *Aqua Fortis* makes no more Ebullition. When all the sifting and noise is over, there will be about the half part of the Silver precipitated, and settled to the bottom, and will be of an ashy colour. Place the Glass in Sand, put Fire thereunder, and boil the precipitated Silver with the *Menstruum*, in which boiling there will separate yet more Silver out of the *Menstruum*, and the residue will remain dissolved up in the *Menstruum*, which is to be filtered through Cap-paper, and then to be evaporated by little and little in Sand, that all the humidity may be abstracted.

*N. B.* The *Aqua Fortis* and Spirit of *Sal-Armoniack*, turn into a liquid and volatile Salt, and have lost their corroding property, which Salt hath inverted the Silver, and drawn its bitterness forth, inasmuch that both Salts are converted into one bitter and green Salt. This Salt must be dissolved, filtered, and purified by pouring Water thereon, and again drawing it off; and being hereby rendered more pure, it resolves it self in the cold Air into a green and bitter Liqueur, one drop of which is able to make a whole Cupfull of Wine bitter. And this Wine being drunk is profitable to the Stomach, causeth quiet Sleep, dissipates Windiness, and keeps the Belly Soluble.

*N. B.* This Salt guilds over Glasses, and other glazed Vessels with Silver, nor does it vanish away but remains constant. It likewise performs other considerable effects in Alchemy, as may be seen in my other Writings, but especially in the second part of my Furnaces, of the last Edition. And thus do I leave the Guests to their rest, that they may Sleep even till broad Day-light.

The Sun being up, and some of the Guests being very drowsy or thirsty with their Yesternight Surfeiting, and being tormented with overmuch Heat; they endeavour to extinguish this Inflammation of the Liver, with cold Fountain Water, or with small Beer, or with hungry and sharpening Wine. Others send to the Apothecaries for some Syrup of Roses, or Violets, and mix that with Fountain Water, and so drink it off. But the burning hot Liver is presently smitten with a sudden horrour, the Stomach is refrigerated, and beset with clammy Humours, and most an end the Limbs are debilitated, the Skin becomes Scabby and cold Peavers possess the Stomach.

Instead

Instead therefore of such like drink, I will here substitute a far better cooling Potion, which shall not hinder the health, as those do, but be profitable to the same.

Take one pound of Spirit of Salt, not of that yellow, unrectified Spirit that is sold in the Shops, but of our well rectified Spirit; wherein dissolve as much Tartar as it will associate unto it self in a gentle boiling; filter the Solution through Cap-paper, that fo all the Feces which were in the Tartar, may abide in the Paper, and the Spirit of Salt it self together with the [dissolved] Tartar may pass through, bright and clear; if the Solution stands long in a cold place, part of the Tartar will float into Crystals, and part thereof will remain mixt with the Spirit of Salt, and give it a grateful vinous Acidity. If you use white Tartar then the said Spirit will remain white, red Tartar tingeth the same with the colour of a Ruby. N. B. The Spirit of Salt is of such a nature, as that it makes all colours more fair. You may therefore use red Tartar to make this Potion whilal, because of the loveliness of the colour, wherewith it tingeth the Spirit of Salt, for as to the virtues and efficacy of them, there is no difference to be found between them.

This Tartarized Spirit of Salt is very sweet, and tastes like an acid Wine, some drops of which, being drunk in cold Fountain Water, will not at all hurt the Liver: nor will it only allay the droughness and thirst, but also stir up in the Stomach an Appetite to meat and drink. And therefore I do commend this Tartarized Spirit of Salt, beyond all other thirst-allaying Remedies, and it may be taken safely and pleasantly, both Summer and Winter, because the unripe acid Wines being drunk with Fountain Water and Sugar, do refrigerate the Stomach, and load it with tenacious humours, and weaken the Appetite, and hinder digestion.

Most profitable therefore is this our Spirit unto those, who daily drinking much Ale, may always mix a little of the same with their Ale. For it makes the Ale to taste like an acidish Wine, it allays thirst, so that there will not need such a gulzing in of so great a quantity of thick Ale, it dissolveth Wind, expels Urine, hinders the generation of the Stone in the Bladder and Reins, and if it be already generated it dissolves and consumes the same, and by little and little drives out the same with the Urine. Being administered to such as are troubled with the Feaver, Gour, Stone, and Scurvy, and that in all their drink, it is a pleasant and profitable Remedy. Concerning the use of which, you may find more spoken in my Treatise, intituled, *The Consolation of Sailors*.

Now besides all this, there is yet one thing more that I shall here admonish you of; namely, that by the Spirit of Salts help may a Remedy be administered to many more hurtfull disorders, but especially in the stead of those sharpest Waters, unto which, Men are wont to come from far and undertake long Journeys, losing their most precious time and Money, neglecting their Calling, their Household Affairs, their Wife and Children, upon the bare hope of recovering their former Health: Whereas notwithstanding, the Spirit of Salt well prepared with Tartar, and having a little Steel Powder put thereinto, will perform the very same effect as the Calibeat Waters are wont to do, and so they may avoid the loss of so much expences, and of their precious time; and thus every one may discharge and follow his own Calling and Domestick Affairs, and yet for

all that, be cured by the help of the Tartarized and Calibeat Spirit of Salt which openeth the Obstructions of the Liver and Spleen.

But what shall I say much for? Some haply there are that go the more willingly to those Waters every year for other reasons. Such as have old chiding Wives at Home, that take it very ill if their Husbands do but stir out of Doors, and are continually a plaguing them with Scoldings and ill Words, have not these think you great reason to seek some Diversion?

Young Women also love to visit these Waters and Baths, who meeting not with so much heat in their feeble and aged Husbands, as to beget them with Child, betake themselves to those Waters and Baths, where at all times they meet with active strong Companions, full of strength and Metal, who without doubt do frequent the said Places, for this very end, namely, to apply warm suppositories to those cold Women, and uterine emplaisters to make them Fruitfull, and to take away Sterility. Such kind of Dames being restored to their former health, and returned Home, their Husbands find (after some few Months) how effectual the use of those Waters have been upon their Wives.

Besides, it most an end happens that the Master and Mistress being absent, the Household Affairs are very awkwardly administered and managed by the Children, the Men-servants, and Maid servants; and that common German Proverb doth usually take place; *The Cat being out of the way, The Mice upon the Shelves do play*. The truth of this is sufficiently testified by frequent Examples. And therefore it is much better to drink the said Acid Waters at Home, whereby both Money and Time is spared, and many evils prevented. And thus much may suffice to have been said concerning a refrigerating Drink.

And now, seeing we have at hand good Cheese and Butter, good Sawces or Cates, and delicate Drink, can we not be here with content? Verily in my Judgment here's enough distill out for one Banquet. But come may say, in very good time! *Glauber* [indeed] does not only teach us the preparation of good Meats, but likewise of Cheese, Butter, Sawces, [or Junkers,] and precious Wine, but yet tells us not from whence the Milk to make the Cheese and Butter withall is to be had, nor whence the Sugar and Spices for the Cates, and the Grapes needfull to make the Wine with, are to be gotten? What benefit have we by knowing how to make Cheese and Butter, and yet want Cows to yield us Milk? To satisfy these, we will demonstrate unto them, that even both the Milk it self, and the precious Spices, and most excellent Grapes are all attainable by the help of Salt.

In my Treatise called *Miraculum Mundi*, as likewise in that called *The continuation of the same*, and in that Book, *of the nature of Salts*, I have clearly enough shown, that all the faculty of the Growth and Nourishment of all growing and movable Creatures doth take its rise and original out of Salt alone, and that the correction or melioration, not only of Vegetables and Animals, but even of the Minerals too, is to be sought for from the same.

But so far as this bettering of the Metals meets with but little credit and is very hardly believed and understood, (may 'tis plainly thought a thing impossible to be effected,) I could not choose but manifest and demonstrate the truth of the same unto the whole World; namely, that like as the Metals are

are in long process of time matured by Salt in the Bowels of the Earth: Even so may the same be likewise matured, mundified, and amended out of the Earth, by Salt, by the help and benefit of Art: not only by the moist way, but also by the dry, and that with one Fire, in one Furnace, and with one Servant, whom I will in this place call *The Countryman paying his yearly Rent*. When his belly is continually fill'd with Coles, his Plows never cease going, so that weekly, monthly and yearly he is able to pay his master the due hire, namely Gold and Silver, wherewith all things necessary for household expences may be gotten.

And although this Countryman, which I will here describe, be not that [great] Country-Farmer, which I have mentioned in the *Third Part of the Prosperity of Germany*: yet notwithstanding he is a little one, and one that will discover so much unto the ignorant as to cause them to believe that the things which I speak of are possible to be done, and that there is a yet richer and better Countryman. But this here is to be accounted as a small Cow, and which will however supply you with Milk, Butter and Cheese, for necessary uses, if not with Sugar, Spices, and Wine too, to be set out upon the Table. If this Country fellow be too little and small for any one, he may even provide himself of a better, and learn by the consideration of this, by what means such Countrymen are to be nourished, that so the Rent may be gotten from him in its due time.

A. *The little Country Tenant with one Plow*. B. *The Countryman with three Plows*. C. *The Countryman's Cap*. D. *His three Plows*. E. *The Registers to govern the Fire*. F. *The Glass set in with his Alembick and Receiver*. G. *The Door to shut the Crate*. H. *The Ashbole*. I. *A Basket of Coals*. [See the Fig. before the 3d. p. of the *Prosperity of Germ.* noted with pag 76.]

In the first place you must prepare you some pounds of good Spirit of Salt, after the way which I prescribed with Virriol, without which it will effect nothing, for out of this [Virriol] it doth in the preparation carry over with it the spiritual Gold, or tinging Spirit, which said [spiritual Gold] is, in the performing of the operation, fixed, together with that spiritual Gold, which lyes hidden in the inferior Metals, and so becomes manifest.

Then (in the next place) you must build you a Furnace, which is called by the Chymists the *slow Henry*, or *dull Harry*, but I call it *The little Country Farmer or yearly Renter*: you may build it, I say, of what bigness you please: or for Example sake, the Tower which holds the Coles may be about Man-height, and about one Cubit broad in the inside, but so, that the top part and bottom part be narrower, and the middle part wider. To this Tower you must adjoin two or three Furnaces, which are here called the Countryman's Plows, and in which the Vessels are to be placed, which hold the Metals that are to be matured by the Spirit of Salt, and which have a continual heat, whereby the never-ceasing coction is holpen from the Tower that contains the Coles. Now see that you make all things cleverly and well proportioned, whereby that the Fire may be well and commodiously governed, and may be conveyed for twenty four hours at least, without any looking too or meddling with, as may be seen by the now described Figure.

The Vessel, in which the Spirit of Salt, with the Metal, is to be exercised (or laboured) with a daily Coction, must be made of such matter as doth not

flie with the heat of the Fire, nor is not eaten with the sharpness of the Spirit, (but) such as may be seen in my Laboratory, and will for the most part dure and hold the Spirit of Salt a whole year without breaking.

All things being ready and fitted, the Countryman's Belly is to be filled with Coals up to the Neck, and his Head covered with a Cap, that the Fire may not find any out-let, save by the lower holes, through which, the heat may find an entrance into the adjoined Furnaces; and as for the Vessels, they are to be filled with the Spirit of Salt, and with Metals fitted for this Operation, and to be covered with their Alembicks, that the Spirits which ascend in the boiling may be received and conserved. When all the Spirits of the Salt are come over, they are to be again returned back upon the dried matter in the Cucurbit, and are to be again drawn off by distillation. This operation and cohobation being often repeated, doth ripen and fix the spiritual Silver and Gold, whereby it becomes Corporal: But yet the Spirit of Salt alone is not able to give Gold, but ripens Silver only, but by the addition of other Salts, it will give Gold too. And even for the fixation of Silver, common Salt may be also added to the Spirit of Salt, that so the Spirit of the Salt may be made strong in the digestion; yea and in time so very strong, as to fume even in the cold Air, and therefore a little water may be also added besides the Salt.

Hence it comes to pass, that in one days digestion six pounds of Spirit of Salt will give seven pounds of the same; unto which, if you again add one pound of Water, and one pound of Salt, you shall have eight pound of Spirit of Salt: which by the addition of another pound of Salt, and one pound of Water more, it may be farther augmented; inso much that the Spirit of Salt, by a continually-repeated addition of Water and Salt, gets a perpetual encrease, and the Metal is so far from being at all hindered in its maturation, as that it is daily ripened more and more. For the Agent and Patient are continually encreased, and become bettered both in quantity and quality, which verily is a most excellent work, and never so manifestly described by any body as by my self.

But that I may be yet better understood by every one, I will here adjoin a way which every one may imitate, and which teacheth how, by the Spirit of Salt alone affording not Gold but Silver, the said operation may be intireted with Copper.

You must take care to have a Vessel made either bigger or lesser, of such matter as the Spirit of Salt cannot spoil or prey upon; And pour thereinto as many pounds of the Spirit of Salt as it will well hold, and as many pounds as there be [of Spirit,] so many ounces of Copper-plate must you put in, and to them add twice as many ounces of Salt, so that to one ounce of Copper there may be two ounces of Salt. The Spirit of Salt being drawn off even till the Copper and Salt be dry, it will be stronger and more in quantity, because, from the adjoined Salt, it hath acquired to it self an encrease and greater Virtues. Pour this Spirit again upon the Copper, which in the first distillation was wholly dissolved up; and boil the Spirit of Salt over the fire, that the Copper, together with the Salt, which was not carried over by the Spirit in the first distillation, may be again dissolved.

The Furnace being cool'd, Take the glass out of the Sand, and pass the Spirit of Salt with the dissolved Copper through Cap-paper, and wash the white  
Iiiii Calx



Calc that remains in the Paper with water, dry it, and melt it with a fix Lixivial Salt, and you shall find as much pure Silver, nay, even somewhat more than the Copper had in it by its own nature. Put the green filtered Solution agen into the Cucurbit, being first well wash'd; of which, if there be six pounds, add thereunto one pound of Salt, and half a pound of Water, that so there may be seven pounds and an half, provided the Cucurbit will contain so many pounds, if not, then put the less matter therein. Then being placed in Sand, draw off the Spirit of Salt from the added Salt, even to dryness, and as much increase as you find it have above six pounds, lay it by, and add as much water to these remaining six pounds, which you must again put upon the dry matter in the Cucurbit, and then agen distill it off till the said matter be dry, and repeat the same Operation again by pouring on and diffilling off. If the Spirit of Salt be augmented in quantity one pound, then put more Salt into the Cucurbit, and agen augment the six pounds of Spirit of Salt by the addition of Water, and repeat the pourings on, and drawings off after the aforesaid manner, always removing at each Distillation, the increase that is over and above six pound: and renewing the application of more Salt, after that the former is drawn off, until you shall have gotten in the fifth, sixth, seventh, eighth, or tenth Distillation as much Spirit as you at first took, to begin your Distillation, [which was six pound.] Now all the operation consisteth in this knack, namely, that you so operate, as that nothing flies away in fume, for all the increase ariseth from the Salt and Water which you added thereunto. When you have gained thus much, you may (without adding any more new Salt) pour on the Spirit of Salt several times upon the Salt which is left remaining in the Cucurbit, and agen draw it off for ten thereof, until it hath brought over with it self almost all that Salt. Which [Salt] being almost wholly changed by the Spirit of Salt that was poured into the Cucurbit, Dissolve up the remaining Maf of the Copper and Salt, and the Sand being cold, take out your Cucurbit, Filter the Spirit through Cap-paper, and wash the white Powder left in the Paper, and dry it; and melt it as aforesaid with a Lixivial Salt, and you shall have as much pure Silver as the Spirit of Salt was able to fix, of the Copper, in such a time. Then put this green Spirit of Salt into the Cucurbit together with more new Salt, and repeat the said labours ten or twelve times, and the Spirit of Salt will be always encreased and rendred more strong, and the Copper will agen yield forth Silver.

This Labour, you may at your pleasure, continue as long as you list, for you will always get some Silver, and have an encrease of Spirit. For both the Agent, *viz.* the Spirit of Salt, and the Patient, *viz.* the Copper doe encrease both as to quantity and quality.

But it may be demanded, Whence that Silver comes? That which gave forth it self the first time we impute not unto the Spirit of Salt, as if by it made, no! but we say that it was in the Copper before, and was melted out of the Oar, together with the Copper, for this may well be. For there's no Copper to be found which does not hold some Silver hidden in its belly: and though the Refiners have as accurately separated it as they could, yet nevertheless we doe conclude that that first Silver separated in the first Operation, was what was left of the Oar

in the Copper, and remained unseparated by the Melters [or Refiners] therefrom, and was not made by the Spirit of Salt, but only separated. And the Spirit of Salt being in its nature an enemy to Silver, does not dissolve it. But whence then did that come, which offered it self unto us the second, third, and fourth time; whereas in the first Solution, all the Silver was clearly taken out, and none at all left therein, but was all of it separated by filtration? What shall we here say, or indeed how shall we dare say otherwise, but that we believe and confess, that the Spirit of Salt did by its operation make the fame of the Copper. Nor is there any reason why this should seem so very strange unto us, forasmuch as yearly in the Earth, all Copper is naturally turned by Salt into Silver, and not only Copper, but all the other Metals were at first, Salts: not such indeed as we use about our Cookery in the Kitchens, but such as are impregnated by the Sulphureous Stars [or Constellations.]

But forasmuch as we doe at present treat only of Copper, we doe not therefore meddle with the rest of the Metals: for very rarely is Copper digged out of the Earth but it hath Vitriol therein, or, in defect of Vitriol, a Sulphur salted with a vitriolate Salt. For any sort of Sulphur being burnt, and its fatness flaming, the sharp Salt is released, and passeth away in fume, resembling the salt, of the fiery Oil of Vitriol, and is captivated [or caught] in the great Alembick under which the Sulphur is burnt. This sharp Oil supplies the place of an Agent as to the Minera's or Oars, in the Veins of the Earth: and doth more and more ripen the Minerals and Metals, but exceeding slowly: for Nature doth scarce attain to that limit in a thousand Years; which Art doth in a few Months time. For there are no impediments to obstruct the operativeness of our Agent, such as are the Stones, Flints, Sands, and various Earths which frequently occur, and are much abounding in the bowels of the [Metallick] Veins: inasmuch that it can discharge its Operations freely, and without any Impediment at all: and besides too, we use our external fire by which we help this our Agent, and strengthen its virtues, and keep it in a continual action.

By all this discourse may every one see, that when we speak of ripening Silver out of Copper by the Operations of the Spirit of Salt, it is not contrary to nature, but altogether agreeable with the same. But now we doe not say that any one will suddenly become rich by this Labour, done with the Spirit of Salt and Copper, but we have described this Operation in this place, for this end, namely, that hereby the possibility of the thing may be learned, and that there may be good ground to believe, that even this too is most true, *viz.* when we write that by such or such an Agent, corroborated or fortified with such or such Subjects, and placed in such-like Digestions, Gold may be extracted as well as Silver out of the meaner Metals, which how little soever there be of, may notwithstanding prove profitable. For having once made only some pounds of Spirit of Salt, you will not need to make any more anew, for in the digestion and maturation of the Metals, it will daily encrease, and that in a plentiful manner, and that too without any considerable costs, seeing that the Salt it self, which is to be added, is likewise cheap enough. If you make your Cucurbit of pure Silver, (for the Spirit of Salt will not work upon that) and digest your matters therein, you need not

then stand in fear of the breaking of Glasses: Besides too, you may always let such a made Vessel lie in the Furnace, and altho' as ever the Spirit is drawn off, you may presently put it on agen, nor is there any need of your waiting so long, and ceasing from the work till the Vessel cool. If therefore a Tower to put the Coals in (as aforesaid) be added to that Furnace, or Furnaces, then is it a true Country Farmer, or Tenant, for the sustaining of whom, there will need no other charge but that of Coals, and yet notwithstanding he gives you a perpetual gain without labour, cost, and trouble. Nay more, if we do but rightly weigh the business, we shall find that the daily encrease of the Spirit of Salt in these labours, is easily fold for more Money than the Coals will cost, so that all that Gold and Silver which is gotten out of the Metals, doth offer it self unto us for nothing. Besides, such kind of Metals may be taken for this Operation as are wont to yield more Silver and Gold than Copper, and the plentifulness thereof will be yet more, if several such kinds of Metals are joined together and so dissolved, and digested, in which operation they better one another by a mutual action; for one supplies what another wants, and likewise from another, are those superfluities which it has in it, taken therefrom: so that (as we said aforesaid) the mutual melioration of these Metals may be set on foot and promoted, as it were without any cost, and by a very little labour.

Whosoever he be therefore that has the knowledge and experience of the nature and property of the Metals, which they are, that have a correspondence with each other, and that love to better each other; and is not ignorant what Agent is agreeable to Gold; such a one I say as this is, will commit unto his Country Tenant the care of Weekly and Monthly paying the due Rent, and will be able by this means to serve God his Creator without wicked Usury; to do good unto his Neighbour, to extricate himself out of that Diabolical Fellowship, of the impious and the great crew of evil Men; and to lead his Life in Tranquillity and Quietude; which verily is a great and singular gift of God, unto any one that can arrive unto such a knowledge.

But yet no Man hath any reason to perfwade himself, should he be a Master of this Art and Science [heie shewn,] that he shall be able daily to separate great heaps of Gold out of the more imperfect Metals, whereby he may be enabled to lead a vicious Life. No, for my endeavour shall (in the first place) be, not to make any wicked Man partaker of this Art.

And secondly, the whole business consisteth in the blessing of God, as we find it Written, *Paul hath planted, and Apollo Watered, but God hath given his Blessing*: For without this Blessing, all our Labour is but in vain: And this the Prophet David doth likewise testify, saying, *In vain do ye rise up early, and being laden with many cares, go to Bed late, and eat your Bread with troubles: For unto them whom God is favourable doth he bestow his gifts even while they are Asleep.* Moreover St Paul saith, *It is not of him that wills, nor of him that runs, but of God that sheweth mercy.* And therefore a wicked Man, though he should possess to great a thing, yet would he not do any good upon it, if he wanteth Gods Blessing. Besides, I do not here bring forth my little Countryman upon the Stage, as if he could help any one unto huge Treasures; no, but only as one that can bestow so much as may suffice, honestly to live. Un-

happily a Man should light upon rich Veins and metalline Oars, which should abound with much corporeal Gold, and so by this means should yield great Treasures. Now so much cannot be looked for, from such Metals as have in them but a spiritual Gold only, unless the true weight be found, and that there be gotten the knowledge of those Metals which have a great affinity with each other, and which being joined together yield forth Gold. Otherwise you must not expect ought else from this Operation save an honest and moderate profit.

But now, as touching what Metals they are that have such affinity, and what the true proportion of the weight is, no body hath any reason to enquire of me, for I do not as yet profess my self an expert and absolute Artift in this matter, for sometimes I have a very gainfull success of my trials that I make, and sometimes agen I get less.

I was willing therefore to shew the way here, of ripening the meaner Metals by the help of Salt, and that too in a manner without any costs: which way of so doing being by me laid open, may suffice for this time, nor did ever any reveal it before me (I speak it without boasting) or produce it unto publick view in so open a manifestation as I have done.

And now if this separation should be used about the fixed Gold only which lies hidden in the Oars and Metals, yet might great profit be thereby gotten in all places; for there is no place in the World in which there are not to be found such Earth, Sand, and Stones as contain in them corporeal Gold, which may be extracted by the aforesaid way without any costs at all. But here is to be observed that those things which I have written, and clearly demonstrated concerning such separatory Operations in the third part of the Prosperity of Germany, are to be agen read over, and well lookt into.

Moreover, this is also to be known, that this maturation if insitured by the dry way, brings more profit than if done by the moist way; for in the dry way the Agent is more holpen than in the moist way, in which there is always plenty of moisture. But however, both ways namely the dry way, and the moist may be done with one and the same Fire, nor will the cost be any more than if the moist way were made use of alone by it self.

For that Tower wherein the Coals are, and which is to keep the Spirit of Salt in perpetual digestion, and to heat the adjoined Furnaces, is always bright hot at the Grate, upon which [grate] if a cementing Vessel filled with Salt and Metals be placed, there will then be even thence as much profit as by an adjoined Furnace, and so by the Fire of one Furnace, and by the self same labour and cost is a double Operation performed, and a continual rent may be expected from the double Countryman.

You must likewise note, that there is a great difference of Salts, and that one Salt is more fit for this labour, and another for that; but by how much greater the Acrimony is, that the Salt abounds withall, so much the more potent an Agent it is: inasmuch that it is of great concernment for a Man to know how to concentrate the moist Fire or Agent, concerning which Concentration there is no need of mentioning any thing in this place; forasmuch as I suppose that these things which are at present spoken are sufficient enough.

Moreover I would have the Son of Art know, that the Salt of the *Maercofism* or of the Ocean, which we have taught the making the Spirit of, is

nothing



nothing at all so efficacious as that which is gotten out of the *Microcosm*. For whatsoever things are found to be in the *Microcosm* or greater World, the same are likewise in the *Macrocosm* or lesser World, namely, Man. But it is not my purpose to discourse farther of this thing in this place, but will (God so permitting) treat more at large of the same, if I come to write somewhat of the nature and signature of the greater World. For hereby great mysteries may be learned, which omitting to speak more of, I keep close to Salt and say, that that Salt which comes out of the Ocean or Sea of Man, or of some other Animal, that is, which is voided out of the Bladder, is far more fit for the Transmutation of Metals, than that which is gotten out of the Sea, as being the Bladder of the great Animal.

The Ancients have called the World the great Animal, and very rightly, for in its Center it hath a fiery heart by which (as being the great Animal) it moves it self, and conserves its life, as shall be spoken of in another place if God shall permit, for according to the common Proverb, *Man propoeth and God disposeth*.

*Morien* was not ignorant that *Arcana's* of great moment lie hidden in Urine, but hath manifestly signified it. For when he had prepared the Tincture for King *Calid*, he wrote upon the Vessel in which it was, these words, *He that carries all things with him, needs not any others help*. And having so done, he secretly betook himself unto his Cell. But he had said before unto the King, In the O King! the Medicine is, by which words, he meant Urine. For out of Man's Urine may a fix Stone be made, which shall be manifested in other places.

Furthermore this likewise is to be here known, that it is a most notable and a true experiment and artifice in Alchymy, that is, in the true melting of Salt, when the Agent of Salt, and the Patient, or Metal, are so thoroughly conjoined and mixed, as that the Agent is dispersed throughout the Patient, that so the Patient may suffer the more, and consequently that that Patient Metal may be the sooner ripened and fixed. When a Flock of Sheep being in the Fold, see the Woolf coming, they are indeed all terribly affrighted, but are not all bitten and torn, and so a part of them feel the hurt and the other part remain free. But if the Woolf seizeth upon the Sheep in the open Field, and that the Sheep are scattered far and wide so that they cannot possibly flock together, they will certainly suffer more grievously.

For Example sake, when I would meliorate Lead by means of Salt, whether by the moist way by Spirit of Salt or by the dry way by dry Salts, if now I cannot radically conjoin the said Salts and Lead together, I do but little to purpose, because Lead and Silver, unless prepared by singular Ingenuity and Skill, are not touched upon by Salt and its Spirit, and so suffering but superficially only they are able to resist a long time. But being radically united unto Salt by the benefit of Art, so as that they cannot be distinguished from each other, then they suffer in all their parts and die, which death is their melioration and life. He that desires to arrive at this Goal, must rise betimes, and use a most notable diligence, for sloathfulness hedgeth up the way of coming thereunto: Even I my self am no perfect Artificer, but wait upon the Omnipotent God, expecting what he will please to bestow upon me for time to come, and

I live content with my present enjoyments. Thus likewise let another do.

But if now *Saturn* is to be used after another way and to serve instead of Earth to receive and multiply the metallick Seed, there's no need of dissolving it in Salts, but it will be better to have it onely (swell or puff up in them, and keep in such a posture as Earth is, conserving the Seed sown therein, in a moderate humidity and in the temperate heat of the Sun, which way is also a good one and commodious for the production of good metallick Fruits, and that by the help of Salt, as the following Process shews, under this title, namely,

*The Fire and Azoth wash Laton.*

SOME of the Philosophers have called their Patient *Laton*, and their Agent *Azoth*. But what subject that is which they meant by the name of *Laton* there are many Opinions of Authors concerning it, in whose Writings may be seen, that the greatest part of them do intend thereby *Saturn*, but yet not the vulgar: and even so is it too concerning their *Azoth*, or Vinegar, that being likewise diversely accepted. But be it as it will, yet this is certain, that even in the common *Saturn* do many abstruse secrets lie hidden, (to say nothing of the more mysterious *Saturn*, did we but know how to get it out.)

All Philosophers do suppose, that the Heart in *Saturn* is better than that in Gold it self, and for that reason do they call Lead a Leaprous Gold, and say, that if it could be mundified by a true washing, some great matter would proceed thereout of. Many Men have very much buffed themselves about this washing, but yet have not attained unto ought else, save that they have brought the *Saturn* into a white, fugacious, and liquid Body, concerning which labour I have made mention in this Treatise of metallick Cates and Sawces, and also in the third Part of the Prosperity of Germany.

In my judgment, the common *Saturn* is a commodious Earth, for the reception of a metallick Seed, and for bringing the same unto multiplication; Witness *Paracelsus* himself who tells us, that *Saturn* may be compared to the Earth, for all such things as it seizeth on it makes like it self, and turns them into Earth, viz. in the common Fire, for *Paracelsus* here intends that.

But now, if some metallick Seed be sown in *Saturn*, as being a commodious metallick Earth, and that such an Earth and such a Seed be moistened with a due metallick Water, and be exposed to the fruit producing and vivifying Sun, the earth together with the Seed, doth by reason of the moistning caused by the pouring on, or affusion of the mineral Water, swell up, and become porous, and receives and conserves the Water, so that the ripening Sun cannot dry up the Earth, and consequently burn up the Seed. And by how much the other Earth is moistened with the mineral Water, and the Sun expelleth the said humidity, so much the speedier doth the Seed ripen, and attain to his maturity.

For like as the Husband-man when he is about to sow this Corn, chooseth such a ground, as contains a fat and tenacious mould, which may not be washed away with the Rain, nor suffer the due nourishment to be withdrawn from the Seed: for if the Seed be sown in Sand, a little Rain can easily wash away the Sand and Seed, and impede the faculty of growth,

growth, which in a fat and tenacious Soil is not wont to happen. For the Water or Rain should but onely moisten the Earth, that it may not be too closely compressed, but become porous and admit of the Rains penetrating unto the Seed: which when so, then is there hopes of the Seeds sprouting, in such a fat Earth which swells up by means of the Water, and of bringing forth its Fruit.

Even just after the same manner are the metallick Seeds to be sown, and ripened; and for Example sake, let us take the vulgar and common *Saturn*, (well mundified) for that Earth, into which we will sow such a Seed as having a great affinity with *Saturn*, loves to be augmented therein, whereby it may bring forth fruit. And like as the Seed of any Animal requires an Animal Matrix, as a Field or Earth to be multiplied in, and hath not any affinity with the common Earth: Even so likewise doth a metallick Seed require a metallick Earth, Matrix, or Ground, wherein it may germinate and be multiplied.

Now this multiplication is on such wise made, as is done in the Animals, by the conjunction of Male and Female, one performing the office of the Agent, and the other of the Patient. So then, we will make some trial in this Process which is here annexed, not for the intent of getting great Treasures thereby, but for the sake of searching into, and getting the knowledge of Nature; we will take the Male in the room of the Seed, and the Female instead of the Ground or Field, and we will try whether or no the Seed will admit of multiplication.

Let us therefore take the common *Saturn* for the Feminine Matrix, and Antimony of the Male-like seed, which we will sow into its own Matrix, as Husbandmen are wont to do. I do not gain-say but that there are other Seeds, and probably better to be found to be implanted in *Saturn*, than Antimony is: But yet here I content my self with this of Antimony, as having an intention of onely shewing at this present, by what way it may appear that a metallick Seed may be brought to a faculty or possibility of growth in the Saturnine Earth. And upon this account for Demonstrations sake of this Labour, was I willing to use Antimony, it being a masculine Seed of a Saturnine kind. For common *Saturn* is usually accounted for the true first Ens of *Lune*, and Antimony for the true first Ens of *Sol*, and they are in very deed found so to be. For you shall not find any Lead without Silver, nor any Antimony without Gold: so that I strongly persuade my self that from those two, there cannot arise ought else but what is good and profitable, did we but know how legitimately to compound and handle them. And although I do not profess my self to know many things, yet will I simply tell you my opinion, concerning the way which I suppose such a Commixtion and Maturation may be effected by.

A Philosopher saith thus,

*By Gold and Silver you will nothing do,  
Unless you use their first Ens therewith.*

The first Entities of both these are Lead and Antimony, the latter of which, (viz. Antimony) is not to be admitted in that impure state that we find it in, unto the former, as unto its Bride or Spouse, but must first be washed in a hot and sharp Lixivial Bath, that it may thereby attain to a delicate silvery white-

ness, and shine like a Star in the Firmament; which Antimony thus purged, is called by *Paracelsus*, the signed Star.

But yet I would not have any one to think, that I do here mean the common stellate *Regulus* of *Mars*, which would be dissolved in Spirit of Salt, and would separate it self from the Lead, which ought not to be: But that signed Star must be so prepared, as not to admit of being dissolved in Spirit of Salt, for else it will not serve for this Work. It must be so concreted as if it were so many thin Shells (one within another,) and so very hard as to be able to cut Glais, and to strike Fire out of a Flint. This signed Star being so washed, is to be sown into its own Matrix, and by the solar Heat and fruitful Rain, to be promoted and enforced unto growth.

Take of the thus prepared masculine Seed, or signed Star, [A] parts, and of the feminine kind, [B] parts, melt the signed Star in a pure Crucible, unto which being molten cast the Woman in, which being cast in, there is presently made a sweet Conjunction and Commixtion of them both in that infernal Heat, in which they familiarly couple together.

The Mafs being commixt, is to be poured out of the Crucible through wet Brooms into cold water, and is to be reduced into Grains, and so the masculine Seed or Husband will be legitimately and duly mixt with its Earth or Ground, or Wife: which Earth together with the Seed which it contains is to be put into a firm Vessel, which fears not the violent corrosion of the Spirit of Salt, but in such a quantity as that scarcely a tenth part of the Vessel may be filled therewithal: Then must there be put thereon as much mineral Water, namely pure Spirit of Salt, as the Cucurbit can bear, and Fire is to be put thereunder, whereby the Spirit of Salt is to be again drawn off, by which Operation, the Earth together with the included Seed will day by day be refreshed, be moistned and swell up, by reason of the Spirit of Salt, no otherwise than as if you should moisten some dry and as it were parched Earth, with Water. For the *Saturn* is not dissolved by the Spirit of Salt, but onely swells up, and becomes foliated, and yet remains whole or entire, nor is it much unlike unto lovely lookt Talk, which shines with a delicate whiteness: and therefore the Philosophers say, sow your Gold in white foliated Earth. Without doubt they meant not common Gold, for then they would not have said, our Gold, but would have simply said onely Gold, had they not intended a peculiar Gold, or first Ens of Gold.

N. B. I cannot by any means omit to give you thus much notice, namely, He that cannot hit upon the manner of preparing the said signed Star, may endeavour the making of common *Saturn* aureous, particularly after this manner, as follows. Extract with Spirit of Salt out of the Oars or Veins and metallick fugacious Earths, the spiritual Gold that lies hidden therein, and extract or draw off this Spirit thus impregnated with Gold from *Saturn*, which Spirit may by this means be all agen h'd, and be used about new extractions. And as for the Gold which the Spirit extracted, that the *Saturn* hath imbibed, and indues it self thereby with a golden nature; which if you imbue or moisten with many such extractions, that goldenness will, as I may so term it, grow up or increase in each cobotation, and the Spirit of Salt it self will become augmented.

K k k k k

If

If now the *Saturn* be imbued with a sufficient Portion of spiritual Gold, it must be reduced by X, or Alkalies, that so the spiritual Gold may be made corporeal, which will exhibit it self pure unto you, after that the *Saturn* shall be driven away on the Telf. But yet there is no need of doing this, seeing it will be better to granulate the *Saturn*, and by those repeated cohobations to draw off the Spirit of Salt agen, being each time impregnated with that spiritual Gold, and so by this means will you enrich your *Saturn* with the greater plenty of Gold. And being so enriched it must be reduced by a fixing X, in my secret Crucible, which neither suffers any thing to go away in fume, nor to run out; in which reduction the spiritual Gold and the fugacious *Saturn* is self are fixed, so that both Gold and Silver are found on the Telf with great profit, this Labour requiring no other costs save those of the Fire.

This Operation which separates fugacious and fix Gold out of the Oars and Stones, is far better than that which is made by the Solutions of *Lime* and *Saturn*, described at large in the third part of the Prosperity of Germany. For here, we do not need either *Aq. Fortis* or Vinegar for the Solution of *Saturn* or *Lime*, neither need we the fame to get the extracted Gold out of the Spirit of Salt, but being free from that labour and costs, we [only] draw off from that *Saturn*, that Spirit which hath extracted the Gold, which [*Saturn*] attracts and holds the volatile and fix Gold that was in the extraction, inasmuch that there is not requisite to this labour of drawing off the extractions from *Saturn*, any thing else save only Coals and Fire. Add hereunto also, the gainfull increase which daily comes in by the addition of Salt and Water, by which the Spirit of Salts day by day augmented without any costs.

N. B. When the Spirit of Salt becomes too strong by reason of the Salt put thereto, that Water where with the Oar is washed, after the first extraction of the Spirit of Salt, [or after it hath first been extracted with Spirit of Salt] may be made use of [and put thereto] instead of common Water. For it is somewhat fourth, and hath likewise a golden nature.

N. B. Praise God, and forget not the Poor, seeing thou art sufficiently informed and taught by what means thou mayst get great Treasures.

The things I here write, are not for this end, namely, to teach others how to make great heaps of Gold, but only to shew them a way of attaining to a good Medicament, and withall, of knowing and perceiving by the same labour, that the melioration of the Metals is altogether possible and certain.

Whoever he be that could attain so far as to bring Antimony and Lead, as being the first Ens of Gold and Silver, into a certain Dissolvent, so as that the one would not precipitate the other; then at length would he have entrance upon the right way, which leadeth unto great things, like as also Gold and Silver being dissolved in one and the same *Menstruum* gives beginning to things of great moment. I dare affirm therefore, that he that can reduce Gold and Silver, or Antimony and Lead, with Salt, into an agreement, hath opened a most strong Gate which leads unto a great Treasure; for then the Patient must suffer even unto death, and must die, out of whose dead Body, new and living Bodies do afterwards come forth.

Although I have often told you in my Writings that Gold has no greater enemy than concombustible

Sulphur, and that nothing is more inimicitious to Silver than Salt, and nothing more displeasing to Mercury than a strong *Lixivium*, and that amongst these contraries there is a perpetual Antipathy so long, until they are constrained by Art and Skill to become friends and mutually to embrace each other: yet notwithstanding, this will not be so easily feasible by every prating Boaster, and that makes a great noise by his lofty vapouring speeches; no, but for the sake of these very Men, are such great *Arcana's* justly and deservedly wrapped up in darkness, and indeed 'tis fit they should be so.

Moreover if there be required a great suffering, 'tis necessary that both the Gold and Silver, as being Male and Female, should suffer together and not barely the one or the other apart: for hereby this Regeneration will be made so much the nobler and the more magnificent. For Example, make a Circle, and cut or divide it with Diameters crosswise (or at right Angles through the Center) so that the extremities of the Diameters which divide themselves in the middle or central point of the circle may touch the Circle, and that of those four extremities [or Semi-diameters] one may touch above, and the other beneath, and the other twain may reach, one to the right side, and 'tother to the left. Place the Gold in the uppermost extremity marked with the letter A, and his enemy, namely Sulphur, in the lower extremity, which the letter C, demonstrates. In like manner place Silver on the left side of the Gold, at the letter B, and its enemy, *viz.* Salt on the right side marked D, and you will see how averily these enemies behold each the other. The *Sol* looking about him spies his capital enemy, Sulphur, directly opposite unto him, and hath *Lime* at his left side, and Salt at his right; and very willingly would he enter into friendship with *Lime*, and Salt which are joynted at his side, if they but would, or indeed could. But he honours not his capital enemy Sulphur, with so much as a look. The *Lime* placed by the side of the Sun, does not permit the Salt to joynt it self with the Gold. For when the Salt is with the *Sol*, it clearly hinders the *Lime* from associating it self with the same. Nor can it possibly be that Salt, *Lime* and Gold should enter into a thorough familiarity. Thus too is it with *Lime*, who hath her capital enemy diametrically opposite unto her, and very willingly would she enter into friendship with both her neighbours, *viz.* *Sol* and Sulphur, if they were not such great enemies (to each other,) and refused this familiarity. For if *Lime* associates unto her self the Sun, then Sulphur denies to come into the society. If she admits the Sulphur as her companion then, then *Sol* is excluded, as abominating the friendship with his enemy Sulphur. Much less therefore can *Lime* be the companion of them both together. See the *Fig.* in the Book of Dialog.

But now if the Gods please, that these four capital enemies, should unite in one sociable amity, and that wonderful regenerations should arise from this new familiarity, (then) do they command *Vulcan* to heat in the Fire this Circle comprizing those four capital enemies, thus constituted in the four aforesaid extremities, and casting such hatefull looks upon each other, and yet not knowing how to escape out of the Circle, and to press them together more and more with his Hammer by little and little, until all four being driven into one mass, do come together into one body, which body doth then obtain a power of reconciling all enemies, and of effecting great matters. By

By this here spoken may any one easily conjecture, what great suffering there is in this Conjunction, and what great freights do afflict these enemies, when each of them must thus against their will enter into friendship with his capital enemy. Verily we find them to be such sufferings as have not their like again, and therefore do they produce to light, such great and such wonderful regenerations. Now whatsoever it be that is exercised in but a small suffering, the fame doth admit of but small emendation.

The greater the suffering, the greater the melioration, so that that affliction which brings with it even death it self, brings with it also so much the more noble and magnificent Regeneration and Resurrection. He that suffers not in this World, shall not have the Crown put upon him after his Resurrection. By how much the greater and more innocent the suffering and affliction of this life is, so much the greater, and fairer a Crown may be expected in the other World.

The Grape is prest so long, till it be rid of all its juice, this juice doth indeed bring a sweet and pleasant delightfulness unto mortal man, but the Grape it self which the juice is prest out of, ceaseth to be a Grape, and perisheth through defect of juice, and passeth into nothing. But unto the noble Vine, hath God given this benefit, that it yearly bears not barely one but many Grapes together: All which being pluckt off, it doth nevertheless produce the following year no fewer, but rather more Grapes; and still remains a blessed and fruitful Vine, because it is furnished with roots and fertile Boughs. On the contrary, they that have devoured the good and sweet juice themselves, remain always hungry and thirsty, and that for this reason, because they guzzle down the juice too new and fresh, whereby their Bellies swell, and they receive no nutriment therefrom.

This is a thing certain and undoubted, that the bodies of the Metals become by suffering and dying far more excellent and more noble. He therefore that knows that the patient is to be subjected unto its own agent, and doth also understand by what way they are to be conjoined, will never labour in vain, but will reap the wished reward of his pains. When the agent doth touch only the superficies of the patient, and penetrates not into its heart or root, there will verily be but a very little good done, save only this, *viz.* That the Agent being afore rendered aureous, is able to give unto its patient also a golden nature, and to bring the fame to an aureous degree, and to bestow upon it the perfection of Gold: but that melioration which is done only by it self proceeds on very slowly.

As concerning the manner of enduing the Spirit of Salt with an aureous nature, that so it may the sooner render its patient a partaker of golden virtues, we have spoken of that already, and demonstrated it clearly enough; he that does not understand, we cannot help him any other way.

N. B. When the Eagle, the Servant of Jupiter, hath with his beak and talons plucked out the coagulated beams of the Sun out of the Cliffs and Rocks, and brings them unto Jupiter, he is so very bountiful, that he sends down the fame unto us by the Rain, which is of so much efficacy, as that all the Herbs upon which it falls are bettered, and the martial, venereal, saturnine, *Lunar* and mercurial Herbs do put on the golden nature of the Sun; so efficacious is the golden Rain of Jupiter, if the Eagle hath first brought unto him the coagulated rays of the Sun.

And that I may be the better understood, and that it may be known, that the Melioration of Metals may be accomplished by a dry Agent, full as well, yea and better, and more profitably than by a moist Agent; I have judged it a thing worth while to adjoyn the following Process under the Title of the Great Country Farmer.

And let the studious Artift know, that the amending of the Metals by the dry way, by the operation of dry Salt, is far more easie, and may likewise be dispatched in a greater quantity, than is wont to be done by the moist way: and that there is nothing required to this operation save Salt and Coals, be the Metals that are to be fixed, even what they will.

For Example, if a man be desirous to fix *Saturn*, or to procure unto it a Silvery nature, there needs not pure Lead be taken for this work, seeing he may have the Oar or Vein thereof for much less price; and indeed there is some that is a wild and sulphureous Oar, which yields not, in the melting, any good Lead, and may be had in great plenty in some places of Germany that I know of, for a very small price, or rather for none at all. Such a wild Oar of Lead as this is, which yields neither good Lead, nor is fit for the Pottery to glaze their Pots withall, by reason of its hard fusion, doe I chuse for my operation, not onely because it costs less than other such Oars of Lead doe, but for this reason too, because it hath store of Sulphur, and fit enough for fixation.

This Vein or Oar doe I bring into small Powder, and mix as much Salt thereto as need requires, then cast it in upon the Coals, in such a Furnace as I have described to make store of Spirit of Salt in: The Salt and the Sulphur exercising their vehement or powerful virtues upon the Lead, causeth it to be afflicted with terrible dolours, inasmuch that part thereof ascendeth on high [or sublimeth] with part of the Salt, and betakes it self into Receivers fitted on for that purpose. In which sublimation, the Salt and the Lead ascend in a spiritual manner, and contrary to their will, suffer spiritually, and so are constrained to enter into friendship, finding a place of quietude in those cold Receivers, and there settling together.

The residue of the Oar, and part of the Salt being burnt up, and emitting no more fumes, but falling down through the Grate like Ashes, more new or fresh Coals must be put into the Furnace, and new matter must be thrown thereupon, as afore; and this Labour is to be continued so long, as it shall please any one to follow it. Now by this, the *Saturn* is far more vehemently afflicted, than in the moist way by the Spirit of Salt; And if unto the Oven [or Receiver] receiving the fume, and in which the flowers of the Salt and Lead settle, there shall be applied yet several Receivers, there will then be therein caught store of Spirit of Salt, which being rectified, may be agen made use of in the moist way. The flowers being taken out of the Oven or Receiver into which the fume goes, are to be agen thrown in upon the live Coals in the Furnace, that they may suter anew and be sublimed. After that they are all sublimed again on this wise, they are to be agen taken out of the Oven, and be cast in upon the live Coals; and must be afflicted with these Labours so often repeated, until they become fix and ascend no more, but fall down into the Ashes. Which being wafted, will yield a Salt profitable for many things, and will quit all the costs which have been laid out upon

upon Lead, Salt, and Coals; so that the Spirit of Salt which is gotten, and that which is amended in the Lead Oar by the Salt, cost nothing. The Ashes being waft are to be reduced, in a Furnace, by blast, and be so often tormented, till a good portion of Silver be gotten by this operation, which the elaborated matter, being purged by a due separation upon the Tests, will give. And so shall you have Gold and Silver by the benefit of this operation, by which [operation] we have manifested unto you the Great Country Farmer paying his yearly Rent.

Now like as Saturn is dealt withall in this operation, even so are the other Metals wont to be handled too; but yet you must observe the Regiment of the fire, which, according to the diversity of the Metals, must also be diversly administered. And even the Commixtion it self requires good heeding, as being a business of no small moment.

Moreover, in this operation you must also note, That one Salt is more fit for this operation than another is; for by how the sharper nature they have, so much the more commodious and profitable do they themselves to be. So Common Salt sublimed, as is done in this Labour, will operate far stronger than Common Salt it self unblimmed. Besides, there are Salts to be found which work yet far more powerfully, yea so strongly, as that they need not the help of an external fire, but do produce their effects even in the cold. The operation of which, in the moist way, if any be desirous to promote and strengthen by an external fire, he may do so in a Lamp-Furnace, and free himself of the charge of Coals, and be exempt from that frequent Labour by which the Fire is to be maintained.

Some moist Fires are of such great virtues, as that they need not any Lamp-fire, but a small golden thread or wire in burning Spirit of Wine is capable of administering hear sufficient.

And the burning Spirit, if made of Leaves, Grass, rotten Fruit, or Corn, and Grape-stones or husks will be but of small costs, or in a manner none at all. Now a pound of such Spirit being placed with a Golden wick in a convenient Lamp will suffice for three or four days, and give heat enough. But yet nevertheless, that moist fire doth ripen its Metal without the help of any external fire at all, and yields its profit, but then it requires a longer space of time.

Put case therefore, that I make my moist fire so strong as to be able to perform its office in the cold, and that it needs not any external fire: And if I were to make a fire, it would needs require one Ducker's charge: If now, standing any-where, it yields me two Golden Duckets out of the matured Metal, it would do well enough, and abundantly recompense the labour and costs expended. For there's nothing wanting of the Metal [you took to ripen] save that which is changed into Gold and Silver.

And so far as I can see by many such Vessels, and those great ones too, there's no doubt to be made, but that my gain will be the greater, and that with very little labour. For now, at first, the labour of preparing the moist fire, is in a manner no labour at all, for in three or four days may be so much made as is sufficient for the maturing of a great deal of Metal. For this fire may be compared to a Seed, which being sown in the Earth afore Winter, doth in the Summer-season produce store of Fruit, and fit to be reaped.

And though this maturation proceeds on exceed-

ing slowly, and excludes all haist, yet it brings with it this benefit, namely, that it requireth no other labour in the Winter-time, but to be onely once laid by, and the perfecting thereof must be committed to God and Time.

There are various and divers such cold Fires, that promote the maturation of the Metals, and may be gotten out of divers Subjects, namely, out of Tartar, Urine, Hairs of Animals, Horns, Calx-vive, Soot, the Blood of Animals, the Feathers of Birds, the Bones of Horses, Oxen, and other Beasts, out of which such a fire is very difficultly prepared, one of them, here reckoned up, excepted, out of which the said fire may be with an easie labour and business made, and without costs. It is therefore a great gift of God, and an especial grace from our Creator, if he make us possessors of such a Country Farmer, which being sustained without any costs, doth notwithstanding very largely pay his yearly Rent. To God therefore are uncessant thanks to be returned for so great a benefit.

But we have said enough of these moist and dry Metal ripening Fires; what way soever any one is minded to chuse, that way may he follow, for it lies in his own free choice. If he chance to err, let him not lay the blame upon me, who out of a good mind have undertaken these labours of writing, but cannot thrust the chewed meat into any ones mouth. I will by God's permission show the wonders of God to some friends this next Summer, that so such as come after us may likewise have occasion of praising God, and of giving him thanks.

But even as the common Earth, when it is moistened with often showers, and now and then freed of them by the heat of the Sun, retains in it self a fruitful Salt, and doth necessarily acquire a fertility: So likewise our Earth doth not onely daily encrease in goodness, but in weight too, and becomes more ponderous: but you must not think that this heaviness or weight proceeds from the Spirit of Salt's insinuating it self into the porous Earth, no: For if the said Salt should be but onely eight days time in the digestion, and the Spirit of Salt be [then] wafted off, yet would it be encreased a quarter part; which ponderosity comes indeed from the Spirit of Salt, out of which the Saturn draws something unto it self for nutritious sake, as the Common Earth does out of the showers of Rain, and becomes more weighty.

For if there were no occult and nitrous virtue in the Rain, it would conduce but little to fertility; and if there were no spiritual and astral Gold, or spiritual and astral Sun in Salt, the immature Metals could not be ripened by the same. By how much the oftner therefore, a good Spirit of Salt is drawn off from the Saturnine Earth, and Saturnine Seed, so much the sooner also doth that Seed arrive unto its full ripeness. For at every turn [of drawing off] something of the good part of the Spirit of Salt remains behind, attracted by the Earth and Seed, from which the melioration and augmentation doe arise: as may be seen in the Vegetable Seeds which sprout forth out of the Earth, and are encreased by the help of Rain.

The possibility of these things I have seen, but have not hitherto brought the said matters to a full maturity, or to speak more rightly, I have not finished the whole operation. He that is minded to make a thorough trial, may so doe: and if he misse the effect of his endeavours, let him not blame me, for I doe not aim at drilling on any one by my persuasions,

ions, and to bestow his charges on an uncertain thing. But I mention these things that to the nature of Metals as also of Salts may be known, and that (by the help of this knowledge) the Writings of the Philosophers may be the better understood. For the labour here proposed avoucheth the truth of those Operations which the Philosophers call their Calcination, Dealbation, Incineration, Ascension, Descention, Cohobation, Inceration, Distillation, Sublimation, Volatilization, Maturation, Fixation, and say that all these and the like Chymical Operations may be made in one Vessel, with one Fire, in one Furnace, without any change of the Labours, Vessels, or Fire.

For the Philosophers have described their great secrets and Arcana's parabolically, and in Riddles, but especially the Poets, as Ovid, Virgil, and many others, who are very hard to be understood by those that have not the knowledge of the nature of Metals, which being once known and understood, renders the meaning of the Poets easie. For the Poets were wont to impose one while such a name upon such a Metal, another time another name upon another Metal, which custom of theirs, he that does not heedfully mark will easily fall into an error, and mis the apprehension of their meaning.

For Example, in one place they call Copper Venus, in another, the Wife of Mars, in another, the Sister and Wife of Jupiter. And so deal they with Silver too, one while they call it Luce, by and by Diana or Juna, another time Vesta. Apollo is by them stiled one while Sol, then Phobus, then Latona, so that it is exceeding necessary, for those that are desirous to learn ought out of their Writings, to be well acquainted with those different names and Appellations. And although the Poets do account all the Metals for the Sons of Saturn, yet do they sub-distinguish them and stile them, Saturn, Jupiter, Venus, &c.

The common Lead is Saturn, and so is Antimony, Saturn, Bismite, Tutia, Lapis Calaminaris, the Ashy Colour, Yellow, White, and red Magnesia are termed by the name of Saturn: The white Marcassite and Zink are deemed to be of the Family or Pedegree of Jupiter: Orichalcum or white and red Copper, are stiled by the name of Venus. But according as Venus is impregnated, and according as the Copper is white or red, so hath it its name. The red Copper is as yet a Virgin. Forasmuch therefore as the Poets have committed unto Writing the Transmutation of the Metals under the Cover, and veil of Fables, and have made mention of Saturn, Jupiter, Mars and Venus; it can never possibly be, that he who knows not this different distinction can understand their meaning. And for an Example hereof, consider but the Fable of Diana and Apollo, brought forth at one Birth by Latona, who was gotten with Child by lying with Jupiter, and was driven into exile by jealous Juna, and having a long time suffered Persecution by the biting Serpent Python, and being driven to flye through all the Countries of the World, did at last after many grievous labours and troubles pass over the tempestuous Sea into the Island Ortygia, and betook her self to her Sister Aferia, by whom she was received, and begat these Twins, viz. Diana and Apollo.

Who will be able to apprehend the meaning of this Fable, save he that well understands the nature of the Metals? Verily no body will so much as dream of or enll out ought of those Mysteries, unless he shall meet with such like Histories in his metalline la-

hours, and then at length will he understand what the meaning of the Philosophers is. But for Example sake, let us take two Metals which have an affinity with each other, namely Jupiter and Venus, these I joyn together, that so the Woman may be impregnated with the masculine Seed. Latona therefore being great with Child, I cast her forth into exile, that she may be continually persecuted by the biting Serpent Python, untill she flies through the Salt and stormy Sea, into the Island Ortygia, to her Sister Aferia, dwelling in the Island Ortygia, and there bring forth the fair Diana and Apollo. Now these things are easily understood, were but the genuine Appellations substituted in the room of such strange terms, of which thing I have onely some knowledge, but do not profess my self a perfect Interpreter. Yet methinks I cannot chuse but say somewhat. The venomous Serpent Python is a firname of Apollo, for he is produced by the efficacy of the Sun, and is that corrosive Salt which doth so long afflict and torment the impregnated Latona all over the dry part of the World, untill she betakes her self by the Sea, that is, by that strong Salt Water, unto her Sister, that is, unto pure Venus, and precipitates her self, and brings forth the fruits of Jupiter, namely, Diana and Apollo together. The Poet doth here mind both the moist and the dry way together, when the Metal is wrought with a due Cement, and made fix it is [then] dissolved with the Salt Water of the Sea, and pure Plates of Venus are put into it thus dissolved, that so the pure Metal may draw unto it self her impregnated Sister, who brings together with her Gold and Silver, which having been so long hidden in its body doth now manifest it self.

It is indeed the better to fix the Metals by Cements, and to render their fugacious Gold and Silver compact, which may be as well done in the moist way by sharp Waters and moist Fires. But if the Metals, legitimately impregnated, do first pass through a dry and burning hot Fire, and are afterwards yet once more transmitted through the moist and cold Fires, then Plato sends the mundified Soul out of Purgatory unto Neptune, by whom it is carried into Paradise, where it doth afterwards remain safe and free from all danger of the Serpent.

Upon occasion of the aforesaid Fable, and particular Transmutation of the inferior Metals, this is to be yet more observed, that every Jupiter is not fit to impregnate Latona, but that onely which is yet living, efficacious, young, and full of Seed is able to impregnate Latona. For Latona carried with her no more but the Seed onely of Jupiter into the Island Ortygia, and left behind her all the body of Jupiter.

Moreover this is to be considered, that Latona did bring forth Diana first, in the Bosom or Lap of Venus, that is, of the Midwife, but Diana, presently after she was Born, performed the office of a Midwife in receiving her Brother Apollo in her Lap, which thing is sufficiently manifest unto those who have laboured (though but little) in the Metals. For should the Nativity of Apollo have preceded, Venus could not have received him, for which reason Diana ought to come forth first, that so the might the more commodiously receive Apollo from Latona. I know not how by any means it may be proposed more clearly.



Take of the filings of pure Iron, Copper or Tin one part, mix it with three parts of our dry Bath, and put the matter thus mixt into an earthen Vessel, which hath the compactness of Glafs, such as those are, which are made at *Siburg* near *Colen*, at *Bamberg* in *Francia*, and at *Waldenburg*, near *Cassela* in *Hessia*, and in other places of *Germany*. (N. B. The common Vessels and Crucibles cannot retain this Water, but it penetrates through them like Oil.) Heat your Vessel so hot as to cause the Water together with the Metals to melt and flow well, in which liquefaction, part indeed of the water will pass away in fume, but this loss may be easily prevented.

When therefore your Metal hath been thus hold for about one quarter of an hour, part of the fame will be found waft and turned into good Silver: nor must you thus understand me as if the Silver in the said Water were only precipitated by the Metal, and that no part of the Metal it self underwent any Transmutation. For albeit that that Silver which was added to the Saturnine Water be precipitated by the adjoined Metal, and returns into its former Body, yet nevertheless there is more Silver gotten than was added to the Water. For that Saturnine Bath while it is occupied about the dissolution of the Metal, doth by the efficacy and Operation of the adjoined *Lime*, exalt and tinge part of the Metal to an higher degree.

But although this labour does not promise any golden Mountains, it is here put for this end only, namely, that the possibility of the thing may be learned hereby: yet notwithstanding, if any one did but know how to adjoin to this Saturnine Water, a golden Ferment, instead of a silvery one, it could not otherwise be but that he would get no contemptible gain and profit: yet if the same Operation be so instituted with a white Ferment, as that not any the least part thereof may go away in fume, and be lost of the Bath, it will bring no loss. N. B. Neither is it always needfull that the Ferments of pure Metals be adjoined to this Saturnine Bath, for I think that apt Minerals may be found, which may be adhibited in the room of aureous and argenteous Ferments. Nay more, I do likewise think that such subjects may be adjoined to this Saturnine Mercurial Water, as may be therein fixed into white and red Tinctures; the thing it self I have not as yet tried, nor do I profess my self to great a Master, for I propose to my self this onely end in my Writing, namely, to shew unto such as are desirous after transmutations, the way of arriving unto the truth it self. For it will be far easier for every one that searcheth into the business more thoroughly, and that maketh more accurate tryals, to find out far greater things, yea much more than he could ever believe. More such Woman-like Washings, and more Boys Plays shall (God willing) be manifested in my Work of Saturn.

But now this Saturnine dry Bath may be prepared much easier, on this wise following; choose you out such an Oar or *Minera* of Lead, which is very pure and clean, and hath not either Iron, or Copper, or any other Metal admixt therewithall: (N. B. If Silver be likewise in the Oar, it rather profits than hinders, but the said Oar must not have much earth mixt in it, and that which is on it must be taken from it by washing off the same with fair Water.) One, two, three, or more pounds of this leaden Oar thus wash'd, must be put into a strong Cucurbit,

and so many pounds of Spirit of Salt must be (put on and) drawn off thencefrom, which Spirit of Salt, as being a moist and Philosophical Fire, will reduce the pure Oar of Lead, which it toucheth every where and in all places of the same, into a bright, Snowy, easily Meltable, and fugacious Calx, which is to be well wash'd with Water and be dried: This is that metallick Bath, and that dry Water of the Ancients, which wets not the hands, and which is able to perform admirable things in the Metals.

But that this Philosophical and moist Calcination of the Oar of Lead, may be accomplished without any costs, some Salt Water must be poured upon the Spirit of Salt, in the Cucurbit, that the Salt may ascend together with the Spirit, and may augment the fame with so great a quantity of Spirit, as may quit the costs of the Oar and Fire, and yield you the dry Saturnine Bath for nothing, which said Bath may be employed various ways about the washings and emendations of the Metals. For out of the Oars which never underwent the burning by the Fire, and were never as yet deprived of their growing faculty, this Bath thus prepared is to be preferred far above that, which is made of the molten Metal.

I do here open to the studious of Art, the Gate that leads unto most great secrets, which were never so clearly manifested by any Man. It must necessarily therefore be, that either God must put a stop, or that the Operator or Labourer himself must be of a stupid and simple capacity, if he cannot learn from these instructions, as much as to live in quietude, and to furnish himself with Food and Rayment.

If therefore God shall vouchsafe his Blessing unto thee in the use of this secret, then give unto him, the bestower of all good things, thy utmost thanks, and be not unmindfull of the Poor. Sustain thy life by the works of thy hands, and let thy light shine before the blind, neither bury the same enviously in the Earth. Do good to every one, that it may be discerned and appear what Tree thou art. Entertain not too great an opinion of thy self, but remember that thou art a Man and man's err and fall. Give no body occasion of quarrelling and brawling. If an unjust conflict be brought upon thee, commit thy self wholly unto God, and he will succour thee. Give place to the greater, and spare the lesser, God will defend thee and suppress thine Enemies.

The Heathen Philosophers accounted the Prophet *Ezekiel* as a clownish Philosopher, because he wrote so very clearly of the Divine Mysteries. For they took it very untowardly, that he was not so envious, as to involve such great Mysteries in silence, but wrote so openly of the same.

He that will now-a-days make it his design to wind himself out of the crew of Sophisters, and such kind of Philosophers that putteth together hurtfull Books, consisting of fine Spun, and seducing words onely meely for their own gain, and without any profitable information at all in them; he I say that would free himself from such, overcome them, and bear away the prize, must imitate that country man, who on a time entering into a Fencing School at *Norimberg* did behold the Fencers artificially combat together so strongly and so long, until all the others being tired, and forsaking the Stage, there remained but onely one as sole victor; who, with a disdainfull look, containing all the rest, assured himself of the victory.

Being

Being therefore about taking up the Prize-Money there deposited, out sleeps the Countryman, saying, you shall not have the reward, except you bear me too off the Stage: Fight therefore he must with the Countryman, or forsake the prize; but promising himself an assured Victory, he exerciseth his most curious and artificial postures, which he had learned in the fencing School, thereby to make a speedy dispatch with the Countryman, supposing that the Countryman would be frighted, and laying down his Weapons, quit the Stage. The Countryman being no ways scared stood very quiet (as confiding in his own strength) so long, till the Fencer approaching near with his oblique Flourishes, made as 'twere a Wheel afore his Nose, whom the Countryman struck all along, with such a smart blow as made the Hair of his Head flye off, and the Blood run about his Ears. So artificial a Combatant as this being overthrow, he was asked by that plain Country Fellow, whether or no he would yet once more try the fortune of the Play, but he would no more prove the Country down-right blows of a Non-Citizen, but left both the Money and Honour of the Victory to the Countryman, who being asked how he durst adventure upon so artificial and experienced a Fencer, and could so overcome him, he replied, that he perceived the Fencerfull may oblique Skipings, but was no strong Man: and therefore I opposed my strength to his artificial Flourishes, and so with one blow struck him down. By this History it is evident, that that finely Spun, and sophistical prating of the Schools, makes nothing to the purpose but a certain experience, and an infallible knowledge of things both is and fo remains the sole Mistress.

For the sake of this that are lovers of divine and natural Miracles, 'tis expedient that I yet farther manifest some certain secrets of Salt, which are hitherto altogether unknown, and shall be shewn unto my Friends in my Laboratory. Nor do I at all doubt, but that some few will be found who will easily understand these things, and look on them as things credible. But I matter not, whether they credit me who speak the very truth or not. It sufficeth me that I can, not onely perform the things I say, but likewise shew them to Friends, whereby they may be able to reap some benefit and profit therefrom.

Salt may be so introverted by the Operation of the Fire, as that it shall lose its sharp properties, and acquire a sweetness, and be brought by the help of other Vegetables and of Water, unto Fermentation, and so yield a good and sweet burning Spirit, a clear, sweet, and strong white Ale, conserving its salt for many years; various drinks, not unlike in salt to the Wine made of Honey and Fruits of Trees, strong and clear Vinegar, and white Tartar, fully as profitable for such Operations, as the common and natural Tartar of Wine is wont to be used about, and may be with those others [afore mentioned] prepared with small charges.

The Air and Fire do in a short time transmute Salt, into true natural Salt-peter, which is no small profit.

The Fire doth likewise very easily endow common Salt with such kind of properties, as render it capable of sating and dunging barren Fields, Vines, Fruit Trees, Hops, and all other Garden Herbs as well as Sheeps or Beasts Dung.

Salt is also so changed by the Fire in few hours time, as to put on a magnetick nature, and attract

the moisture and water out of the Air, and to retain it with it self a long while, and therefore is not easily dried up by the Sun. Corn, as Oats, Barley, Rye, Wheat, Pease, Beans, and other Seeds being sowed in such a Salt for a Night, do by means thereof, grow up the speedier out of the Earth. It is very profitable therefore in the Summer Season, wherein there's scarcity of Rain, and especially in sandy Grounds, because it holds the Rain Water a good while, so that it is not so easily dried up by the Sun. Besides, too, that Salt is of such attracting virtues as that one ounce thereof, being put in some little Glafs to two ounces of Water, hardens all this Water, in the likeness of Salt, so as that you may carry the same about you in a Paper; whereas there were two parts of Water to one of Salt.

This Salt abounds with yet many other wonderful virtues, some of which I have declared in my Treatise, of the Nature of Salts, filing it by the name of *Sal Mirabilis*, and that not without good cause. It is of the form of Salt-peter, and is void of all Acrimony, it is a little bitterish to the taste, and is of a Balsamick Nature. For being rub'd on Beef or other such like Fleth, it keeps the same, though exposed to the open Air, from being infested with Magots, and from being corrupted: And therefore it is an efficacious subject, with which as being a most efficacious Balsom, dead Bodies are preserved from corruption. It converts all things put into it, in long process of time, into an hard Stone, and abounds with many other wondrous virtues, (for certain causes.) I pass by in silence at this time. *Paracelsus* calls it *Sal Enixum*, but I *Sal Mirabilis*.

Nor ought it to seem at all wonderful, that common Salt doth so easily obtain by the Operation of the Fire, a better and sweeter quality. I do in very deed affirm, that not onely the common Kitchen Salt, but even those too, which are of a most bring corrosivity, as *Aqua Fortis*, *Aqua Regia*, Oil of Salt, of Sulphur, and of Vitriol, may by a certain sweet Vegetable, (without the addition of any contrary Salt) be brought to such a pass in three hours time, as that a Man cannot perceive the least Corrosion at all in them. Nay more, if this very Salt hath dissolved up any Metals, it does not part with them, but holds them still: so that the corrosive Solution of Gold which is made with Oil of Salt, becomes a sweet liquor, which likewise comes fo to pass, with the Solutions of Silver, and of the other Metals: so that by this way excellent Medicaments may most easily be made out of Metals.

New Wines being fermented with such a Salt, do change their Tartar into sweet Wine, and become clear in a months time, and suddenly have both the taste and odour as old Wines usually have. Certainly it is a secret of very great concernment, when by reason of the coldness of the Air, the Wines cannot attain unto their due maturity. N. B. There appertains to this fermentation, a singular and excellent Artifice, by which the Wines and other drinks are promoted to a speedy and strong fermentation, inasmuch that the Wine boils in the Vessel, though the Vessel should be set out to the Snow and Ice in the coldest time of Winter: whereby the Wines must needs be made better, stronger, and sweeter. It is a very artificial invention, hitherto concealed by me, but now I am minded to reveal the same unto my Friends.

M m m m

By



By the same Salt too, Wine, Ale, Methelin, and other drinks may be in short time turned into good and sharp Vinegar without the help of the Sun, or of a warm Stove.

If therefore any one needs for his Operations any distilled Vinegar, he may even distill it in wooden Vessels, without any sparkle of Fire, only in the Air, by the proper efficacy of the liquors themselves, and by the help of the Air: and this in such wise, as that a whole Barrel of distilled Vinegar will not cost so much as one Token, the Barrels or Vessels excepted, which verily is a most Artificial Distillation.

This likewise by the same means may a sweet burning Spirit be distilled out of Ale, Wine, and other the like Liquors.

Any common Wine may be rendered so strong by the help of a certain sweet Salt and artificial fermentation, as that it cannot be drunk because of its strength. Some Pots full only thereof, being poured into a Barrel full of small Wine, will make the same so strong, as to equalize it with generous Wine. He that is so minded may add some sweet Spirit in the fermentation, and so make it the more sweet, more efficacious, and more wholesome, and so a little quantity thereof being poured into another Barrel will make all the Wine therein contained become sweet and good.

Out of common Salt may easily be made good Alum and Vitriol, no less usefull for the Dyers than the natural are.

It is likewise a thing easily feasible, and that too in few hours space, to turn the same into a fiery nature, and make it have the same property as the Salt made of Wood Ashes, and of the burnt Lees of Wine and such like, and as Pot Ashes have, and may serve for the Soap Boilers and be applied to the same uses that those Salts are used for.

Moreover, store of sweet Spirit of Salt may be gotten with small charges out of common Salt, serving not only for the preparation of many excellent Medicaments, but also for the maturation of the meanner and unripe Metals, as we said afore.

These and the like wonderfull things, yea and very many such effects incredible to the unskillfull doth that contemptible and common Salt produce, to the exceeding benefit and profit of mankind: which excellent things I neither would nor could (for the honour of God, the giver of all good things, and for the sake and profit of mankind) any longer conceal. But some or other may object and say, if by the help of common Salt, such great things may be effected, why do not you prefer the same before Salt-peter, which you have so exceedingly praised in the third Part of the Prosperity of Germany, and have constituted it the Monarch as it were of the whole World: whereas notwithstanding it is so venomous a Dragon as is wont to devour all things. Can't these two Salts I pray, namely the common and Salt-peter, divide the Government of the World between them, and bear sway and command both together.

To such I answer, that although that common Salt be the producer of many wonderfull effects, yet must it needs give place unto Salt-peter, which being inflamed and on Fire is wont to overturn huge Mountains, and blow them up into the Air, which thing seeing common Salt cannot do, 'tis but fitting and right that it should be dignified with so great a Title. However, being by the Operation of the

Fire and Air made equal unto Salt-peter, and performing the same effects, it may then worthily be regarded as Salt-peter is with the Title of Monarchy.

The effects which I have attributed to common Salt and Salt-peter, I can every hour shew, in very deed, to be most true. Ill therefore do they do, that bark against me for saying that Salt-peter is a universal Dissolvent, and that endeavour by their railing reproaches to obstruct the truth.

Why do they not produce some better thing, seeing they will not admit of this universal Dissolvent? such Men as these do nothing else but bewray their own foolishness, and kick against the Pricks.

Had they ever done ought, or set their hands to work, for the sake of searching thoroughly into nature, they would never so boldly condemn, and reject that, which they never as yet understood. They behave themselves very basely, and clearly discover unto all Men's view, that they have sucked in their uncertain and foolish Opinions, by the bare reading and hearing of uncertain and dubious Writers, whose meaning notwithstanding they understand not; for my part I remain constant in my Opinion, and say, that Salt-peter is an universal Dissolvent, and is able to dissolve all the things in the whole World, if it be made use of in three forms or shapes. Whatever the acid Spirit thereof, or the Eagle with its sharp Claws cannot effect, its fixed Salt, or the fiery Lyon will accomplish: and whatsoever is impossible to be done by these two, the Griffon which hath its rise from the Eagle and Lyon, will artificially perform.

N. B. The acid Spirit of Niter doth not dissolve sulphureous subjects, but mercurials only: Contrarywise, the fix Niter doth not seize upon mercurial subjects, but sulphureous ones; but the flame of Salt-peter performs both: which verily is wonderful, that things so unlike should in some few hours time be extracted out of one and the same subject. For the corrosive Spirit prepared out of Salt-peter by Distillation, and likewise the fix Salt, are most bitter enemies to each other, which ruining and slaying one another, and being dead, return agen unto that which they were afore, and partakes of both natures; which the Ancient Philoposers do clearly point out unto us by the Griffon, which is headed and winged like an Eagle, and the hinder part of its Body like a Lyon, as we have mentioned more at large in the foregoing third part of the Prosperity of Germany.

Upon him that rightly understands this ancient Fable of the Griffon, Lyon, and Eagle, doth the Sun shine, for he will get no small profit to himself thencefrom. Whatsoever the Corrosive Eagle dissolves and tears a-pieces, that the fix and fiery Lyon precipitates. And whatsoever the Lyon devours, that the Eagle doth agen snatch from him: but they kill each the other, of whose dead bodies the Griffon exists, which hath the body of the Eagle and Lyon. By how much the oftner this labour is repeated, so much the more potent and stronger doth the Griffon come to be, [especially] if both the Eagle and the Lyon have filled themselves with food and are grown fat; or by how much the bigger the Eagle and the Lyon are grown, by such Subjects as are agreeable unto them, afore their mutual fighting; the Griffon doth also become of magnitude proportionable.

Once every day therefore may such a conflict, slaughter, revivification, and transmutation of these two fighting and capital Enemies, viz. the Eagle and

Lion,

Lion into the Griffon be made. But if you would have it profitable, then must Vulcan sharpen Saturn's Sythe, by which he may divide the Griffon [in twain,] and may turn whatever proceeded from the Eagle, into the Eagle again; and may transmute that which arose from the Lion into the Lion agen. When the dominion of the Griffon is divided, and that the Eagle bears sway onely over his birds, and the Lion onely over his beasts, like two Kings, then all is well, and there's no war. But if once the Eagle endeavours to snatch away from the Lion his prey, then ariseth a great war, and of so long a continuance, till they have slain each the other, of whose bodies the Gods doe make the Griffon. But when the Griffon becomes too disdainfull, and affecteth Tyranny, and designs to bear rule over birds and beasts together, he is agen divided by Vulcan, by the pervasion of old Saturn, that so he may return by a reiterated transmutation into the Eagle and Lyon: which wheel [or rotation] of reciprocal transmutation doth never rest, but converts it self [or turns it self round] in a perpetual course for Man's punishment, as long as it shall please the most high God, who, at last, will put an end to all fightings, slaughter, and contention, that afflict this world: at which time all the Eagles and Lions which ever were in the world, shall be turned into the Great Griffon, which will rend and overthrow the whole Earth.

This time all pious Souls doe expect and wait for with ardent desire, and many sighs, that they may be at last freed from the talons of the Eagles, which rend all things a-pieces, and from the claws of the roaring Lions, and enjoy everlasting peace and quietude.

Thus much may suffice to have been spoken of Salt-peter at this time, which, how it may be prepared very plentifully, and with great profit, out of the Salts of Vegetables, Animals, and Minerals, I have already declared in the foregoing third Part of the Prosperity of Germany. He now that dreams of so managing his affairs as to reap benefit and profit to himself thencefrom, may inquire into the business by a more accurate meditation and search. Yet let him know, that Salt-peter may be very easily made of many vile Subjects, which may be every where had: of which Salt, if you have plenty, you cannot want other things. For not onely most excellent Medicaments against all kinds of Diseases may be made with Salt-peter, as likewise the growing faculty of Fruits springing out of the Earth, be promoted, as of Corn, Wine, and such like things necessary for the sustaining of the life of Man; but also pure good Gold may very easily, but with great profit, be gotten out of the imperfect Metals.

Seeing then, that by means thereof, a man may be supplied with firm health, food, and rayment, and with Gold and Silver, what other thing is there, I pray, that he can want? That which I have so oftentimes said, I doe here repeat and affirm, That there is not in the whole World any subject that can compare with Salt-peter, much less be preferred before it.

Such a noble, yea so kingly a Subject therefore as this is, well deserves to be most highly honoured by us, and to be searcht into by the utmost of our endeavours, because of the so great benefits it bestows upon Mankind. We will therefore proclaim and pronounce Salt-peter to be the Monarch of the whole World, though all its and my enemies, who endeavour to bespatter our honour and repute with the

brands of infamy, doe even burst for malice.

O most foolish men, with how vain a hope doe ye expect the Lion and Monarch from the North, as the Jews doe their Messiah, who came above 1600 years ago. The Lion of the North, and the Monarch of the World is even at this time present, and hath always been, but yet hath been known but by a few; the full and perfect revelation of which, God alone knows. I doe verily think the time is now at hand; These things which are known unto us concerning him, are all of them but particulars, and very few too. But if the said Northern Lion shall find out and dig forth the treasures which lye hidden in the Mountains, then will he at last exhibit his power to be seen, and shew himself to be the Monarch of the whole World.

Salt-peter is that great and fire-spitting Dragon, the keeper of the Golden Apples, and that venomous Basilisk which kills all things with his looks. If he be but fixt and made constant in the fire, then is he that Salamander living in the fire, and that Phoenix the bird of the Sun, which having gathered pure Gold out of the Sand, useth it to the making of her nest, and arriving to its utmost old age, burns her self; out of whose Ashes other Phoenix's are produced.

He that desires to know more of the Griffon, Phoenix, Dragon, Basilisk, and Salamander, all which doe exceedingly thirst after Gold, and dig it out of the Earth and keep it, may read Pliny, and other the ancient Writers of natural things; as also Ambrosius Calepine's Dictionary of eight Languages, and of the last Edition.

#### The Conclusion.

These (O friendly Reader) are the things which I was willing to publish at this time for the Countries good; Had I had more time and opportunity, I would have added more profitable secrets, and such too as are of no small moment. If I find that these here written are acceptable, I will in a subjoyned Appendix make a clearer interpretation of such obscure places as may be herein met with.

N. B. I would have the friendly Reader here know, that although I have written these Four Parts of the Prosperity of Germany clear enough, above my other [Writings] [or more clear than the others] yet notwithstanding I have referred for my self and my friends somewhat amongst all the Processes, and ways of operation, so that I know how to effect the preparations of Salt-peter, and to make use of its various properties, in extracting Gold and Silver out of the Oars, and in the melioration of the imperfect Metals, and transmuting them into Gold and Silver much easier, and far more commodiously, and with much less costs.

The things which I have written, I have written for every one, Friends and Foes together; The other, and those better Secrets, I have referred to my self and my friends. This shall now (God willing) be my chiefest care, that my Laboratory, in which the truth of the whole business shall be shown unto my friends, may be fitted up and made ready. In the mean time, the Princes and Noble men, whose territories such metallick treasures are in, and cannot be extracted by the help of common fusion, may consider, whether or no it will be agreeable to their minds to make use of these my Artificial, and not vulgar Operations in extracting the Gold and Silver by

by Salt and Salt-peter out of such-like auriferous subjects. If it shall seem unto them a thing worth while, to institute such operations for the profit of their Countries, they may send unto me a fit person, and one that knows how to deal in the fire, and one that is of a silent disposition, and of good education, who may learn the very work it self in my Laboratory.

But they that are Lords of such places as doe not contain in them those auriferous Minera's or Oars, and can nevertheless get store of them from the bordering Countries, and are desirous of amending them, and using them for their profit, we deny not to shew and disclose the Art unto them too, (the persons always considered,) namely that artificial and moist Extraction of the volatile and fix Gold, not only out of Minerals, Stones, Sand, and Clay, but likewise out of the already-molten Metals themselves, as Lead, Tin, Iron, and Copper; in which Metals, there is often times hidden much Gold and Silver,

which admits not of being extracted by the common melting Fire; but is easily drawn thereout of, by the maturation and separation that is caused by Salt and Salt-peter, and so brought to common use.

All these things we will not be loth to make friends partakers of, as likewise of other rare and artificial inventions, and such as are profitable to all kinds of men, none excepted; which are such things as will bring much profit to my Country, and shall be shewn in my Laboratory, publicly, and privately unto friends: but with this proviso, namely, if the said friends will faithfully promise unto me, that they will with a faithful silence conceal those secrets which they shall see and learn from me, and improve the same, onely to the honour of God, to the comfort of the sick, to the help and succour of poor Widows and Orphans, and to the defence of the Truth; and not use them to Diabolical disdain, and detestable pride, and other fooleries and vanities.

The End of the Fourth Part of the Prosperity of Germany.

## THE FIFTH PART OF THE Prosperity of GERMANY.

Clearly and Solidly demonstrating, and as it were shewing with the Fingers, what Alchymy is, and what benefit may by the help thereof, be gotten every where, and in most places of *Germany*. Written and Published to the Honour of God the giver of all good things, primarily; and to the Honour of all the great ones of the Country; and for the Health, Profit, and Assistance against Forreign Invasions, of all their Inhabitants that are by due right and obedience subject unto them.

**L**IKE as the weighty command of God enjoyns all Children to love their Parents, and to submit themselves unto them, with a due obedience in all lawfull and equitable things, and to yield them due fidelity: Even so likewise doth he require from every subject a due obedience to their particular Magistrates, that they most willingly obey them (with a faithfull observance, as being the Fathers of the Country, and to whom they are tied by all right of Fidelity) in all such things as pass not be-

yond the boundaries of equity, and withall it behoves each such subject to communicate any thing whatsoever that is requisite for their safety and defence, and for the repelling and beating off the Enemies.

The consideration of this dutifull service, which binds every Subject to his Magistrate, stirred me up (seeing that greivous and sudden Fire which almost destroyed all the Kingdom of *Poland*, and therefore fearing, lest by dilating it self it should also deri-

ment our Country) to take care in publishing, some four years ago, a little Book intituled the first Part of the Prosperity of *Germany*. I therein taught, by what means the vast plenty of Corn and Wine might be so concentrated as to be easily preserved and kept, and so be made serviceable for the common good, and of exceeding profit, in future calamitous times.

I likewise shewed the way and manner of some other Arts, and such as are most usefull for the common good of the Country, amongst which, that discovery of making Salt-peter out of old and rotten Wood, (from which may a vast quantity thereof be had) is none of the meanest.

I have also be thought my self of another way of pleasuring my Country with no small benefit afore I die, and thus I intend it.

First of all, I would have the whole World know by this small Work or Treatise, that I have a mind to demonstrate the most profitable and principal secrets which I have treated of (partly openly or plainly, and partly obscurely or more darkly) in those four parts of the Prosperity of *Germany*, and that both to the high and low in my publick and private Laboratory, afore this year is run about. To this end, I have already the chiefest and most necessary Utensils at hand, and when all the necessary provision is gotten together and made ready, those said *Arcanums* which will be so exceedingly profitable to the Country, shall be visibly demonstrated to such as the chiefest Magistrates shall make choise of, and to other honest Citizens and Men of the Country. And amongst these *Arcana's* which are of such great benefit, the three following ones are the most principal.

The first is, the making of good Salt-peter out of contemptible, and every where obvious subjects.

The second is, how by the help of this Salt-peter, easily and copiously to extract the fugitive, and the fix Gold and Silver and Copper out of the *Minera's* or Oars, with a great deal of profit and mighty advantage, and that without any melting or fusion by Fire.

The third is this, the truth and certainty of Alchymy shall be shown, and it shall be proved, that it is not any vain dream, deceitfull Phantasia or Falchacy, as the greatest part and number of its haters and *Ignoramus's* have hitherto slanderously reported; but that it is a most true Artifice, and of wondrous consequence, by the help of which, (it making use of Fire and Salt,) all contemptible Minerals and Metals, and which are of no great gain, as *Lead, Iron, Tin, Bismuth, Cobolt, Zink, Lap Calaminaris, Marcassites*, all other fugacious Minerals may be so fixed and ripened, as that much and true and constant Gold and Silver may be extracted out of them with small costs, but abundance of profit.

These three secrets verily are in my judgment of great moment and therefore are worthy for the great ones, and Princes, and other Fathers of the common Weal to be made partakers thereof by revealing the same unto them.

I have deemed it worth while, in a few words to illustrate the incredible utility thencefrom arising, that any one that hath but any reason may perceive it.

And first, as concerning Salt-peter, the whole World knows what profitable and needfull a subject it is. There can never be so great a quantity thereof prepared, but it may not onely be applied to ne-

cessary uses but also to such as bring a great deal of profit. I forbear to speak of its most great use and exceeding profit in making Gun-powder, which no Kingdoms, no Common-wealths can want to defend their Country withall, and drive off their Enemies.

And if there were no need of it for this thing, yet would it be of mighty moment, and bring in abundance of profit by extracting Gold and Silver out of the poorer Oars which will not bear the charges of melting, and now there will never be so much Gold and Silver, as that it will not be of any profit to a Country.

Nay more, if there were no want of Gun-powder, nor of Gold nor Silver, (which time when 'twill come, and how it should come, for my part I cannot see) yet (having Peter) we cannot be in want of Bread; and how great soever the plenty is of Wine, and Corn, and Fruits, yet there is never want to be too much. Corn and Seeds being macerated with Salt-peter afore they are sown, and the Roots of Vines and Trees being moistned with a very little of its liquor, do not onely grow more plentifully, but also produce more plenty of Fruits, and such as ripen far sooner, and are of a sweeter Taste, than if they were dung'd with that stinking Beasts Dung liquor. If then, Salt-peter be a subject so excellent, as that we can by no means want it, and that it may so easily be prepared out of Wood and Stones in plenty; if above all other things it makes the Earth fruitful, if it can extract plenty of true Gold and Silver out of the contemptible Sand and Flints, what can we desire more from it, unless it be a found and healthfull Body, whereby we may in fulness of health quietly and peaceably enjoy such great benefits vouchsafed us by God? But now this very same Salt being justly called the wonder of the World can bestow upon us, this very health we speak of.

I do affirm that Alchymy it self, or the Transmutation of the lesser, or meaner Metals into the greater or more noble, and into Gold and Silver, is not a vain dreaming dotage, and an opinion void of reason, but is the very truth it self, and confirmed by many experiments; the demonstration of which, I do, God willing, this Summer not rashly but advidefly set about shewing it by publick and evident experiments, and its use for the good of the Country.

Now then, so far as the Country is every where sufficiently stored with Iron, Lead, Salt and other mineral matters, and such like contemptible subjects, and yet notwithstanding there is not at present any profit arising thereby; verily it cannot be, but that in a few years time (if such melting Houfes were in all places made) Men would be rendred Masters of great Treasures. Who knows what God will do, and whether or no it may not so come to pass, that it may be said of the great ones of [our] Country as is mentioned in Holy Writ concerning *Solomon*. And he made Silver as plentiful as the Stones that lie in the Streets, &c.

But that I may yet more open the Eyes of the Studios after all, and show them, by what means all these things may come to pass, and fall out true, I do hereby assure him, that there's no need of taking those Metals for this Fusion, that are already pure enough as Iron, Lead, Tin, and already fit to be employed about Mans use; no, those common and sulphureous leaden *Minera's* or Oars which are found to be uncapable of yielding profitable and venal or

N n n n

(Glab)



Therefore I doubt not but that seeing this little Book offers the Country such great benefits and Commodity, there will not only be some of the Vulgar sort, but also many of the Noble ones [or Magistrates] be found, to whom the reading of the same will not be a tedious thing.

And now I return again to speak of Alchymy, openly disclosing my Opinion concerning it, and firmly averring, that Salts only have power to wash, maturate, and perfect the unripe Metals.

But some or other may here say, if Alchymy be the fusing of Salt, by what means can it possibly ever be, that Gold and Silver should be gotten out of Salt by melting? If there were Gold in it, cannot it be gotten forth easier than by melting in the Fire? I answer, you are not so to understand it, as if huge heaps of Gold could be gotten by a bare fusing and melting of Salt. No! no such matter. But when the Metals have Salts adjoynd to them in a due manner, and so undergo a melting Fire, they do (in that fusing) display their virtues upon the Metals, and do so bring them to a maturity as so yield forth Gold and Silver. For Salts are the universal ripening Agents, both in the dry and in the moist way, as is clearly evident from the third and fourth part of the Prosperity of Germany, so that there needs no more to be spoken as to this.

But yet, that these things may not seem new, or altogether absurd, I say, that in all Salts there lies hidden spiritual Gold, but yet it cannot be extracted from them without the addition of the Metals. For all the things that are, are generated, encreased, and sustained by the Sun, (and amongst these may be reckoned up the smallest Vegetable) do contain the fugacious beams of the Sun hidden in them, which said beams may by the benefit of Art be made corporeal and fixt. This I taught and demonstrated more profrely in the second part of my *Miraculum Mundi*. I will reach the same in the first Century of my general Appendix, which said Appendix shall illustrate all my Writings with more clear notes; and I will evidently show the way, by which true and natural Gold is to be gotten (by the benefit of a certain precipitating matter, out of Sea Salt, both by the dry and by the moist way. This Operation brings not any considerable profit, but doth in very truth show the possibility of the thing. But he who knows the way of conjoyning true and due [or proper] Metals with legitimate [or suitable] Salts, and of handling them in a due and true way of Fusion, will get Gold and Silver out of all the imperfect Metals, and that with no small profit; and this shall be demonstrated in my Laboratory this present Summer by God's help.

And for the more evident proof hereof, it seems worth while to adjoin a Story out of the Journal of *William Lingou of England*, [rather *Scotland*] who Journeying through *Italy*, testifies that he saw in *Trapania*, a City in *Sicilia*, much Gold excoted or drawn out of Sea Salt; which thing, seeing it agrees with my Opinion, and confirms what I say, I will add the words of the Authour himself as they are in *Latin*.

"The fourth City of *Sicily*, is *Trapania*, situate in the West-side, and opposite to the City *Biserta*, seated on the barbarian Coast of *Africa*, which yields pure Gold, which is exported by the Merchants into *Italy*, *Venice*, *Dalmatia*, and *Greece*. It is excoted in some Artificially made Salt-pits

by the more vehement beams of the Sun, which Pits are filled and emptied every month. Now the Salt here on the Sea-shore, has a colour like the redness of a Ruby, or Corral: The City is almost the one half of it employed about working thereupon. The Gold it self being purged is distributed throughout the whole Christian World.

These are the words of the said Authour, I know nothing of the certainty of the thing it self, he that is desirous to find out the truth of this Relation may easily do it. As for my self, I easily credit this Relation, because of the Mount *Aetna* which always is burning in that Island, and because of the Sulphur too, which all the Land of *Sicily* abounds withall. And verily it seems a thing altogether likely, that when the Inhabitants of this Island upon the Sea-shore, make Salt of the Sea Water for their necessary use, by digging Pits in the Earth after the manner of all those hot Countries, and letting in the Sea Water, and that the warm beams of the Sun separate [or any of] the unprofitable sweeter [or insipid] Water, in Vapour, and that that Water of Salt is endued with a notable sharpness; it extracts the Sulphur out of the Earth which is there in plenty every where, and it renders this [Sulphur] by the help of the heat of the Sun, constant, corporal and fixt, so as that it can be afterwards molten in a melting Furnace into Gold. If now the most hot beams of the Sun, and Salt Water can change common earthly Sulphur into Gold, why may not the same be done also by the benefit of Fire, Salt, and Art.

That all Gold is at first naturally generated of a pure Sulphur in the Earth, no body will indeed deny. That any Sulphur may by the help of Fire and Salt be fixed and changed into natural Gold, daily experience witnesseth, not only in my own Laboratory, but in my Disciples Laboratories too, the which, visibly demonstrates, and even by manual Operation confirms the truth of those things which I have mentioned in the second part of my *Miraculum Mundi*, hereabouts.

That which is mentioned in the old Hymn of the Ancient Church-Fathers, viz. who made Gold of Rods or Twigs, and Gems of Stones, seems to the ignorant altogetheras Paradoxal, new, and incredible: and from which 'tis gathered that St. *John* the Evangelist made Gold of Sticks of Wood, and Gems of common Stones: I can in a few words demonstrate that both are true.

Dissolve common Sulphur, or any Vegetable in common Salt, this Solution will make the Sulphur of a red colour. Keep this Solution for at least one hours space in the Fire, you shall find a little of the Sulphur changed into Gold; to the red Salt, adjoin the Calx of *Saturn*, melt them by Fusion into one Body, and reduce the Lead by a Cupel, you shall find a grain of Gold, it yields indeed no profit but demonstrates the certainty and possibility of Art. But if any one shall be skilled in managing this Operation in great quantity (as shall be done this Summer in my Laboratory) he will not complain of loss, but will always get profit.

But let this suffice as to the making Gold out of any Wood, or any Herb, by the help of Fire and Salt.

Let us now see by what means Stones of manifold colours may be made by the help of Salt, out of Wood or any Herb. Adjoin to the red Salt made of Wood, a little Powder of white Flints, put them

in a Crucible, and melt them in the Fire, that they may become a red Glas, resembling almost the colour of a Ruby; if you keep them longer in the melting, the red colour will be changed into a green, and have the likeness of an Emerald: After this, comes a sky-colour, resembling a Saphir, then follows a yellow, not unlike a Jacynth: then in a longer continuance of Fire, it becomes black and like an Agath. Indeed these Stones are no harder than common Glafs, but as to their colours and beauty do exactly resemble the precious natural Stones.

These two *Arcanum's* indeed do as to the outside view seem not very excellent, but yet I believe, the well minded Reader, to whom I offer them as a pledge or Love-token for to remember me by, will not think them (seeing they teach the extracting of Gold out of any Wood or Vegetable, and how by white Flints to make Stones of several colours) of so small a moment or value, as they appear here to be,

but will believe that he has a foundation laid open for him, to arrive to greater secrets.

As concerning these kind of wonderfull things, and Transmutations hitherto unknown to the World, and changing things into more noble and better Species, I will treat more at large in the ten Centuries, in which, my Writings shall be declared with more evident and clearer Explications, to which I refer the well minded Reader, concluding this Book with those Verses of *Ovid*.

*Tamque opus exegi, quod nec Jovis ira, nec Ignis,  
Nec poterit ferrum, nec edax abolere vetustas.*

And now, a work I finish have, of which, Jove's wrath, or flame, Or Sword, or all devouring time can never raze out the name.

# An APPENDIX TO THE FIFTH PART OF THE Prosperity of GERMANY.

Clearly and perspicuously revealing and declaring, (for the benefit and profit's sake of the whole Country) by what means those three *Arcana's* promised in the said fifth part are to be advantageously effected. Together with an adjoynd Explication of some obscurer places which are not so clearly disclosed in the third and fourth parts of the Prosperity of Germany, as likewise in the first Century.

Friendly Reader,

I doubt not, but it will seem a wonder to many, that *Arcana's* of so great moment and so much utility should be laid open by me, in so perspicuous and evident a description, as for every one thoroughly to know them.

However, any Body may easily persuade himself that I have not so done without weighty causes, which to reckon up here at present, I judge it not so altogether necessary, but that it will be more commodious to refer it to some other convenient time. The chiefest and which is the most over-joyning reason amongst all the rest, is this, viz. the perverseness of some abusive Men, not only endeavouring to make my Writings envied [or hated] by Men of common rank, but also by the great ones, by their lying reproachfull slanders; and especially most falsely averring, that those three *Arcana's* which I promised in the Fifth Part of the Prosperity of Germany, are of no profit,

O O O O

and

and therefore cannot be effected with any advantage, and that I my self sought after nothing else by promising their discovery, save onely by imposing them upon [or selling them unto] others to scrape some Monies together. Now forasmuch as this is the property of Slanders, to be admitted far easilier and readilier than the truth it self, and that for this reason many have diverted their minds from the truth of this thing by buying them about these Calumnies, and so have not known how the case stands; but (on the contrary) seeing I am conscious of mine own Innocency, and am far wide of those Crimes so falsely charged on me, I have judged it most just and most highly necessary, not to suffer those most false Accusations to rest upon me, but to shew the contrary to the Eyes of the whole World, and by demonstrating and disclosing the very truth it self, to recover my honour so perfidiously and treacherously snatcht from me; the which could not possibly be done by any better way than this.

Necessity therefore required the Work it self to speak, and to defend its own self, which indeed is a true and genuine defence, and way of stopping the shameless and lying Mouths of all reproachfull Slanders. God will in time recompence such false Mens most wicked Works, whereby they have exceedingly injured me. Mean while every one may apply these most profitable inventions to their use, and undertake the doing one or other of the Operations whereby they may reap some benefit, which I wish them from my Soul.

Nor do I doubt, but that a very many Men will, by following the Doctrine by me prescribed, and insisting upon the foot-steps of my Writings, which are founded on the truth, as being a sure Foundation, get themselves no small profit; whilst they quietly and peaceably enjoy the gainfull practicing on my Arcana's: And especially of that most easie secret, by which, fugacious and volatile Gold is extracted out of all kinds of Flints, (every where plentifully offering themselves, and so by the help of Lead, is rendered Corporeal. Which Work verily is such, as that one Man doth no ways damage another by, but may rather help and profit him. Therefore do I at present affirm to every body with that truth which God loves, and will defend, that all the following Operations which I manifest in the publishing this little Treatise, have been wrought by me not once onely but often times, and have been shown to many others, so that no body has any reason to doubt hereof, nor need he be solicitous about any other thing but how wisely to manage, the Operation, and to be diligent about his labours. But if it should so fall out as that a Man should commit an error or two, which may easily happen, let him not ascribe the errors he commits, to the Art it self, and thereupon to accuse it of falsity, but let him rather inquire into the occasions and reasons of his own errors, and without doubt by such enquiries will he attain his end, and get the hoped for fruit: in which thing, my first and second Century will by an easie Manducation help him.

These are the things which for the truths sake and to witness it, was I willing to produce. And I do hereby signify to every one that now my publick Laboratory is at an end, and shall remain shut for time to come, which I was willing every one should know.

[The first] Operation shewing the way of reducing any Lead, or any Vein of Lead by the help of common Salt, [and] by Coals, into Athes, in the Furnace called Sticbofen, that so the Gold and Silver may be extracted with profit.

TAKE of Lead or a Leaden Vein two parts, and of common Salt one part. The Lead Ore is to be ground in a Mill, and so are they to be commixt, and by little and little thrown with a Shovel upon the Coals in the Furnace, serving to make Ashes, and which has Pipes or Chimneys fitted thereunto to receive the fume and the ascending Flores. That molten part of Metal and Salt which falls through the Grate is to be again taken up with your Shovel, and cast in upon the Coals until the whole Metal, or all that metallick Vein shall be turned into Ashes. Then farther, all the burnt matter, is to be freed by divers washings from all the defilements, and the remaining Athes of the Metal or Metallick Vein, is to be reduced into a Metal in a Furnace which the Germans call Sticbofen. These incinerations and reductions are to be so often and so long repeated, until you find (by making trial with some little piece) that your Lead is now fitted to be handled or wrought on in the Hearths or Furnaces by the Fire of Separation. For then in the Hearths

or Tests it is changed into Litharge, whereby it may the more commodiously yield forth the Gold and Silver, which by the Fire and Salt are therein matured.

N. B. But you are here to observe that the leaden Oars can indeed be commixed with the Salt, and so thrown in upon the Coals: But now Lead admits not of being so dealt withall, for it is not mixable with the Salt, and therefore it requires that the Salt be first cast in upon the Coals, and then must it be thrown in afterwards at top of it. And this way is to be observed and so often repeated and so long, always throwing in, first the Salt then the Lead, till the Lead being turned into ashes, hath wholly lost its metallick Fuson. The said ashes are to be washt with Water and reduced in the Furnace, on such wise as we spake of but now.

N. B. Other lesser Metals may be added to the Lead or to the leaden Vein or Ore, and so be reduced into Athes together, as Tin, Iron or Copper. But yet these leaden Oars are more advantageous and profitable if they are taken alone, as being more fit for this kind of labour, seeing they have already in them Iron and Copper, and yield not any good and vendible Lead, by reason of their wild nature, and so there's no need of burning up Copper and Tin which are already vendible.

N. B. Whilset

N. B. Whilset this Incineration is done, many Metallick Flores does ascend up into the Receptacles appointed for the fume to go up in, and which are adjoynd to the Furnace, which (if need be) may be taken out, and by washings be freed from the Salt which ascended together with them, and by Reduction be restored or reduced to their former body: and will yield Lead which contains in it Silver, and is to be converted into Litharge like other Lead, that the Silver may be separated therefrom.

This likewise is heedfully to be observed in the other *Mina's* or Oars turned into Athes, that afore their Reduction, they be thoroughly washt from all the Salt, and the light filths or defilements are to be well separated from the metalline body; for if this be neglected, the Salt being forced with the strong blast of the Bellows would carry off the Metal together with it self, and the Ashes of the Coals would hinder the Fuson of the Metal it self, and reduce the same into *Scoria's*.

As concerning the Reduction it self, this is well to be regarded, that the Fire must be kindled in the Furnace at least two hours afore the Ashes of the Oars that are to be reduced, are to be put in, that so the Furnace may be thoroughly bright-hot within; for if it be not through fiery-hot, the Castin *Mina's* melt not, and being not molten they lie in the Fire, and hinder the blast of the Bellows, and spoil the Operation it self.

These labours therefore require a skillfull Artificer, and one versed in such Operations, for they are not so very Facile as they seem to many, to appear to be.

Then farther, this is likewise to be noted, that if the *Mina's* or Oars that you take to this Operation are full of Sulphur, and that that Sulphur is not wholly taken away by torrifying [or calcining them] it will by its fierceness reduce in the melting the body of the good Metal into *Scoria's*, and instead of Metal present you with Dross. And this is that Incineration and Reduction which I have showed in my Laboratory, both to Friends and Enemies; But yet I have (since that time) found out a far easier way of doing this labour, by the help of which, one Man will do more in one day, than he could otherwise in eight days. But because this way is not as yet made common, it seems not convenient in my Opinion to divulge it here; for as much as I have determined with my self in this present Appendix to disclose onely those things which I exposed to be seen in my Laboratory by others.

By what means Gold, Silver, yea and Copper too, may with great profit be extracted out of the poor Metallick Veins by the most way, and which cannot quit the costs of doing it by Fire.

First of all, the metallick Earths are to be made red hot, and to be quenched in cold Water, that so being made brittle they may be ground in a Mill. If Sulphur be admixt in them, then must they by a foregoing firing be freed from the same, because the Sulphur hinders the *Aqua Fortis*, from duely dissolving those Oars. Being now thus prepared, they are to be put into the stronger Glasses, or into Earthen Cucurbits made of the best Clay, and the following Water is to be poured upon them, and is to cover them over three fingers breadth. The Cucurbit being filled with these matters is to be set in a Cal [or Pot] full of Sand, and prepared for this use, and

all the Water is to be drawn therefrom by Distillation: which is not onely all of it again recovered, but withall doth get it self an encrease or augmentation from the Salt-peter or the Salt, so that there ascends more Water by Distillation than was poured on.

The Oars are to be taken out of the Cucurbit, (or Cucurbits, if there were more Pots used) and being taken forth you must pour common Water thereupon to extract the remaining Salt thereout of, in the which Salt is found the Gold and the Silver that was in the Oars.

N. B. This is to be observed in this labour, that all the Spirits are not to be drawn off from the Oars even to the dry Salt; and this not onely to thun the damage that might happen by breaking the Glasses, but also for this reason, viz. that there may be left behind with the Salt a little Acrimony, because of some Salts which easily pass into Salt-peter when some *Aqua Fortis* is drawn off them. And albeit that *Aqua Fortis* will easily turn the whole Body of Kirchin Salt into Salt-peter, yet notwithstanding amongst all the Salts one Salt admits of a speedier, another of a flow Transmutation, according as it is more or less akin in its nature unto Salt-peter.

And therefore to prevent this error, some humidity is to be left with the Oars. For when all the Spirits are drawn off, and the Salt is turned into Salt-peter, the Water would not be sharp enough to hold up the Gold that is extracted, when the Solution is made, for the Water would dissolve barely the Salt-peter, and leave the Gold remaining behind with the Oar.

If this error should chance to be committed, the Salt-peter is to be extracted out of the Oars with the Water, and more new Salt must be poured on upon the same Oars together with the *Aqua Regis* that was drawn off by Distillation; that so this *Aqua Regis* having been once abstracted may not afterwards transmute all the Salt thereto added into Salt-peter. For by how much the *Aqua Regis* is drawn off from the Salt, so much the less is the Salt turned by it into Salt-peter, and at length, it will come to such a pass as to remain just as it was afore the abstraction [of the soft drawn off Spirit]. For this is the nature of *Aqua Fortis*, viz. to transmute half its weight of Salt into Salt-peter at the first time; the second time it transmuteth but a fourth part; the third time much less; and at length will transmute none at all; but puts on the nature of Spirit of Salt: which notwithstanding is most fit to extract Gold and Copper withall out of the Oars in infinitum, if Salt be thereto added, out of which, it is wont to get it self a perpetual encrease (and be) like other Spirit of Salt.

Now then, to prevent this inconvenience, the *Aqua Fortis* may be left off for altogether, and those Minerals and Metallick Earths may be extracted with the Spirit of Salt onely, and Salt added therunto: onely observing this thing in the Distillation, viz. that some of the humidity be left behind with the Oars whereby they may be the easilier taken out of the Glasses.

Moreover this is to be likewise known, that Gold, Silver, and Copper may be extracted out of their Oars or Earths even without *Aqua Fortis* or Spirit of Salt, if onely Salt or Salt-peter be but added. For if some Oil of Vitriol or of Sulphur be poured upon the Water of Salt-peter, or that the Water of Salt be acuated therewithall, it becomes strong enough to extract Gold, and after the extraction and distilling the

Phlegm



Phlegm off, there follows by distilling a pleasant Spirit of Salt, or from Salt-peter a good *Aqua Fortis*. This labour therefore is more gainfull and less troublesome, than if *Aqua Fortis* or Spirit of Salt were used thereunto.

There are other easier and more compendious ways of extracting Gold, Silver and Copper out of their Earths, which, seeing they have not been as yet shown in my Laboratory, I shall silently pass them by at present and that not without reason. But yet there is frequent mention made of the like [Operations] in my first Century, in which he who has an earnest desire to know more of those kind of ways, may make enquiry.

*The Preparation of futable and proper Waters to extract Gold, Silver and Copper out of poor Oars.*

**T**AKE of Salt peter one part, of common *Aqua Fortis* two parts; these being joyned together, extract Silver and also Copper. But to extract Gold out of its Oars or Minerals, there must be taken one part of common Salt, and four parts of *Aqua Fortis*. One pound of Salt, and four of *Aqua Fortis*, make four pounds and  $\frac{1}{2}$  of *Aqua Regia*, the other half pound of Salt stays behind with the Metallick Veins or Oars in the bottom of the Cucurbit, and contains the Gold that was in them, and is to be extracted with common Water.

*The way of getting out the Gold and Silver out of the wash-out Salts by precipitation, and of reducing them to their peculiar bodies without detriment or loss.*

**I**F it be Water of Salt-peter and hath Silver in it, the Water of Salt being poured in, precipitates the Silver to the bottom. But if Water of Salt, and has Gold in it, the Gold is precipitated by pouring on a *Lixivium* which hath in it a little liquor of Flints. And now this Water it self thus mix by pouring (other precipitating liquors on it) yields (by decoction) most excellent Salt-peter. And the *Aqua Fortis* and *Aqua Regia*, which ascended by Distillation, are fit to make new extractions of Gold, Silver, and Copper out of their Earths; and by iterated extractions (by the Salts and Waters thereto added) do they get a perpetual increase, inasmuch that in these extractions of Gold, Silver, and Copper, there are not required at all any other expences save those few, bestowed on firing. Therefore in the beginning of this Work there is not required ought else but one only pound of *Aqua Fortis*, because in the progress of the Work it proceeds on to an infinite increase, yea, enough for the extraction of many thousands of pounds.

(Hence is it that this Work is an unheard of Operation, and doth almost exceed all belief, and from which there must an immense gain of necessity accrue, because Gold, Silver, and Copper may by this means be extracted out of their poor Metallick Earths without costs.

There remains yet one thing which is to be heedfully regarded in the precipitation of the Gold and Silver. A common *Lixivium* cannot precipitate all the Gold out of the *Aqua Regia*, and therefore I had you add to the *Lixivium* some liquor of Flints, and this will also appear in my first Century.

Therefore it behoves every one, clearly to see whether or no he makes use of true and genuine Liquor of Flints in his Operation, that so he may not

instead of it, use a bare simple *Lixivium* onely, and so commit a great error, as it hath happened to some as I have been told.

But he that can't make true and good liquor of Flints, or else has it not at hand, may substitute in its stead, common Spirit of Urine prepared in a Copper still, which together with the said liquor precipitates all the Gold out of the *Aqua Regia*.

*N. B.* But this Gold thus precipitated by Spirit of Urine, fulminates like Gun-powder, unless it be burnt with common Brimstone afore the Reduction, and that this fulminating faculty be taken away from it, which inconvenience the liquor of Flints is not wont to bring.

*N. B.* If there should be much Zink, Iron, or *Lapis Calaminaris* in the Oars of Gold or Silver, the *Aqua Fortis* or *Aqua Regia* would not all ascend by the Distillation, nor get increase; but some part thereof stay with those Metallick Earths, and with the *Lapis Calaminaris*, &c. and by adhering thereunto be concentrated: but yet there would not be any loss by that, for by the pouring on a *Lixivium* of Wood-ashes, may it be turned into good Salt-peter, of as much value as may easily recompence the charges of the *Aq. Fortis*, or *Aq. Regia*.

Besides, you are likewise to observe this, that if there should be Copper admixt in the Oars of the Gold and Silver, the *Aq. Fortis* would extract the Copper too, as well as the Silver.

But now the nearest way of separating these two Metals from each other, is this. Let Spirit of Salt be poured to the *Aq. Fortis*, and it will precipitate all the Silver out of the *Aq. Fortis*, down to the bottom, and the Copper will be left in the water; which if you put some Iron into, it will stick to the Iron, and by this means be gotten out of the water.

This water now, after the Metals are withdrawn from it, is fit to make new Salt-peter with, and by addition of Vitriol to yield a new *Aq. Fortis* by distillation.

*Alkali Salts* do in the Fusing bring the precipitated Silver to its former body, which otherwise is very fugacious.

The Copper is turned into excellent Verdigrise. And so the Oars of Copper, though never so poor, may be extracted, and that with no small benefit: Because the Verdigrise made of the bare Copper is twice the price of the molten Copper it self.

*The manner of making good Salt-peter in plenty, out of Kirchin-Salts and Calx-vive.*

**T**AKE the Stones of Lime, which have been thoroughly changed or reduced into Powder by the Air, four parts: of Kirchin Salt, or Common Salt, one part, [by weight, and not by measure] whether pure or impure [it matters not:] and of this mixture is a thickish paste to be made by moistning it with Urine, or, in want of that, with Water; which is to be made up into a Pile with Wood, and so may it be made *Stratum super stratum*, of what bigness you please: and it may be done in a Furnace made for that purpose, or else in the open Field abroad in the Air. But you must beware in the building up of this Pile, that the mass of Salt and *Calx-vive* be not too thick laid, and too much; but it would be better to make it up in balls or pellets, that so they may be well fired by the flame, which must penetrate everywhere through the previous heap or pile: which cannot

not be, if the mass be spread too broad, and so stop up the passages of the flame.

The heap being made as big as you are minded to have it, the fire must be put under, and so long fed, till all the wood is burnt, and the balls themselves have been red-hot, a whole hour at least: that the Acrimony of the Salt may in so great a heat be changed by the *Calx-vive*, and get it self a milder nature, and consequently be so much the easier transmuted into Salt-peter.

*N. B.* The Salt that is on this wise transmuted, is most fit for dunging Lands, and to be used instead of the common beasts dung, as I have at large taught long ago in many places of my Writings.

This is the preparation of turning Salt into Salt-peter, which Artifice, if any be minded to work about, it is necessary for him to order his Operation this following way.

*The manner of making Salt-peter out of this prepared Salt.*

**F**IRST of all, this inverted Salt must be exposed to the open Air, and beams of the Sun; but yet so, as that the heap may not be moistned by the Rain, and it must lie in its heap the height of some three or four Feet; the which heap is to be wetted either with Man's piss or Beasts; or if there be not enough of this to be had, then with bare water onely, that so the pellets or balls lying quietly for some days, may be dissolved and be mixed with the rest of the matter.

Now when the warm Air hath consumed all the humidity, and dried up the heap, the aforesaid moistning is to be repeated; which being again consumed, and the heap dried, the labour of repeated moistnings and excofations is to be so long continued, as long as necessity requireth: For in long progress of time is the Salt-peter generated, which must be washed out with water, and by decoction be reduced into Stria's or Crystals.

This Generation of Salt-peter proceeds indeed slowly on, but yet it brings a great profit. For if once the Salt-peter be but generated in such an heap of Salt, and the reliques left after the washing out of the Peter be again put to the same heap, there will new Salt-peter be generated in process of time: so that new Salt-peter will every year offer it self to be washed out of the heap: and this work may be continued without end.

But he that would have some Salt-peter from this inverted Salt in a shorter tract of time, let him know, that the Seed or Ferment of Salt-peter must be added unto the said heap, that so this same Seed may get augmentation from the Salt, and increase and grow, like as an herb is wont to grow in a fat and saline Earth. For all things have their Seeds, and doe draw their Increase out of other Salts. The Seed of Salt-peter is volatile, as is its acid Spirit: its Root is fixed Niter; which being implanted in all sharp Salts, doth beget Salt-peter in a most plentiful manner, and such as is very good, or even better than that which ariseth out of those acid Salts and Alcalies.

We doe not here show this propagation of fix Salt-peter by acid Salts, because it is described in the following Labour and Operation.

Therefore like as any Vegetable may be propagated and multiplied not onely by the help of its Seed, but even of its Root too; Even just so is it with Salt-peter, for it admits of propagation and multiplication

by the means both of its Seed and of its Root, as another Herbs doe.

As concerning the Seed of Salt-peter, it is very easily preparable by those who deal in metallick separations and extractions by the moist way. For if Gold be separated from Silver by *Aq. Fortis*; or that Gold and Silver be by it extracted out of their Oars, this very operation hath already abundantly recompensed the charges laid out thereon, and so it offers it self without any costs, and as it were *Gratis*.

And now, if I pour this water on, instead of common Water, upon the inverted Salt, it does not onely become good Salt-peter, but doth also yield (as being the Seed of true Salt-peter) an hundred fold increase, after the manner of the Seed of all Vegetables, and doth the same as they do. And by how much the more of this Nitrous Seed is sown in the Earth, so much the more Salt-peter, and so much the sooner too is generated. For when a Gardener doth sow his Seed sparingly, he must necessarily have but a thin harvest: and so on the contrary it is to be understood of a plentiful harvest. And if now there should be any one that should upbraid the Gardener with the slowness of his Seed, because it is to produce not Buds, nor Stalks, nor Flowers, nor Fruits in a few days space, would not he say that he cannot compell nature, for it reserves to it self its due time, and its natural course?

The very same would I have you understand here concerning Salt-peter: if haply my Enemies, those most ignorant Sheepheads, would object against me, that seeing the Salt-peter doth not presently, in a few days, grow or spring forth from its seed sown, therefore that seed was not true nor good, or that it is altogether impossible that Salt-peter should be generated so plentifully out of Common Salt: I answer (such, as the Gardener does, 'Tis necessary to allow Nature her own appointed time.

But that it may evidently appear, that this my planting of Salt-peter, and that this augmentation may be far more evidently demonstrated, than that of any Vegetable seed; the business may be tried for confirmation sake in a small Experiment, afore you set about a more laborious and prolix exercise, and to prevent your fears of attempting it in vain.

Take the Salt prepared with the *Calx-vive* three pound, and put each a-part in several Earthen Vessels. Take likewise of the Water of Salt-peter already used (as being the Seed of Salt-peter) one ounce, two ounces, and four ounces: with the one ounce of that *Aq. Fortis* commix as much Common water as may serve to moisten one pound of the aforesaid inverted Salt: Then to the two ounces of the same *Aq. Fortis*, adjoyn likewise as much water as may serve to moisten the other pound of Salt with: And so doe with the other four ounces, and therewithall moisten the third pound: Set those three Pots, containing the three several pounds of the said prepared Salt, at the heat of the Sun, but so, as that the Rain may not come, and wash off all the Salt. All the moisture being consumed by the Solar heat, moisten your matters in your pots with Rain water onely, so often, as the drying needs the watering it. When two or three months are over, take out each pound separately by washing it out of the matters in each pot, and you shall find a vast difference, and shall see that that one pound of Salt which had those four ounces of Nitrous seed in it will be all transmuted into Salt-peter, save a few peccs: But that pound

P p p p p which

which had two ounces of the said Seed poured upon it, will contain a lesser portion of Salt-peter; and the other which had but one ounce only will have the least portion. Moreover, if you pour those Salt-waters you wash out, and which are not yet turned into Salt-peter, upon the feces again, and so dry it as afore, and bestow yet other three months on these exiccations and moistnings, and then again boil the Salt-peter out of the Salt, it will be much encreased and bettered; and so you will have to much the greater encrease of Salt, by how much the longer you shall have prosecuted this Labour. Such Experiments doe demonstrate, that by how much the more Seed there is cwn in a fat and salt Earth, to much the more plentifull encrease of the Seed is to be expected.

But those deriding mockers and persecutors of Art and Truth may here object and say, that the Salt-peter ariseth from the Salt-peter water only that was put thereunto, and not from the Salt it self? But I answer, That that used *Aq. Fortis* is indeed the Seed of Salt-peter, but can never recover the Nature of Salt-peter without the help of some fix body: Like as the Seed of an herb cannot become an herb, unless it be cast into a moist and salt Earth, from thence doth it get its body, and so is encreased.

Verily I willingly confes, that the Spirit of Nitre may be reduced to the former nature of Salt-peter, by affuming it self a body out of all the fix Salts. But yet, as far as I have hitherto known, by my manifold inquiries and investigations a long time, I could not find any other Salt (save the following) by the help of which, those Waters utter about metalline Washings, may be sooner and better transmuted into Salt-peter, like as this, and the following Salts doe: And therefore I doe commend it as of the best rank for the making of Salt-peter. The manner of preparing good salt Nitre out of the extracted Oars is already revealed in the first Century, and therefore needs no superfluous repetition here.

*Another Preparation of Salt for the making of Salt-peter.*

Take Common Salt one part, and of a sulphureous Oar, which the Germans call *Schevelkiez*, two or three parts, if they contain less Sulphur: But if they have Vitriol in them too, then must you take equal parts of both. Grind the sulphureous Mineral in a Mill, mix it with the Salt, and heat it red-hot by well torrefying or calcining them for two hours (in Furnaces serving for such a work,) either upon a Grate, or else without a Grate, upon Hearths; that so, during this Candefaction, the Sulphur may have ingress into the Salt, and may alter it. This Salt being washed out of the sulphureous Minera with water, and boiled till a skin gathers at top of the water, it shoots into long Stria's or Cryffals, like Salt-peter, and tastes like it, but falls into Powder in a warmish Air. If it be burnt and prepared by putting *Calx-vivæ* thereto, after the way afore going, it is convertible into good Salt-peter, but sooner and in a shorter time. If the Miner's you use have Copper in them, or any other Metal, yet nevertheless may they be gotten out thence by fusion, for there will be nothing lost in this operation but the Sulphur; and this must have been driven away by burning it, however, if you would have any of the Metal out of the Minera.

*N. B.* The *Capus mortuum* out of which the Spirit of Salt by the addition of the Vitriol is extracted, yields such a like Salt, and very fit to make Salt-peter withall. There are also several other ways, which yield no small plenty of such Salts, and that in a manner without any costs, especially if the help of Stone coals be thereto used. Besides too; this you are to be advised of, that (seeing the Salt is to be burnt with the *Calx-vivæ*) one *Calx* is better than another, for some Lime stones are more apt for the making of Salt-peter, but primarily those, which when you touch your tongue with, doe yield a fiery taste; with which sort, the Lime made of Sea-shells doth not compare as to goodness.

*By what means the Root of Salt-peter is to be implanted in acid Salts, so as to be thereby augmented, like as the Root of a Vegetable, being transplanted, gets an increase from the saltness of the Earth.*

Even as we have demonstrated in the foregoing discourse, that the acid Spirit of Nitre is the seed of Salt-peter, and doth encrease it self out of *Alkali* Salts like as an Herb doth out of the Earth: Even so by the same reason, fix Salt-peter, which is the root of Salt-peter, admits of transplantation, yet not by fixed Salts, like as the sharp Spirit does, but by sharp Salts, whereto it is to be united by implantation: For, two Acidities, and two Alkalies, cannot produce any new Essence, but two Contraries doe always produce a third. The acid Salt, which is of the meanest acidity, and which doth easiest admie of being transmuted into Salt-peter, is the common Kitchen-Salt, which we taught the way but even now of inverting by the Miner's of Sulphur. And if that such provision cannot be had to prepare it by, the very Kitchen-salt it self being taken both in the moist and in the dry way, would perform the same, as I have already shown in other places of my Writings. And as for the making of fix Nitre, you may meet with the way of doing that too and agen in my other Writings, and especially in that place where I have treated of the dry separation of washing of Metals, *viz.* when sulphureous and Antimonial Metals are washed by Nitre.

*The way of preparing Spirit of Salt, necessary for the Extracting of Gold and Copper out of their Oars; as likewise of making good Salt-peter of the matter left after the distillation is finished.*

MIX with two parts of Vitriol or Allum, one part of Kitchen-salt, and throw in this mixture upon hot burning Coals, the Spirits of which are to be taken in great Leaden Cisterns instead of Receivers. This operation (besides the salt Spirit it gives) yields also sharp Flores. If any shall provide himself with double Leaden Cisterns, and shall make the Outer one to hold in it the lesser Cistern, and so fill this outer one with cold water, he shall obtain more plenty of Spirits by reason of this better refrigeration. But such Cisterns requires a great deal of Lead; for verily even those three alone which I had in my Laboratory contained a thousand and forty pounds of these Lead.

There may be other kinds of Receivers applied to this use, which, to reckon up, would be too tedious in this Book.

The

The matter remaining after the Distillation may be ground in a Mill, and one part thereof mixt with two parts of *Calx-vivæ*; and so balls are to be made thereof, and to be put upon wood and burnt, as we shewed afore, that so they may be transmuted into Salt-peter.

But besides all these, there hath been a far better and more compendious incineration, and bettering of the lesser and more imperfect Metals shown and demonstrated to my friends, in my Laboratory, which requires not so many Circumstances and Labours, as the foregoing more prolix operation, which is performed by throwing Common Salt upon the Coals, does: For it is to be done in a peculiar Furnace, and with purer Salts; and being wrought about a greater work, yields very considerable profit: so that it impregnates Silver and Lead with Gold, with twenty four hours ease labour, and renders them worth the labour of separation.

In like manner, Copper may by the help of such Labours be very much amended, and gets no small portion of Silver, if it be added: so that with a little fire and a very few expences, every sort of Copper, though it has eadured the fire scarce twenty four hours, is wont to be so much bettered, as to shew in the Touchstone the marks of two, three, and sometimes six Lots, according as it has been diligently and circumspectly handled. Hence comes it to pass, that by vile and every-where obvious Subjects any Silver and Lead may be matured by little and little into Gold, and so may Copper it self be ripened without any detriment into good Silver, by a few repeated Labours. Now these operations requiring but small costs, and but a few labours to accomplish it, may be exercised without intermission, and bring vast profit. These inventions are such as never were as yet thought on by any, and so never at any time saw the Light. But now they that saw and learned, in my Laboratory, the great incineration, did not all of them see this Labour and Artifice, and apprehend its use, but such of them only that stayed out constant, even to the end of the whole Demonstration in my Laboratory. And as for such as too soon forsook their Master and the School, they are (and indeed very deservedly) altogether ignorant of this operation. For should they have been masters of this *Arcaenum* too, they would verily have detrimented me more, which God of his mercy prevented, and hereby provided, that all [my Arcana's] should not fall altogether into mine Enemies hands. The Furnace which I used about the said Incineration and Melioration of Metals, is as yet in my Laboratory, and will happily there remain all this Winter. But as for mine own part, I have determined with my self to leave off Chymical Labours, communicating them to others, with whom this more compendious bettering of the Metals will be yet longer to be seen. Therefore all the whole Drove of my Enemies, though never so big, will not at all be able to oppress the truth, what mad attempts soever they make against it. For although one or another of them hath thesively stole from me my Secrets, yet presently the Divine goodness hath largely supplied me with others. I have now laid a sure Foundation in Alchymy, and have kindled a Light for both Friends and Enemies, which will very hardly be extinguishd as long as the World endures.

But now, that some little knowledge may be had of this more compendious Incineration, and bettering of Metals, *viz.* of Iron, Copper, Tin and Lead into

Silver, and of *Lune* into Gold; I say that it is to be done in a twofold manner. The first is, when the Metals are destroyed either with common, or else with prepared and moist Chymical Fires, and converted out of their own Metallick being into an Earthy nature and Essence, are imbedded with spiritual Salts, and burnt by a close Cementation, so as by their mutual efficacy and actions upon each other, to amend themselves, and afterwards by reduction and separation to yield forth Silver and Gold with profit. And this Labour admits of being exercised in as great a quantity and plenty as any one pleaseth, and is clearly void of tedious troublefomeness, and great expences, for one onely person may discharge this Operation in one onely Chimney, and that with no small quantity of matter too. Nay more, (and which is of greater moment) if any one shall in this operation make use of such Salts as they call Graduating Salts, which are ease to be got, and cost almost nothing, he will get far greater profit, especially if he shall put Copper-plates to be burnt with the Metals reduced by the said Cementation into ashes, which said Plates, those Graduating Spirits will penetrate wholly and throughout, and in this penetration, better them, and bring them unto a more noble degree, so as to give on the Test, Silver impregnated with Gold. Nor is it necessary that those Copper-plates be separated by Lead in the secret Pot, so to get the Gold and Silver made in them, by the said operation, though they have already gotten a meanly-white Colour. 'Tis better and more profitable to put them yet again in some new Cementations, and urge them more with the violence of the Fire, and they will be enriched with a greater access of Gold and Silver, then afterwards are they to be separated by adding a due [quantity of] Lead, which is [thus] done, when the Lead containing the Gold and Silver, together with the Copper, are melted together into a great Cake, these are to be put in the Furnace, which the Germans call *Siegerofen*, that so the Lead melting may flow down, and in flowing or running down may carry away with it all the Silver and Gold that was in the Copper. By this Artifice is the Copper conserved, and is to be a-new made into Plates, and to be used about new Labours, and be again enriched with Gold and Silver by Cementation.

*N. B.* There is not at all any need of any peculiar Lead for this separation of the Copper, forasmuch as that Lead may be used therabouts which is molten out of the Powders of the Cement, and already contains in it Gold and Silver, which Metals are conserved by one and the same work in the labour of Separation, and are already gotten by the Gradatory Cements out of the Minerals, and the more imperfect Metals.

And this now is my more compendious Incineration and Cementation of the imperfect Metals, to make them better and more perfect. This Operation have I shown to some Friends in my Laboratory, which will moreover be in many places exercised with profit. And now any one may easily foresee and guess, what flame mine Enemies, (who with their Diabolical Clamours and Calumnies, lay my Writings are unprofitable and all over full of Lyes,) must at length be confounded withall, and how basely they have behaved themselves. Nor verily is it to be doubted but that there will be such frequent exercise and so familiar a practice of Alchymy (which is an Art that produceth infinite benefits) throughout

out all Europe, that even abundance of Work-men [or Tradesmen] will leave their Plows, and set themselves about Alchemy, and by the Assistance of my Writings get themselves Food and Rayment in an easier and pleasanter way, even out of the contemptible Sand, and abject Stones. Whereupon it will of necessity follow, that in all those places where now poverty is rife, plenty of Gold and Silver will again come in sight. These are new fruits which God bestoweth in this Age. And every one that gets so far as to obtain these fruits, let him have regard to the poor and needy, and not forget his Benefactors from whom such things proceeded: lest he pull upon himself the wrath and anger of God.

Moreover, there were some other Arcana's ocularily demonstrated in my Laboratory, during the thawing of those meer prolix secrets, the reckoning up of which here I judge needless. Some of them are of no small concernment, which by the same Sinister or unlucky mishap fell into the hands of mine Enemies, and will without all doubt be by them manifested. For that very reason will I myself reveal some, in my second Century (God permitting) that it may not be concealed from any one, what excellent secrets I have disclosed for the use of mankind.

Amongst other Arcana's, this is none of the meanest, which, [viz.] teacheth to extract Copper, (by Waters of almost no cost or charges, out of poor Oars of Copper which are every where obvious, and are not rich enough to defray the charges necessary for a melting Fire,) and bring it to use, and that in great quantity, and so easily as that without question the poor Country-men that can very hardly sustain themselves, their Wives and Children, will for the time to come set about such an Operation, and get such Miner's or Oars, or even the Scorias of them, to extract the Copper out of them and sell it, and so provide themselves Food and Rayment against a sharp Winter, whereas otherwise they must live miserably in want and poverty. The Operation it self is this.

*How Copper may easily and very profitably be extracted and made corporeal (without any melting or fusion) by a certain Water of very small expences.*

There are two sorts of Oars or Veins of Copper met withall, some are mixt with Sulphur, and refuse extracting with *Aqua Fortis*; inasmuch that you must first remove the Sulphur from them by roasting as it were and burning them, afore that Salts or sharp Waters can display their virtues upon them. Now that roasting (or calcining) then, is to be done on Hearths by the flame of Wood, on which, that metalline matter broken into Powder, is to be unceasingly stirred with Iron Instruments, so long till it emits no more sulphureous stench: This done, they admit of extraction with *Aqua Fortis*.

Other Miner's or Oars which have no Sulphur admixt with them, need not this calcining, for they are to be onely heated red hot in the Fire and quenched, with Water and so broken to pieces, and then are they made fit for extraction.

But all sharp Waters which dissolve Copper may be used to extract the Copper out of poor coppery Oars, and that with profit, when the Waters are of no great costs, but are to be had for a very little charges. Such are an *Acetum* or Vinegar of Corn, *Acetum* of Woods, which any Countryman may get

easily and in great quantity; also, Water of common Salt, Water of the Lees of Wine, out of which adust Wine (or Brandy) or Spirit of Wine is prepared, and which else are cast away. These two latter are of the meanest price, and may therefore be easiest of all gotten. The Operation it self is this.

The Oars being reduced into Powder must be put into small and low (Copper) Pans, about the thickness of a Span, for if they should lie too thick or compact, they would more hardly be stirred with a wooden Stick: Upon them thus lying in the Pans, pour that acid Water the height of a Span or at least a hands breadth above the matters; then put Fire under the Pans, let it boil strongly, and let the matter be unceasingly stirred, that the Water coming to it in every part, it may extract all the Copper the more easily. When this Water has boiled one or two hours, and so gotten a most green colour, and that it can dissolve no more Copper, it must be poured out, and more put on, and be on such wise boiled so long till it hath gotten the same colour. Now this pouring on is to be repeated with new Water so often and so long till it imbibes (or extracts) no more greenness, which is a sign that all the Copper is extracted out of the Oars.

N. B. If there should be but little Copper in the Oars, the first Water will extract all the Copper, and so there will not need the pouring on any other Water. Nay more, it sometimes happens that even the first Water would attract more Copper if the Oars had had more of the same. Therefore the Copper is not to be precipitated out of that Water which hath not extracted Copper enough, but is to be reserved and poured upon new Oars, that it may be thoroughly impregnated with Copper, and so the precipitation with Iron may not be used in vain. For by how much the more Copper, the Waters shall be extracted (or held up in them) so much the greater is the gain, and so much the less Water is required to this Work.

It is a thing easie to be understood by him that shall thoroughly search into this Operation, and manage it with due diligence, so as to commit no error.

N. B. If you have store of these green Waters, put in some old Iron for one or two nights, and you shall get out the Copper that will adhere unto it like filed Copper, and it will leave the Water white and clear, which said Water can be used no more about this kind of extraction, but may be poured upon *Calx-vive* mixt with Wood-ashes, and so be dried up, by the Air or the Sun, under some Roof to keep off Rain, and from this used Water, and the *Calx* or Lime is Salt-peter generated in such a manner as I taught afore.

N. B. This Copper which sticks on to the Iron, is to be freed from all the Saltiness by washing it with common Water, and is to be afterwards dried, and so may be used in the stead of pure Copper, for if molten it nothing at all differs therefrom, if the Operation be but well managed. Nay more, it has in it a most notable Commodity, as being more tender and more pure, and more commodious for many Operations than that gross common Copper is. 'Tis also very fit to be converted into most excellent Viridigreefe, if it be moistned with sharp Vinegar and set in the heat.

Moreover I have shown in my publick Laboratory, by what means Spirit of Salt, *Aqua Fortis*, *Aqua Regia*, and my *Sal Mirabilis* may be easily gotten, and

and that in great quantity too, by a Separatory Sulphur, which is nothing else but Oil of Sulphur or of Vitriol, of which I have very clearly treated in the second part of the *Miraculum Mundi*. Likewise how Gold may in one quarter of an hours space be converted by the *Sal Mirabilis* (in a Crucible) into its first matter; or, into a red, transparent, sulphureous, and soluble Stone, which fulfurs it self to be dissolved by common Water into a most excellent Medicine. This golden Water being poured to the roots of Herbs, makes them to have a golden property, as concerning this thing you may consult my Treatise of the nature of Salts, and the second part of my *Miraculum Mundi*.

Besides, I have shown to some of my Friends, how in the extraction of Gold and Silver out of the poor Oars a Gradatory and withall fixing Spirit may be received, which is able by graduation to perfect (or exalt) any *Argent-vive* into Gold and Silver, according as the extraction has been made either of Gold or Silver Oars.

This is great a secret hath as yet escaped mine enemies hands, and so has that my secret incineration and cementation of Metals, of which they would likewise have been Masters had they waited but yet two or three days longer; for I presently showed such Operations to those that stayed, and unto other honest Spectators.

To these may be also added that notable Arcanum of bringing Lead in one quarter of an hours space to such a pair, by means of a graduating Fulmen, without almost any costs, as to be so impregnated with Gold as to be worth the separating.

These and such like Arcana's with many most profitable discourses have been seen and heard in my Laboratory, a tedious and needless Repetition of which I willingly omit.

Finally, to mention somewhat by way of addition, 'tis necessary that I say onely thus much, that happily in some short time, the business will so come about that many Men will not for the time to come take on them such a deal of care about the laborious, costly, and uncertain ordering of Mine pits, but will rather lay hold on and manage (and that with greater profit) such as can be had and gotten better on the outside of the Earth. But especially there will not be a few who will set about these Cementations of mine for gains sake, for they have many times many lying idle by them, and which yields them no profit, which by this assisting way they will augment, and without doubt it will be effected too by many.

Verily I cannot at all see (as far as I know) whether there can be found any honest and certain way of sustaining Life in the whole World, than this true melioration of Metals, which brings with it so great a benefit. For even Merchandise it self though it be so very gainfull, yet doth it stick amidst Sins, as firmly as a Nail does in a Wall.

The Services of Lords and great Men are laborious and full of servitude, which many have experienced. And as for War, that snareth away a-bundance of Men by an immature death.

Far better therefore is it to live quietly with one's Family in some poor Cottage, and to feed on a piece of Bread, than to hunt after uncertain Riches by most great dangers. Therefore I doubt not but there will be many found for time to come, who being holpen by my Writings, will more commodiously sustain themselves together with their Wives and Chil-

dren, than hath been hitherto done. Nor do I at all doubt, but that many will take it very unworldly, that I have so manifestly and so perspicuously revealed all things. For this is often done and daily is it, that I am upon that account reprehended by others, as the following Letter may witness, the like of which I could have here added more had I so listed.

There is no Body can satisfie all. Even Jupiter is not the same (or alike acceptable) to all: One is troubled with heat, another is burthened with cold. What things soever I have written, they are clear and evident to such as are skillfull in the Art, and have understanding in the business, and therefore they had rather I had written more darkly. But the unskillfull and ignorant do judge that I have played the Sophister in Writing, because they hit not the mark.

But all their judgments and Censures might be tolerated whatever they be that they pass upon my Writings, did they not by reason of their ignorance, condemn the good things themselves, and say of such things as are most true, that they are Fallacies and Lies: but this needs not seem strange to any, so far as such wicked condemnings proceed from those that by reason of ignorance and blockishness do no better understand the business. But this is plainly diabolical, to be highly benefited by any one, and to be made partaker of such great secrets, and yet afterwards impudently to deny the same and say, that they never had any good thing conferred upon them. The detestable malice and impiety of these Men hath enforced me to manifest in this Appendix, so many excellent secrets, which I would at no time have laid open, had I not been so treacherously deceived by those perfidious Men.

*This is the Letter written unto me, of which I made some mention even now.*

"THOU hast written too clearly, and again too  
" manifestly; beware lest God stir not up  
" against thee another new Farnesian Devil, to punish  
" thy easiness [or forwardness] of publishing such  
" Mysteries. For they are not to be profaned by  
" the ungodly, let not the present corruption of  
" Men deceive thee, and that blindness [of theirs]  
" which for the most part ariseth therefrom; for all  
" wicked Men are not blind, I know many Farners  
" that are defiled with all kinds of Evil, and yet  
" are not all of them so blinded as thy Farners is.  
" Nay, their Wit is so penetrative and so clear-sight-  
" ed, that should they but read the divine Books  
" that thou hast published there would not be a se-  
" cret in all nature, but they would know it; nay  
" more, they would in a short time perfect that Phi-  
" losophick Work. Which should it so come to pass,  
" (what more's the grief) what a many Slaughters,  
" what Whoredoms, how many ruinings! And what  
" evils of all sorts would break in upon mankind; of  
" the which, thou thy self (though innocent) wouldst  
" be the cause. I know that the detestable Calum-  
" nies of the impious Farners enforced thee to pub-  
" lish them, for he every where reported and to all,  
" that thou wert ignorant of them. But my most  
" dear Sir, what is your knowledge as a thing of no-  
" thing, unless another likewise knows that you  
" know it? God knows that thou knowest, for he  
" gave thee thy knowledge. Thine own conscience  
" also knowsit. What? Cannot these two most plenari-  
" ly bless or make a Wife Man happy? The pleasure  
" that depends on the Opinion of Men is unhappy. In

vain do we seek after true Felicity without us, if to be its solid principle or foundation should be within us. What matters it, if Men think thee to be less learned than thou art, as long as the very light it self of nature shines unto thee? I would to God that I could once accomplish that, which, by thy divine Books it is most certainly manifest unto me, thou hast perfected, and let all Men believe me to be a most stupid Fellow; I wish not thus, as if I did at all doubt the truth of any Work. For though I should have perfected the whole work an hundred times, I could scarce be more certain of the truth thereof [than now.] He that knows the way of concentrating Fire, and of uniting the terrestrial Sun to this concentrated Fire, and the *Arca*'s of Fermentations doubts not, nor seeks after any thing more. I may boldly say, that seeing nature doth perform whatever she has a mind unto, by these three, it must necessarily be, that it should do some most eminent thing. But if I could but once have finished the Work it self amidst those thousand of busineses that have hitherto withheld me, and kept me off from the Operation, I should have been long ago able to wind my self out of the intricacies of this present Age, and wholly devoted my self unto God, and to the most holy Philosophy. I beseech thee therefore my [dear] Master, and entreat thee by God and by the most laudable charity thou owest thy Neighbours, to write more obscurely for the time to come, nay, and if it may be, to wrap over the Books thou hast already published with some new cloudings, lest that celestial treasure fall into the hands of the unworthy, and to become hurtfull to pious Men. Pardon Sir the liberty of my complaint, for there is no other cause thereof save piety to God, and a Zeal to the most Learned, most upright Man, and one that too well deserves from ungrateful mankind. And albeit thou knowest not me, yet canst thou not be unknown to the Curious, seeing thou hast Written such wonderful things. Nor can there be any one that shall but once have read over thy Books, but he will be highly obliged unto thee, if he has but any light of Justice [or Righteousness] remaining in him, &c.

Many such like Letters as these, have been oftentimes sent me from learned and skillfull Men, tending to this end, to warn me not to publish such excellent secrets for the time to come. Yet nevertheless, amongst those that are rendered partaker of such, there are some who (although the Operation it self has been sometimes manually showed them very perspicuously and clearly,) are notwithstanding so forth and ignorant, as that they cannot imitate the aforesaid Operation. But some there are also that are come to such an height of Treachery, as that (being either seduced by their own false malice, or drawn away with the desire of profit,) they deny even the truth, certainty and stability of that very thing themselves have manually experienced, and dare to say it is false, this verily is an astonishing and detestably malicious wickedness, and justly and deservedly gives every one an occasion to shun such devilish Men more than a Dog or Snake.

*Glander* may justly and deservedly be compared with a burning Candle, by serving others, am I continued; have not I by the publishing such very excellent Writings kindled a clear and new light to the

whole World, and added and consumed mine own peculiar Oil, and that in vain too, as reaping no recompence proceeding from a gratefull mind?

### An Explanation of some obscure places which are to be met withall in the Third and Fourth Part of the Prosperity of Germany, and in the first Century.

In the Third Part of the Prosperity of Germany.

In the Operation which teacheth to extract Gold and Silver with profit, out of all Oars or Metallick Earths, in Page 360. A. signifies Lapis Calammaris.

Page 361. A. is once met withall there, and signifies the same Lapis Calammaris.

In Page 370. the same Letter A, once put, signifies the same Lapis Calammaris.

In Page 370. b. where we treat of the Waters used about Washing or Edulcoration, and show their use, the Letter B. signifies pieces of Cloab, and the Letter C. the shells of Eggs, and all Cockle-shells and Muscleshells, [or Shell-fish] of all kinds, in the water and out of the water: but the Letter D. denotes the Feeces or Luss of Wine.

In the same Page, the Letter E. shows or signifies Egg-shells, and the Shells of all Shell-fish.

The Letter F. signifies Stones and Lime.

In Page 371. a. the Letter G. signifies Oil of Virril.

In the Fourth Part of the Prosperity of Germany.

In Page 397. b. the Letter A. signifies one part, and B. three parts.

In Page 398. a. by the first X. is understood Alkalies, and by the other X. is meant a fixt Salt, helping on Liquefaction or Fusion.

Here follow some profitable Operations, and which appertain to the Extraction of Metallick Earths; they are indeed treated of, or published in the first Century; but because of the omitting of some words, they are hard to be understood: which, forasmuch as they comprise the things that primarily concern the Extraction of Gold and Silver, it seemed to me a matter worth the while to insert the same in this Appendix, the which (as I hope) will not be unacceptable to those that search after such great Secrets.

31. By what means volatile Gold is to be compendiously extracted by the moist way, out of coloured Flints, red Talk, Granates, Sand, Clay, and such-like Oars or Minerals, and made corporeal.

First of all, such Minerals are to be heated red-hot in the Fire, and be quenched, then ground with Mill-stones, and are to be put in Stone-Pots, or Waldenburg-Pots, or Colein-Pots, that in them they may be moistned with pouring *Aqua Regia* thereupon. These Pots you must put Coals about, and heat them well. The Minerals being together with the *Aqua Regia* well heated, there must be poured thereupon so much Common warm water, as will suffice to wash off the *Aqua Regia*. Being on this wise

wife moistned, they are to be put into great Pots made of good Potters Earth, having a many little holes in the bottom, over which is some Cap-paper to be spread, that nothing of the Oars fall out through the holes, but the water onely may distill down. After that all the first water is run out, you must pour on more hot water, and these pourings on are to be so often repeated, till the water tastes on more saltish, for then it has carried off with it the *Aqua Regia* that contained the Gold in it.

N. B. The Pots are to be set upon a Bench or Drefser that hath holes in it, so that the [Waters] may pass through the bottoms by the holes, and Vessels may be set there-under.

N. B. The Minerals may also be put in Barrels, having a double bottom, such as those Barrels are in which they use to wash out the Salt-peter with Common water out of the Earth. And now after the same manner are the pourings on of Common water to be so long continued till there is no more saltiness perceived.

N. B. Albeit that there is no more tast of Salts discernable, yet nevertheless some of the Salt doth as yet abide with them, [viz. with the Oars] and which is to be turned into Salt-peter, on this wise following.

32. How good Salt-peter is to be made with profit even out of these Oars.

MIX these Minera's that are thus deprived of their Gold with an equal weight of *Calc-vive* and Wood ashes, then heap them up in a heap under some Shed or Pent-house, and moisten them for half a year, or for an whole year by repeated pourings on, of either Man's piss or Beasts, as often as (after the drying up of the moisture) need requires. In want of Piss you may use Common water. By this means the *Aqua Regia*, which was not thoroughly washed off with the warm water, and so remained behind in the Oars, will, by the assistance of Urine, or even of Rain-water, convert the Salt in the *Calc-vive* into good Salt-peter, which is to be washed off like other Salt-peters, and be reduced into Stria's or Crystals. The remaining matter being freed of the Salt-peter by washing it off, may be again put under the same Shed or Roof, to keep off the Rain, and be exposed to the Air and Solar heat, and be moistned with Urine, and it will in its season again yield Salt-peter, and will even keep doing the same for many following years, if it be dealt with all on the like manner. And so even the very *Aqua Fortis* it self, which remained behind in the Oars, will bring its benefit. The reason of this manner of Salt-peter making is this, because the *Aqua Fortis*, or Spirit of Nitre, is as it were the seed of Salt-peter, and is of this nature, viz. when it is put among other Saltes, (like as when some Vegetable seed is sown in the Earth,) it augments it self thereby, and is multiplied, even as the Seeds of Herbs are wont to doe. And happily, hence came that old Proverb, of sowing Salt, which the unskillfull and ignorant mock at, saying, How can it be possibly done, that Salt should be sown and multiplied, seeing the Rain can dissolve it and wash it away? These foolish ones did not know either what Salt was to be sown, or how. Evident it is, that even this is the sentence and opinion of the ancient Philosophers, that even Salt may be sown and multiplied in the manner of Vegetables.

N. B. Out of the extracted Oars or Minerals

being conjoynd with *Calc-vive* and Wood ashes, may Salt-peter be made, in a few days space, by moistning the matters with pouring on, even barely Common water, and so drying it up again: but then there will not be such a quantity, as when more continued and more frequent pourings on of Urine have preceded.

N. B. It is likewise a thing possible to be done, to make good Salt-peter even in one days space, with the Waters used about the Edulcoration [or washing of the Oars] if they be poured upon *Calc-vive* so long till all the noise [or tilling ceaseth] which is made in the Solution. And thus out of the sharp water of Salt-peter, and the fix Salt in the *Calc-vive* is presently generated Salt-peter, shooting into long and delicate Crystals, after that the superfluous moisture shall have been thence drawn off in a Copper-pan. The remaining Salt-peter-water must be again boiled in a Copper even to the appearance of a thin skin, and then be set in the cold to grow more Salt-peter; these Labours are you to foot on withall until all the Salt-peter be boild' out.

I think now that I have written and delivered all things perspicuously and clearly: He that cannot comprehend them, must even let them alone as an Ass must the Harp.

As concerning the sharp Waters which are used about the Extracting of Gold out of the Minerals or Oars, so as the Gold may not be lost that is in them, but be conserved, and that with profit, there are several ways that offer themselves, amongst which we have thought good to produce these following.

33. The ways of Reducing volatile and fixt Gold unto a body, out of the Edulcorating Waters (so called) with which the Gold aforesaid hath been Extracted out of the Oars; and also of usefully or profitably improving the said already used Waters themselves.

HE that desireth to enter upon the best way, may pour into the Solution of the Gold, or into the Water containing the dissolved Gold, a Solution of Silver or Lead, and in such a quantity as he shall guess the Gold is of, that is dissolved in the Water. As for Example.

Suppose there be two or three Lots [Lotones or half Ounces] of Gold in the water, there must then likewise be dissolved so many Lots of Silver or Lead in *Aqua Fortis*, or thereabouts; which Solution is to be (be it more or less) put to the said water, and to be well mixt by a strong shaking it to and fro, till it becomes like Milk. When it shall have settled, it must be shaken again, and those strong agitations must be several times repeated in an hours space. Then all being well settled, the clear water is to be poured off, and the grosser matter is to be put in a Filter, that so all the humidity may by distillation [or filtration] be removed from the dissolved Lime, or dissolved Lead, and the Metals themselves may afterwards by reduction be reduced into their priffine body, by such an help as we will presently teach.

N. B. If the Silver or the Lead should not have extracted all the Gold out of the Water, or drawn it to themselves, which may easily happen, yet notwithstanding there is not any loss of the same. For, because the *Aqua Regia* being debilitated by pouring plenty of water thereupon is rendered unfit to extract any Oar anew, there may be poured into that edulcorating Water out of which the Gold is already drawn by the Solution of Silver or Lead, a sharp [or strong]

frong] *Lixivium* made of Wood-ashes and *Calx-voxe*, and rendered a little sharper by a little Liquor of Flints. For the Flints doe precipitate all the Gold out of the Solutions. And now the *Aqua Regia* being kill'd by the *Lixivium*, lets fall every Metal that it has in it, whether it be onely Gold, or Copper, or Iron, in the form of a yellow Powder: This Powder is to be dried, and to be reduced after that manner which I told you but now, that I would teach.

The same Gold may likewise be gotten out of the *Aqua Regia* (first debilitated by Common water) very commodiously by a Solution of Mercury or Quicksilver put thereto; The Mercury abides in the *Aqua Regia*, and the Gold falls to the bottom like a tender fine Powder, which being washed and made corporeal by reduction will be 24 Carrats fine. And as for getting the Mercury out of the *Aqua Regia*, it is not to be better done than by pouring thereto a sharp *Lixivium*, by which the Mercury is constrained to fall down to the bottom like a yellow Powder, which is profitable for such-like precipitations. The *Aqua Regia* and the *Lixivium* serve for to make Salt peter withall.

The Edulcorating-water out of which all the Metals are already reduced [or precipitated] being boild in Coppers, till a skin appear at top, and then poured out into other Coppers or wooden Vessels, yield excellent Salt-peter, fit for the distillation of *Aqua Fortis* for a new Operation. He that is skill'd in managing this work, will get as much Salt-peter as will pay the costs of the *Aqua Fortis*; infomuch, that the Gold is extracted without any costs. For five or six pound of *Aqua Fortis*, which holds in it two or three pound of dissolved Salt, and is precipitated with a sharp *Lixivium* of *Calx-voxe* yields about some ten pounds of Salt-peter: and this will certainly answer the price of the Water or *Aqua Fortis*; and so you will have Gold extracted out of the Stones without expence or charges.

34. Another and better way of getting out the Gold that is Extracted out of the Oars, out of the *Aqua Fortis*.

MAke, by Calcination, some Ashes, of one part of Tin, and four parts of Lead, and put them in an Iron-pot, whereto pour the extracted Gold, or the *Aqua Fortis* containing the Gold, boil it and continually stir the Calx with an Iron rod, that so all the sharp Spirits may cleave to the Lead and Tin ashes, and the Phlegm onely may exhale. After that the said Calx of the Metals hath concentrated all the Spirits, and is become wholly dry, let it be taken out, and be cast upon Coals in a secret Melting-pot or Crucible, in which operation the fire forceth out all the Spirits into the Recipient, which are to be again made use of for new Extractions. The volatile Gold, and which is mixt with Iron, adheres to the Calx of the Metals, and is to be reduced in the Furnace which the Germans call *Stiobofen*; wherby the Lead impregnated with the Gold, and exalted by it, is gotten, which by separation yields the Gold and Silver.

N. B. If that Lead should not contain Gold enough as to be worth the while of separating it on the Cupel [or Test] it is to be again commixt with Tin, and be reduced into Ashes, and by this Calx are new Extractions to be Concentrated, that so by the so many repeated Labours, the Lead is at length made rich enough, and yields (by separation) a good portion of Gold and Silver.

If (in the separating) the matter be turned by the blast of Bellows into Licharge, it is not needfull to melt such a deal of Lead on the Tests, which would require so much fire. But however, it is a thing feasible for the Gold to be gotten out of [er by] the Tests without melting, which shall be taught afterwards.

35. How an *Aqua Regia* is easily acquired for the Extraction of Stones.

FORasmuch as Spirit of Salt may be had in great quantity, you need onely dissolve some Salt-peter therein, and this Solution is to be used to extract the Minerals withall. For the Spirit of Salt being made stronger by the Salt-peter, doth readily and willingly seize upon the tender Gold that is in the Stones. And as for the Spirit of Salt, it may be used as it comes over in the first distillation without any rectification.

36. An easier way of getting an *Aqua Regia* usefull for extraction.

Because that these Operations do always bring forth Silver impregnated with Gold, and that *Aqua Fortis* is requisite to make the Separation of them; the Solution of Silver may be used, and so the labour of the aforesaid incineration be omitted. Into the *Aqua Regia* wherewith you have extracted the Gold, pour in a Solution of Silver, and it will fish out the greatest part of the Gold out of the *Aq. Reg.* and is, [viz. the *Aq. Reg.*] to be afterwards made use of to a new extraction, and be again directed of its extracted Gold by a Solution of Silver. In want of a Solution of Silver, the extract is to be concentrated with the Ashes of Lead, and you must proceed (by driving off the Spirit out of the Ashes, and by reducing the same Ashes in a Furnace,) after the same manner as we taught you but now in our foregoing directions.

N. B. You are here to note, that the *Aq. For.* which containeth in it the dissolved Silver, and is poured into the *Aq. Reg.* or nitrous Spirit of Salt, doth add an encrease unto these same Waters. For the *Aq. For.* doth corroborate the Spirit of Salt far better than Salt-peter doth.

37. How the Silver (wherewith the Gold has been separated out of the *Aq. Regia*) is to be gotten [or reduced] out of its Calx.

After that the Solution of the Silver being poured into the *Aqua Regia*, hath extracted the greatest part of the Gold; the *Aqua Regia* is to be poured off clear from the Silver remaining in the bottom, and is to be used about new Extractions. But if to be it should yet contain Iron in it, it must be concentrated with Lead-ashes. The white Calx of Silver is to be put upon some Cloth over a glass or stone Vessel, and so is to be freed from the remaining *Aqua Regia*, which will drop from it; and by pouring on of warm water, it must be altogether rid of the *Aqua Regia*, which as yet adheres thereunto. This done, your Linnen-cloth being strong and three double, the Common water is to be squeezed through thereout of, and the Calx it self laid by, to dry; which may afterwards be reduced in the Secret Crucible, or be used about a Cementation of *Lapis Calammaris* into Gold and Silver.

38 H. W.

38 How the said Calx of Silver is to be reduced without any loss of its weight, and without any Detriment.

Forasmuch as this white Calx of Silver is made so very volatile by the Salts, as that it cannot be reduced at all in the common melting Pots or Crucibles without great Detriment, there is no way of preventing that loss more commodiously than this which follows.

Mix this silvery Calx with an equal weight of a sal *Alkali*, and cast it into the secret red hot Crucible, wider at bottom and narrower at the top, the which you must cover with its Cover made of the Lute of Wisdom. By this means will the Calx melt, nor will it lose any thing by fume, nor will it penetrate into the melting Pot or Crucible: and so the Silver impregnated with the Gold will be converted without hurt, which being granulated the Gold may be separated by *Aq. Fortis*: Now this very Solution of the Silver by the *Aq. Fortis*, may be again used to gather [or separate] more new extracted Gold, and so will afterwards produce the Silver to be reduced the same way we instructed thee, and so give thee a perpetual Separatory Operation of Gold and Silver, which may every where be exercised with a great deal of profit.

39 Another way teaching to reduce fugacious Silver with greater profit.

Put upon the Rudder of thy Silvery Ship, the little Fish called *Remora*, that so it may be freed from its speedy flight, and abide quiet. Melt thy said Ship together with the *Remora* that sits on the Rudder in the secret four-square melting Pot, in which melting together, there is not onely recovered all the Silver without any Detriment, but it doth also get an increase of its weight, out of the white Bristles or Fins of the little Fish, and becomes enriched with Gold by its Blood: so that this Additament yields (in the Reduction) a greater quantity of better Silver than other Additaments do. But as concerning other Commodities or Benefits that this fugacious Silver bestows, it shall (God willing) be taught afterwards.

This much was I willing at present to teach and reveal, concerning the extracting of volatile Gold out of Stones and the poorer Oars, and of a successful graduating of Silver into Gold. There shall be more taught elsewhere.

40 A gainfull extraction out of the poor Oars or Minerals of Silver and Copper, by the moist way.

These Minerals or Oars are to be dealt with after the same way as we showed above about the Minerals of Gold, viz. they are to be heated red hot, quenched, and ground with Mill-stones, and be moistened with *Aqua Fortis*, and to be extracted after the like manner as the Oars or Minerals of Gold are, all the difference being onely in the Waters; for *Aqua Regia* is to be used to extract the Gold with, and *Aqua Fortis* for the extraction of the Silver. If therefore there be the Minerals of Gold and Silver at hand, the Gold is to be extracted by *Aqua Regia*, and the Silver by *Aqua Fortis*; and both the Solutions are to be mixt together, in which mixture the Silver precipitates to the bottom in the *Aqua Re-*

*gis*, and withall fisheth out the Gold out of the *Aqua Regia*.

Neither is it here any impediment, if the Oar of Silver should also contain Copper in it, which will be extracted together with the *Aqua Regia*. For the Silver and Gold fall down to the bottom, and the Copper abides in the *Aqua Regia*, which is again fit to extract more Gold withall, and may indeed be used as many times as any one shall please. The Copper it self is extracted out of the *Aqua Regia* by Iron Plates, but they tinge the *Aqua Regia* with a yellow colour, and therefore make it altogether unfit for any farther labours of this kind. Better is it therefore to concentrate it upon the Ashes of Lead, that so that spiritual Iron in the *Aqua Regia*, may convert some of the Lead into Gold by Gradation, and the *Aqua Regia* it self having been so often used may be yet again used.

41 Another far easier way of plentifully extracting Gold and Silver out of the poor Minerals or Oars, Sand and Clay, and the like Minerals without the Fire of melting.

Fill a Glass Cucurbit, or one made of the best Earthen, and excellently well lured a little more than half full, with the Minerals, Sand, or Stones containing in them, fugitive and fix Gold, and hereupon pour as much of the following *Ambrosiana* as is sufficient to moisten them; then presently put on an Alembick (for as soon as ever the dissolving Water is poured on the Oars or Minerals, it presently works and fumes) and draw off therefrom (in Sand) all the humidity by Distillation: that so in the distilling the Gold it self may be dissolved, and the *Aqua Regia* it self may by Distillation be recovered; which is again profitable for a new Operation, as we shall tell you by and by. All the moisture being drawn off, let the Cucurbit cool in the Sand, and then take it out, and put in some Water, that the Minerals and Sand may be softened. Now extract very carefully and diligently, all the Salt out of the Oar, in which said Salt is the Gold that is extracted out of the Oars or Minerals, and boil it up into a red Salt, to which must be added some Licharge, and so must be molten in such Pots as will not break. The Licharge will imbibe all the Gold, which how it is to be separated from the Lead, we will presently teach in the following discourse.

42 The preparation of the Water necessary to this extraction.

For the extraction of Gold, Salt is to be dissolved in *Aqua Fortis*, and for the extraction of Silver, you must dissolve Salt-peter in *Aqua Fortis*. With these Waters, of which you may furnish your self with plenty without any great labour, moisten the Oars, and then distill them off again from the said Oars, and they will be always fit for such like Operations, infomuch that you need never to make new Waters. Nay more, in all the several Operations and Extractions of the Oars, they will be more and more augmented, so that if thou usest but at first no more than two pounds of the same Waters, they may suffice thee for infinite extractions.

N. B. By this means, all the Gold, how little soever, may be extracted by thee out of all Flints, Sand, and other Minerals without any expences, the Fire onely excepted.

R t t t t

This



This also is expedient for me here to show, that sometimes there are to be found fugacious Minerals of Gold, and coloured Flints which are sufficiently rich with Gold, and are painted as twere with delicate colours, *viz.* green, sky-colour, and red: but in the heating them red hot, those colours vanish, and leave the Flints white. Such as these admit not of heating red hot, like as others do, which retain their colours in a red hot Fire. Therefore such must be reduced into Powder without any previous heating red hot, and you must extract them [as they are] that to the volatile Gold may be attracted by the *Aqua Regis*, which said Gold being abstracted [again] by the Althes of Lead commits it self to [or imbibes it self in] the said Althes, which are to be reduced by the help of the secret Crucible; in which Reduction, the Gold becomes corporeal and admits of being separated from the Lead with profit.

N. B. Such Stones may likewise be mixed with the sharp coagulated Spirits, and these [Spirits] may be forced over by a Retort: For so the fugitive Spirits of the Salts carry over with them the Volatile Gold, and make a very excellent Gradatory-water, transmitting fugitive Mercury into Gold, with greater profit, than if this very volatile Gold had been made Corporeal with Lead.

This secret is none of the least of those which teach the Extraction of Gold out of coloured Flints or Stones.

Such a volatile Gold may also pass into other Metals by gentle Concentrations, and so become fix, and will bring no small profit, may rather a greater benefit than if it were gotten out by fusion. In such Concentrations, the volatile Gold hath time of getting a body with the other Metals, and of acquiring a fixity, and is as it were a golden Seed, which augments it self into Gold, in, or out of the Metallick Earth.

43. Another Water to Extract Gold and Silver withall.

For Gold, let Salt; for Silver, let Salt-peter be dissolved in the Water [or *Aqua Fortis*] and let be thereto added as much Oil of Vitriol as half the Salt is you put. This Water extracteth Gold and Silver out of the poor Minera's Sand and Stones, and requireth the same operation as the precedent ones do. It is likewise augmented even to infinity, inasmuch, that Gold and Silver may be extracted out of the poor Mines without Costs, if you except but the fire.

N. B. Oil of Sulphur does the same that Oil of Vitriol doth, and therefore may it serve instead thereof in such Extractions of Gold and Silver.

44. Another far easier way of plentifully Extracting Gold and Silver out of the poor Minera's or Oars, with very little or in a manner no Costs at all.

Mix the Oars or Minera's with their due Waters, and therewithall fill small Pots or Crucibles made of the best Earth, which put near one another in a great Iron pot. Put an Alembick upon the Pot, and draw off the Spirits by distillation, which [Spirits] will require all thy disbursements, and will so give thee Gold *Gratu*, which you are to wash out of the Oars with Water, and get it [or corporatise] by *Saturn*.

45. Another yet easier way.

Moisten the Oars with their due Waters, cast them

in by little and little upon the live Coals, and that in such a manner as we taught thee about distilling Spirit of Salt. By this Distillation the Spirits pass into the receiving Vessels, and the Gold and Silver are dissolved and stay behind with the *Sol Mirabilis*, and is to be waste out of the Oars with Water, and to be molten with *Saturn*. Thus is gotten the Gold and Silver that was in the Minera's or Oars, without any expences, and the Spirits quit all the Coals.

46. How Gold and Silver may plentifully be extracted out of Fat Clay.

Although that the Extraction of Gold and Silver by moist waters is a forbid operation, as was aforesaid at the beginning, yet is it not done without profit; because the Gold and Silver may be gotten out of the Waters by precipitation, and of the used Waters may Salt-peter be made. But now the case is far otherwise with fat Clay, for that, it being fat, the Spirits hide themselves therein, that the one half thereof can hardly be recovered, unless such an Earth be freed of its fatness by heating it red-hot: and this requires some labour to effect it.

But seeing that in all places of the World, where soever any Earth is, there is such a kind of Earth, and that in no small quantity, that contains Gold and Silver: and there hath not as yet been any body that hath endeavour'd to reduce it to any profit, and bring it into use, but especially when it contains not in it so much Gold and Silver as to defray the charges of separating it by Lead. But I have found out a very easy way of doing it with profit, and I think it my duty to disclose that Artifice for the publick good; and it is thus:

Mix such an Earth as contains therein Gold and Silver with the Water of Vitriol, which I have aforesaid described, and make it up into balls somewhat bigger than ones fist, which throw orderly and by little and little into my first Furnace, or into my second distillatory Furnace, and draw off the Spirit by Distillation. The dissolved Gold and Silver remaining in the *Sol Mirabilis* is to be extracted out of those balls broken small, with warm water, and to be reduced by Lead, after the aforesaid described manner.

47. By what Artifice Gold may be plentifully and easily extracted out of Granates, Agates, Sapphires, Rubies, Sand, or other hard Minerals which suffer not themselves to be tamed neither with Lead, nor with sharp Waters.

It is certain that all Granates, what Colour soever they are of, or what place soever you meet with them in, whether you have them out of Rivers, or wash them out of Sand or fat Clay, or that you find them in the high Mountains and Rocks; they always contain in them much Gold: but by reason of their Glassy nature, they cannot by any means be extracted with *Aqua Fortis* or strong Waters, nor can they by reason of the hardness of their bodies fusion be molten with Lead. Hence it is, that as hitherto they have never been so handled as to have their Gold extracted out of them with profit, and therefore are they neglected as unprofitable, unworthy, abject, and contemptible Minerals, whereas notwithstanding it is a thing feasible for a man to enjoy their Gold and Silver with a little labour, and as it were without any trouble. But now what course will we take to doe this, seeing they elude the sharpest powers

powers or efficacy of all strong or sharp Waters, whereby their heart may be penetrated, and Gold may be extracted out of their bowels? I answer; They are to be overcome by Concentrated Spirits, and which are reduced to the form of Salt, as also by a fusile Salt of Lead, and be so diverted of the Gold they contain in them, and without this will the victory over them hardly be obtained. For Spirits being reduced to the form of Salt, doe abide the fire most patiently, and perform a double labour; one by their Acrimony, the other by a strong fire, inasmuch that nothing can escape their power, and therefore all things are tamed and subdued by them, and doe afterwards readily obey the virtues or power of Saturnine Salt, and yield forth their Gold by fusion.

47. A Demonstration, above the reach of any Conjecture, shewing that more Gold and Silver may be gotten out of the Oars or Minera's of Gold and Silver, by the hitherto prescribed ways, by sharp Waters or Salts, and in a manner without Costs, than is wont to be done by many Experiences, and by the fire of Melting.

I believe it is not unknown to any one that is but a little acquainted with the knowledge of the Minera's of Gold, that the Gold cannot be gotten out of them without the addition of Lead, or the help of some matter rendering the fusion more easy. And now when such Oars contain but little Gold, and contrariwise much Lead, or matters require to promote fusion are of necessity to be thereto used, how can it be, that that little portion of Gold or Silver should recompense or defray such great expences? Therefore such poorer Oars have hitherto lain as cast-aways, as being incapable of bearing the Expences of separation, and so are not put to any use, nor are at all profitable.

But admit that the Oars do contain as much Gold and Silver, as that the Costs of melting may be repaid by them; yet such a fusion, compared with this invention of mine of Extracting Gold and Silver with Waters and Salts, is as if you should compare Water with Wine, or the night with the most brightsome day, which have no comparison.

For, first of all, the common melting of Metals is accompanied with far greater Expences, than that Extraction of mine with Salts, which verily needs but a very little charge. Then farther, it can never be, that all the Gold should be so perfectly Extracted out of the Oars, but that some of the same will abide in the Scorria's; besides, the volatile Gold and Silver, which must necessarily be blown off by the vehement blast of the bellows, and the acuteness of the fire, and so be lost.

Now amongst all the conveniencies that arise from the Extracting of Gold and Silver out of the poor Mines, that is none of the meanest, *viz.* that not only all the fix Gold and Silver are conserved by the Salts, but also the Volatile too, and this latter is made fix and constant in the fire, together with that former fix part, whereas by the fusing fire it is all of it lost.

N. B. For the Waters of the Salts doe make the volatile Spirits of Gold and Silver, and which otherwise would vanish away fix and constant; for by a strong blast and force of fire are they rendered yet more fugacious. Hence comes it to pass, that [there is but the] one half part of that Gold extracted by the fire of the usual way of melting, that the Waters

of Salts get out of the Oars. Upon this account my Invention doth not onely yield this commodiousness as to get both the fix and volatile Gold and Silver together, without any detriment out of the Oars, but also gets not a little in sparing Coals, (not to mention this, that one man does more in the Extraction of Gold and Silver by Salts, than three men are wont to doe in the common way of Fusion.

By what hath now been said, it is evidently apparent, what a deal of benefit and profit this invention will bring in all places of Germany. For this Extraction may be used commodiously and profitably, not onely in all Minera's or Oars both rich and poor ones, but also may be used in Extracting the Gold and Silver out of all colour'd Flints, wherewith all Rivers, Brooks and Fields do abound.

But some or other may haply say here, by what means can it possibly be, that Gold and Silver should be extracted out of the Stones that lie too and agen every where in the Streets? I answer such, that indeed it is very rare to find fix Gold and Silver in such Stones, but yet they have in them a spiritual, unripe and volatile Gold, which is not onely made fix and constant in the extraction made by Salts, but it doth likewise turn some of the Lead it self that is added in the fusing and separating it into its own nature by Graduation. Hence 'tis evident, that in all places of the Terrestrial Globe where soever Stones are, good Gold and Silver may be gotten with profit, by a little labour and small costs. Praise and glory be eternally given to the most bountifull Lord God for such Inventions. Amen.

These are the Secrets which I publicly demonstrated and divulged [or communicated] in my Laboratory, for the benefit of my Country. And I do now again affirm and witness that if even the very bare Letter be observed, no body can err. And if so be that any one should change this or that order, and so think to better the Operations, and should err, let him not lay the fault upon me who have Written the naked truth, but let him blame himself.

I had several other things of no small moment, to have spoken to here at present, the which I shall God willing very suddenly dispatch in my second Century, for the present time does not permit it. And in the said Century will I declare with a yet clearer and easier manifestation, those Secrets here disclosed, the which could not at present be done because of my too much haste.

And now I wish to all the pious Students after this to great an Art, a large and plentiful blessing from the mercifull Lord God, as to this so very excellent a Work, that the poverty and want of abundance of miserable People may be supplied in many places. Which if it be (as I hope it will) it will exalt the honour and glory of the most high, and will encrease the Prosperity of the Country, and withall will check and keep under the most base attempts of mine Enemies. But especially if the counsel that I have proposed in my first Century, (*viz.* that every one may have liberty to exercise such Operations) takes place. This being granted, it cannot be, but that Gold and Silver and Copper will every where be gotten out of the Earth, with the help of these my Writings, to the great profit and benefit of all the whole Country.

And

And so I conclude this so much hastned Appendix, time, I will express God willing in my second Century with a clearer Explanation, and thither do I refer those things that I have not in such or such a place for the well-minded Reader. clearly and evidently enough expressed for want of

The End of the Appendix.

THE  
SIXTH and Last PART  
OF THE  
Prosperity of GERMANY.

In which the *Arcana's* already revealed in the Fifth Part are not only illustrated with a clearer Elucidation; but also such are manifested as are most highly necessary to be known for the Defence of the Country against the *Turks*: Together with an evident Demonstration, adjoyned [shewing] That both a particular and universal Transmutation of the imperfect Metals into more perfect ones by Salt and Fire is most true; and withall, by what means any one that is endued with but a mean knowledge in managing the Fire, may experimentally try the truth hereof in four and twenty hours space.

To the Friendly READER, Health.

I Taught in the First Part how the over-abounding quantity of Wine and Corn is to be Concentrated, that it may abide uncorrupt for a very many years, and when necessity requires it may be an help to many in need.

In the Second, Third, Fourth and Fifth Parts I taught the Extraction of both six and seven Metals, to great profit, and almost without any Costs, out of the bodies of vile, poor Minerals and Metallick Earths, which will not quit the Costs of a Fusing-fire, and this to be done by no costly Waters; and withall, how to bring them into use, which no body afore me ever did. And did not I disburse a great deal of Monies in building a convenient Laboratory, in which I produced such most profitable things to the view of every one, and demonstrated them to be true? And what have I reaped for these so great benefits I have done, but a most ungratefull casting off their remembrance? Have not all the things I have taught been accused of falsity and deceit both to the high and low, by those who have so audaciously dared to deny the Melioration of Metals by Fire and Salt? These have also asserted, that the making of Salt-peter of Common Salt is altogether impossible; and they have affirmed it to be a thing quite contrary unto nature, that Metals should be gotten out of the poorer sort of Metallick Earths by the help of a Water made of Salt-peter; but yet that even this is most certainly true, the Appendix of my Fifth Part, and my Second Century, doe demonstrate by indubitable Experiments.

And

And albeit that the three said *Arcana's* are evidently enough delivered and described, so as even to be palpably felt by the hands of those that know how to manage the Fire, yet notwithstanding they have brought but very little benefit as yet, because that although they are most true, yet are they contemned and disregarded by unskilfull Men, out of meer Envy and most perverse hatred, and doe even yet stick in contempt.

However, not regarding these [base dealings] and that I may mete them all things in full measure, I have a mind yet farther to detect some secrets, by which there may redound to the Country very notable fruits: And that not only by converting the many Metallick Earths that contain in them Gold and Silver, and which have not hitherto been profitable to any unto a gainfull and a beneficial use; but also by defending the Country against the most dangerous invasion of the *Turks*, who are the Capital Enemies of the whole Christian World, and that by so strong and efficacious a defence, as never any mortal man did yet contrive the like of.

As to what belongs to Mineral Treasures, I have exhibited a sufficiently clear and manifest description of them in the second, third, fourth and fifth Part of the Prosperity of Germany, and also in the Appendix to the fifth Part, and in the second Century. But yet there is nothing so perfect and absolute but that in process of time there may be added and adjoyned thereto some new thing, and somewhat of perfection: Witness my Instrument which I mentioned in the second Century, by the help of which, Gold, Silver and Copper are easily and plentifully extracted out of their Metallick Earths, and that on such wise, as that there are requisite no other Costs but the bare Charges of the fire. And farther, this way would bring no small profit even from those Metallick Earths which are ranked amongst the poorest sort of Oars; if it were well known, and exercised in many places, there would flow thencefrom most mighty profit throughout all Germany, and the said Instrument would by its assistance wonderfully promote the same.

For although I have heretofore published several ways of preparing sharp Waters, and of extracting the Metals with them out of the poor Minerals; (and yet even these ways bring no despicable gain) yet they perform not that which is wont to be accomplished by the help of the said Instrument. For this Instrument serves not only to extract those sharp Waters in a greater quantity, but is also far fitter and more convenient for the Extraction even of the Metals themselves out of their Earths, and for the separation of the Dissolving Menstruum from the Metals, than those Glass Vessels are, which have been commonly used about this Operation.

Therefore it much concerns him that employs himself about these kind of Operations, well and thoroughly to know its Use. I made indeed some mention of the same in my Second Century, but yet not so clearly as for any one thoroughly to understand its Use by what I there spake. Therefore I have thought it expedient to give here somewhat a clearer and more perspicuous description of the same, that so I may not seem to be at all wanting in my diligence unto any one, but may be said to have done all things with a due candour and openness.

The Description of the Instrument, serving for the plentifully preparing of Spirits, and for the easie extraction of Metals out of their Oars, without much Cost.

This Instrument is to be made of good Earth, that can sustain both the Fire and the Spirits; Metals are unprofitable to make it with, because they doe not long resist the Corrosion of the Spirits: But now, that the said Instrument may the longer abide in the Fire, its outside superficies must be fenced with Iron bonds. This Earthen Vessel therefore must be made of such an Earth as abides the violence of the Fire, and resisteth the Corrosivity of the Spirits, so as that it breaks not nor chaps with too much heat, nor be corroded and eaten through by the Corroding Spirits. Such Earths there are enough of too and agen in Germany. Moreover, this said Instrument may be made greater or lesser, according as you are minded to prepare a greater or lesser quantity of Spirits; But however, it must not be made too big, for then (if it exceeds a due magnitude) it will not abide the fire so well. Therefore is it necessary to have several of these Instruments made, if a man be minded to make at one and the same time a great quantity of Spirits. But if any be minded to sit about this Operation so as to have huge quantities

of Spirits, it will be his best way to have his Instrument made of Iron plates, such as the Armourers use, and to strengthen them with Iron rods, and so fence it both in the inside and on the outside every-where with Lute or strong Clay. For by this means the Instrument being made of a sufficient bigness for the work you would put it to, will in its inward superficies hold the Cerroding Spirits, and in its outward superficies undergo the violence of the fire without detriment, and be far more commodious than to many little Instruments that are made only of Earth.

Of the Form and Figure of this Instrument.

THE matters out of which the sharp Spirits are to be drawn, are not to be put nakedly in [as I may say] into the Instrument it self, but are to be put in some strong Earthen-pots and so put in, that after the Spirits are distilled off they may be again taken forth, and other Pots filled with new matter may be put in, in their room; and this to be so often done as need requires.

And seeing the Salts that are to be distilled are not put naked into the Instrument, but are put in, in Earthen-pots; the Instrument must necessarily be prepared, as that those Pots may be put in as often as need is, and be again taken forth, when the

S c c c c c Distillat.

Distillation is done, and new ones be put in, in their stead.

The Instrument therefore must be of a like bigness both above and below, and 'tis no matter to have it much exceed the height of your Pots you put in.

One side of it must have a Door to put in the Pots at, and to take them out again, the which Door must be made to shut handfomly after your putting in and taking forth.

To the other side must be fitted a Pipe somewhat large, by which the Spirits may have a passage forth into the Receiver. And the Instrument must be on such wise placed in the Furnace, as that the Door and Pipe may lie without the said Furnace. To the Pipe must be added another Lead Pipe, twining round like a Serpent, and therefore is by the Chymists called a Serpent [or a Worm:] the which must be set in a Vessel full of Water, that so the Spirits passing out may be cooled and be caught in the Recipient.

*Of the use of the Instrument.*

**W**HEN you will distill your Spirits, you must put therein so many Pots filled with your prepared Salts as your Instrument can hold, then close the Door well, and put Fire in the Furnace. This done, the Spirits will ascend out of the Pots thus heated in the Instrument, and finding no other outlet but by the Pipe and Worm, they will enter into them, and being there cooled will run down into the Receiver. You shall know if all the Spirits are forced out of the Salts or not, when they cease to flow out through the Worm into the Recipient. Which when you shall perceive, you must open your Door and take out the Pots in order, and then put in new, that so the Distillation may be continued on without any delayings. But now, those Pots that are to be put a new into the Instrument, must be set nigh the Furnace a while, that they may grow hot: for else being put in cold, they would not brook the sudden heat, but chap and break. When all the Spirits are distilled off, then you may put in other new Pots in the room of them you took out, and the Operation is to be so long and so often repeated as need shall require, or as any one has a mind to do. The Salts that remain behind in the Pots you take out, are to be moistned and macerated with some Phlegm or weak Spirit, and they do again, sometimes emit Spirits by Distillation, but yet not in such quantity as at first they did.

This is that way of preparing sharp Waters usefull for the extractions of Copper and Gold. But as for *Aqua Fortis* requisite for the extracting of Silver, it cannot be prepared by this same Instrument, because it will corrode the Worm or Lead Pipe, if it should pass through it, which the Spirit of Salt and *Aqua Regis* do not do.

*N. B.* When therefore you would make an *Aq. Fortis*, you must make you another twining Pipe or Worm of some other Metal which will not be preyed on by the *Aqua Fortis*, or else set some other Stone Vell's to the Nose of the Pipe that goes out of the Furnace.

It is also a thing possible to be done, to make such strong *Acetum* of Corn and Honey by the addition of some Salts, as that it shall not onely extract Gold and Silver, but also Copper and Lead out of metallick Veins or Earths.

This much may at present suffice to be spoken concerning the preparation of sharp Waters needfull for the extraction of Metals out of the Oars. The preparation [or Operation] it self follows.

*How Metals are to be extracted out of their Earths or Oars, by the help of this Instrument.*

**T**HE preparing or fitting of the Miners's or metallick Earths for extraction, hath been described in the Appendix of the fifth part, and therefore needs not be repeated here.

But as we there showed, that the roasted [or calcined] and powdered Oars were to be put into Glafs or Stone Cucurbits, that for they might be moistned with the sharp Waters, and be macerated [setting the Cucurbits] in warm Sand; so the very same thing is to be done here, this onely excepted, that [viz.] the earthen Pots supply the place of Glafs and Stone Cucurbits, and the Instrument it self in which the extraction is made, performs the office of Sand: After the extraction, the Water impregnated with the extracted Metals is poured off, and the remaining matter it self is wash'd by pouring common Water thereupon, after such a manner as hath been prescribed in the Appendix of the fifth part.

*By What means the Metals extracted by the dissolving Water out of the Oars are to be separated from that same sharp Water without any Detriment, nay rather with an augmentation of the said Water.*

**W**E have taught in the Appendix of the fifth part, that if a Man be not minded to precipitate the Metals out of the Solution by the contraries, viz. by Alkalizate Liquors, then there is no commodiouer and nearer way than that which separates the dissolving Water from the extracted Metal, by Distillation in Glafs or earthen Vessels.

If now any one is minded to encrease his dissolving Water in this separation he may be Master of his desire by adding thereto common Salt, and drawing off the Water from it, which said Water will by this means be encreased and rendered stronger. And now there will come no inconvenience to the Metals themselves that are held up in that Water, in that some Salt remains with them, (no,) for in the reducing them, the said Salt gets them an easier and readier Fusion and Flux.

But yet it is not necessary to leave the Salt with the Metals, seeing it is better to separate it from the Metals with common Water, and so use it again to the same labours rather than let it be lost in the melting.

*The Reduction of the Metals from which the dissolving Water is separated.*

**A**lbeit that that Reduction hath been already described in my second Century, yet I thought it worth while here again to repeat the same in a few words.

It is to be done two manner of ways, and that partly in Crucibles, and partly in the melting Furnace which the Germans call *Stuehofen*. The pure Metals, as the Gold and Silver are wont to be molten and reduced in Crucibles: the Copper may be reduced in the said Furnace, and needs nothing to be added about its Reduction. But for the reducing of Gold and Silver, six Salts, the Glafs of Lead, Borax

and other additions of that kind, (of which we have made mention in the second Century) may be made use of. And as touching the addition of those matters which are wont to be used to promote the easier Fusion, this is primarily to be regarded, whether or no the Metals are pure and alone [by themselves] or else have other Metals mixt with them, that (so accordingly) convenient additions may be applied. For if the Gold should also have Copper or Iron in it, then there cannot be any better thing added than Antimony, which reduceth the Gold by one and the same labour [or Operation] and also separates the Copper and Iron therefrom, which thing, other such like matters that are used to make the Fusion the easier, do not perform. Therefore it is necessary that he who would set himself about such Operations, do well understand the Artifice of a metallick Fusion, and so administer or order his labours by adding or taking from, according as the subject requires and as is best. It is impossible to prescribe such things to any one in such a manner as to make him presently understand, learn, and imitate the same.

*Some other manual Operations which are needfull to be known in the use of this Instrument and which may be exercised.*

**F**irst of all, it would be no small or mean *Compendium*, [or good Contrivance] if this same Instrument were composed of two or three parts, taking for the lowermost part a broad Iron Pot, and so to set on the upper part with its Door and Pipe thereto annexed. And because the bottoms of the Iron Pots do a little bow rounding, and that yet notwithstanding the Pots you put therein may not stand leaning or awry, the bottom is to be made level with calcined Allum, that so the Pots put in upon that may stand upright. From hence likewise ariseth this Commodity too, that if your Pots should chance to break, and the dissolved run out, it would not be so lost but would lodge it self in the burnt Allum, and may easily be recovered in the preparation of the sharp Waters and be applied to use.

Secondly, the Instrument may likewise be so prepared, as that the Pots may be put thereto by taking off the upper part, and then the Pots being put in, the upper part must be adjoynd again to the nether part, and [so] be again covered with its Cover; for being thus, there needs not the Door in the side to put the Pots in by.

*N. B.* There must be some Notch or Channel like wise fitted to the top of that upper part, which being filled with Sand may receive in it the Cover, and so prevent the outlet of the Spirits that way, by means of its tight shutting; as we have taught in the second part of the Furnaces. The Instrument prepared on this wise, will haply be more commodious to many Men, than if it had a Hole or Door in the side. But every Man may choofe either this or the other way, which he pleaseth.

Thus have I now taught, and opened the use of my more secret way of easily preparing the sharp Spirits of Salts in great quantity, and the manner of dealing about the Extraction of Metals out of the poorer metallick Earths: Away (I say) most easie to do such great things, and which was never as yet known unto the World.

But yet I doubt not but that the Metals will for the time to come be plentifully and very profitably

extracted (and so applied to common use) by the help of this Artifice and Instrument, out of the poorer *Miners's* which contain in them Gold, Silver, and Copper, and which will not quit the costs of the Fire; and so far as by the help of this Instrument, the sharp Spirits of Salts may be gotten easily and in large quantity, not onely for the Extraction of the Minerals, but also for the concentrating of moist Fires, and seeing that wonderful things may be done by the help of those Fires; I do therefore commend it to the Studios of Art, as a thing of better esteem than ordinary, and have sufficient reason of it to do. For to omit the saying, that those cold Fires do give an excellent Magnet for Water or Ice, they do also abound with such virtue as by which they can ripen and better the Metals; the which we will make a larger description of, in what follows.

Besides too, there may haply be effected far greater matters with those cold Fires, as to the defence of the Countrey against the *Turk*, that Capital and Bloud-thirsty Tyrant and Enemy of the Christians, in some cases than with Gun powder: if such moist Fires be cast into places a pretty distance off by suitable Instruments, or be forced out of those lesser and greater Guns and War-like Canes, they will bring far greater Detriment to the Enemies than Gun powder is wont to do.

By this means, one weak Woman will in some cases be able to repel many armed Men; but this is a thing which such Men as are unskillfull in natural affairs, will deny till it be made manifest, and used against the *Turk*. Therefore I have a mind to set aside all other business, and to make those kinds of admirable Fires to the utmost of my power in great quantity, so far as I well and assuredly know how great Detriment may be brought upon the *Turks* by the help thereof.

Fires they are which any one may carry about with him like Waters; they will not burn or overthrow Horse and Man sooner than any have a mind they shall. Nay yet more, if any has a mind to forsake their Virtues, he may by adding other Fire-breathing matters, make them far more vehement and efficacious, and do far greater matters with them as being much more hurtfull than with those simple Fires.

And now seeing I have so very much commended the concentrated Fires of Salts, to

1. Diligent and provident Masters of Families, thereby to take away the superfluous wastiness from their smaller Wines, Ales, and other Drinks, and so to concentrate them, and carry them (in case of necessity) into the strong and fenced Cities;

2. To the poor Chymists, that they might by them correct and better the Metals and so help their own poverty and want;

3. And to the Christian Chieftains of War, and faithful Rulers of the Countrey, that they may stoutly resist the *Turks*, that are the sworn Enemies of the Christians.

I judge it altogether necessary to treat of them somewhat more clearly.

*By what means and way this threefold use of cold Salts may be most profitable to the Countrey.*

**F**irst of all, the concentrated Spirits of Salt may bring most great advantage, by concentrating the poorer sort of Wines, the which they make better,

ter, as is shown in the second Century: when the superfluous Water is removed from them, inasmuch that they do not only keep their goodness constant and durable, but may likewise be far more commodiously and easily transported out of one place into another, so that necessity requiring, they may be more easily transported out of such places as are more remote from Cities and fenced places into the stronger holds and fenced Cities, and so be conserved.

It is as yet fresh in every ones Memory how miserably the case stood with Men in the foregoing War, which lasted thirty years. If any Farmer had his Cellars full of Wines, and the Soldiers break in to the Country, did horribly abuse the gifts of God, that which they could not consume by their detestable Gluttony, they wickedly spilled upon the ground; the Soldiers I say, and such Men as profess themselves Christians, and durst boast of the Christian Religion. From hence may it easily be conjectured what it would be, if such a multitude of *Turks* should over-run our Country, which imminent evil, God of his mercy turn away from us.

In the days of *Noah*, the Men then lived in all security, and not at all regarded the Preachings and Admonitions of that godly Man, by which he exhorted them unto Repentance for 120 years together, they did Eat, they Drank, Married and gave in Marriage, till the Flood swept them all away, and there was no more room for Repentance left, as sacred Writ testifies.

We read of *Sodom* and *Gomorrah*, that the Inhabitants of those Cities being even drown'd in Leachery, did to despise the reproofs and warnings of the godly Man *Lot*, until a Fire was sent upon them from the wrath of God and consumed them.

Who is there that in this Season feareth God, and lives piously? He that is the strongest oppresseth the weaker, nor does at all think on this, that there is one far more powerful than he himself is, who comes when he pleaseth, and punisheth such powerful Oppressors. But these things, and such warnings of this nature are plainly mockt at.

Did not God sufficiently enough warn us the last year 1660, and shewed unto us his wrath, by those dreadful Tempests and Storms, and Earthquakes, wherewith almost all *Europe* trembled. Doth he not also this very present year (1662) shew us his self-same displeasure? What portends that Comet that was seen in the Heaven, any one may easily guess what it means. Verily it threatens nothing else but evil, especially because it extended its Tail contrary to the usual wont of other Comets, towards the upper part of the Heaven, just as if it should say, I will show unto the Men, that 'tis not this or that Country, this or that Enemy that shall chastise you, but 'tis the King himself of all Kings, who is in Heaven, that hath purposed to punish you for your Wickedness; whose Rod ye may [yet] divert from you that is stretcht out to punish you, if you apply your selves to him by serious Prayers, true Repentance, and unfeigned amendment of your Lives, now whilst you have time allotted ye to repent in, if such admonitions as these can but find entertainment with you. And what I pray will this warm Winter bring upon us, the which being destitute of all cold Ice and Snow hath permitted the Trees to flourish in the very month of *February*, and the Medows to be clad in Flowers, and ripe Cherries to be seen? Without doubt, nothing else but all kinds of poisonous Diseases and which will speedily kill Men, and with

which mankind will be afflicted; and if so be that an intense cold should yet follow, which may easily be, there would doubtlesly follow a great Dearth of Grain and Provision by spoiling the Wine and Corn, whose buddings are already come so far forth, as that the cold may easily destroy them. And now are we not sufficiently enough admonished by these fore-runners and signs of the wrath of God coming on us, and hanging over our Heads?

Besides all this, let us consider that great Conjunction of all the Planets in *Sagittary*, such as hath never been since that time in which all the Planets were in Conjunction in *Aquarius*. And this Conjunction [in *Aquary*] preceded the deluge, which destroyed all mankind by the breakings in of the Waters, *Noah* and his only excepted. But as concerning what that great Conjunction in *Sagittary* the next year 1663 will show us, and bring upon us God knows. *Sagittary* is a martial sign, and deadly, and portends nothing but Dissentions, Seditions, and uproars of War; and therefore prophesieth unto us nothing but bloody Wars, inasmuch that it is much to be feared that this ungrateful World will be consumed, and blotted out as 'twere by Fire, and the Sword, and the anger of God: which evil, God of his mercy turn away from us. Certainly these Conjunctions are not wont to fore-ignite or bring along with them any good. But I heartily wish I may prove a Liar in this case, though I fear me, that there is more evil coming upon us than will be welcome unto us.

For when God sheweth us any thing with his Finger, it should be of more concernment unto us than all humane Writings, for they may err. But God never does any thing in vain and without cause. Never did there at any time a Comet shew it self in the Air but many Calamities succeeded it. That old Proverb may very likely prove true, which the Ancients have pronounced, *viz.* that it will come to pass in the year 1660, that Alchymy will begin to flourish, but will bring along with it such changes for [some] years following, and such dreadful changes too, that the third part of Men will perish with Famine and Pestilence, the third part will perish with Fire and Sword, and there will be but a third part only left.

But yet I would not that you should take or look upon this my prognostication on such wise as if all these things should infallibly come to pass as I have predicted. No, I was willing only to open to you my Meditations upon the years to come. For all things are seated in Gods power alone, in whose hands only and alone we know our firm helps and assistance to be ready for us, and therefore do not in the least confide in our own strength and power, which are more vain than are all fading things.

But so far as there are natural means granted us, of driving away our Enemies, we may well use them as far as in us lies, for that it belongs unto every Christian Man, to do his utmost to repell with all his power the common Capital Enemy of all Christendom.

And now therefore that I myself may not be found to be the least in defending my Country, I have determined to exhibit in this Book the help and assistance that I can afford, and this is not Money and Wealth which I have not, but by offering such artificial inventions, and disclosing them, whereby the Enemies may be valiantly resisted. For in all things we see, that many times far greater things may be done with Wisdom and Prudence, than with Strength and Fortitude, and this is clearly evi-

dent in the most efficacious Operations of Gun-powder, which produce far greater effects than Mens hands, though never so strong, could ever bring forth.

'Tis well known, that the use of Gun-powder was not always known, but was first found out by a certain Monk in *Germany*, in the year of our Lord 138: who by chance lighted on the finding of its dreadful strength. Neither is there any one ignorant, what great Victories they that well knew its use, obtained over their Enemies afore it was made manifest. But when it became publickly known, then it served both Parties, so that neither part had more advantage by it than the other, and then the deciding the Controversie consisted (next the blessing of God) in the multitude of the Men, of which their power was composed, and not in Art. And like as it seemed a merely incredible thing at first when it was heard of, that a Powder of such mighty force could be made of such vile Subjects, *viz.* Brimstone, and Salt-peter, and Charcoals: Even so will it at first exceed all belief, when it shall be heard say that Waters may be prepared out of such Subjects, which said Waters can doe such wonderfull, and so many great things.

It is also reported [or Chronicled] that the said Monk did not search after Gun-powder purposely, but being addicted to Chymistry, and occupied a labour Operations upon Salt-peter and Sulphur, endeavoured to distill a Water from them. Now these being mixt, and by chance taking fire, he perceived them to break every thing, and rend it into pieces: And hence came that man to know the unheard-of Virtues of Salt-peter and Sulphur, which being so thoroughly contrary to each other, made such great concussions or shakings. The same thing happened even unto my self, for purposing to make sharp Waters out of Sulphur, Salt-peter, and other Salts fit for my purpose; I perceived in such Operations, that far greater things might be brought to pass by such fiery Waters than could be done by Gun-powder. Nevertheless, I buried these Secrets in great silence, nor manifested I them to any man, though I knew them above these twenty years; fearing this, that should they be known, they might be as Instruments in the hands of the Christians to torment one another with.

But now seeing God hath vouchsafed to bestow a peace upon the whole Christian World, and that the *Turks* doe begin more and more to persecute and vex the Christians by their Tyrannical Persecutions, and endeavour even thoroughly to root them out, as they have already made a beginning in *Hungary* of their detestable attempts, I advised with my friends whether or no it would not be expedient to detect and lay open those Secrets to the Christians, that so they may be used against the *Turks*, and I was advised by these my friends to proceed on in the revealing of them. Upon this account (all other businesses laid aside) I wholly betook my self to this very one thing, to get great store of those kind of fiery Waters in readiness, which may be made use of as most substantial bucklers or defence both offensively and defensively against the *Turks*. Now I have done this the more willingly and readily, because they kill no man, but doe only so far debilitate them, that they may be overcome, and easily taken and made Captives. For were this invention of mine such as would kill men, I would never have at any time produced it in publick, and thus divulged it. And therefore I am evn-

er of this mind, that that Monk *Barthold* did not well in divulging the preparation and use of Gun-powder, by which such a multitude of Men are destroyed and slain.

But by this Invention of mine, no man is slain, and yet the victory wrested out of the Enemies hands. And the Enemies being taken alive and made Captives, may be constrained to work, and in my opinion may bring more benefit than if they were slain.

I doubt not but that the things I here propound may seem impossible even to the wisest [fort of] men of this World; nor indeed is it to be wondered at if it be so; for they are unheard-of Secrets, and unseen, and so exceed all belief. I dare not here trust my Pen too much, though I could disclose them in a few words, and so, as to bring every one to acknowledge the truth hereof, and to feel it as it were with his hands. But I must deal warily, lest such sharp, and yet not killing, weapons fall into the Enemies hands.

But yet that I may in some sort satisfy the desirous Reader, I doe signifie unto him in brief, that all the whole Art lyes couched in this knack, that vast quantities of those artificial Waters may be gotten without great Expences; and being prepared, may be afterwards applied to use by some certain secret Instruments both offensively and defensively. For those watry Fires, or fiery Waters which I speak of, are of such a burning nature, that neither Men nor Horses whom they touch are able to resist [or endure] them; And yet they doe not kill, unless one be minded to slay others, and then they must have a more peculiar preparation. But as they are by themselves, they kill none, but doe extremely disturb both Horse and Man, that it makes them even impatient of the pains, and so forceth them upon one another, whereby their order being broken, they ruine themselves. This done, the victory is as it were given unto the adverse parties hands, whereby they can without any labour vanquish and take their Enemies Captives I dare not to say any more hereabouts, this only I add by way of overplus, that even Women (where Men are wanting) may not only (by this invention of mine) drive off the Enemies from any fenced place, but they may force them out again out of the place, or overwhelm the Company of them that are entred with Stones. Though this seems an incredible thing, yet is it most true, and will without doubt, after it shall come to light, in a short time serve as a most notable defence for the Country.

And as touching the ease, and not at all costly preparation of the moist Fires and their due use, together with the Instruments hereto requisite; all this shall be shown and detected to those only who both can and will use them against the *Turks*. But to others not, and this we were willing to signifie by way of admonition or advice.

This little, but yet exceeding weighty Secret, and which may be used against our Countries Enemies with most notable benefit, I have revealed enough of at this time. Mean while I hope, that even this very year the Enemies of the Christian World will be notably endangered by it, which God of his grace and mercy grant, that it may be a solace and help to the Christian World so dreadfully persecuted by the *Turk*, even for the honour and glory of his holy Name. Amen.

Now follows the third use, and that consists in the melioration of the Metals, by which also great benefit may redound to the Country.

AS for such things as concern the true and indubitable melioration of Metals by Salt and Fire, I have already sufficiently enough demonstrated in the fifth part of the Prosperity of Germany, and in the Appendix thereunto.

But seeing my true demonstration there made, seemed not sufficiently clear and evident to not a few, and that therefore they have most lyingly dared to aver, that there is no such thing as a true transmutation of Metals, and that such like Affirmations as these are meer fables, meer falsities, and meer dreams: Therefore I could not choose but (to stop the mouths of such wicked Men, and shame them,) to lay open and publish an evident and palpable truth.

And this is no great task for me to do, for I was many years ago certain of the truth hereof, and therefore can easily set it afore the Eyes of others, and that not only particularly [or a particular transmutation] but also universally, inasmuch that even the blind may see and palpably feel, that the transmutation of Metals is not an old Wives Fable, but is a certain and firm Science, and what is risen even from the foundation of nature herself. If now I shall prove it to be thus, I have then I hope secured my affairs, and have not only defended the Writings my self have sent abroad, but withal the most true assertions of other honest Men, and so shall have evidently demonstrated those things which to the greatest part of Men seems a thing impossible to be done.

Albeit that there are many who have left us the truth in their Writings, yet are they so involved in obscurity, that such as know not the Fundamentals of the Art, can never learn ought of certainty from them. Whence it comes to pass, that so many Men have vainly attempted the Art, and therefore the Art it self hath been mightily despised.

The Transmutation of Metals is not a thing of so small a moment (as that eminent Philosopher *Sandevogius* witnesseth) in his Preface prefixed to his Writings; where he also tells us, that he that obtains the knowledge of the same, so as to transmute any imperfect Metal into a more perfect one, though it be done without benefit, hath met with an open Gate, and entrance leading to greater matters, and this is also exceedingly agreeable with the truth. For if any one shall take some imperfect Metal, and by handling or dealing with it with such or such matters, shall find that it is advanced to a golden or silvery nature, may more deeply look into the business with fuller and more accurate Meditations, and [at length] wholly search it out, viz. whence that bettering proceeds, and by what means or in what manner his labours are to be contrived.

And now when such an one doth make fix and constant, such or such a Metal by the benefit of the Fire, and useth no other matter about the Operation but Salt, and doth really find a true melioration of the Metal, certainly he cannot ascribe it to any other thing but the Fire and Salt: and now whereas he assuredly knows, that the melioration of Metals can be perfected by the help of no other thing but of Fire and Salt, he will not need to search for any other, but will rather wholly apply himself thereunto, whereby he may most commodiously deal with the

Metals by the means of Fire and Salt, and better them with profit. And if now he be once Master of his desire, he will gain sufficiently thereby. But if not, he cannot blame the Art but himself, who indeed sees the possibility of the Art but hath not (yet) entered in by it, or through it to the great Treasures it discovereth, so as to take to himself a due or competent part. But so far as such happy Men are very few and found, who find the Key that opens the Doors to such Mysteries, I judged it a thing worth while if I did here detect this very Key, and show by what means the Gate (by which the closest of Arts is made fast) is wont to be opened. And if now it shall please the Studious Artift to enter thereinto, he may with all my heart, and so enjoy those Treasures. I will not pass the bounds I have intended to observe: it is sufficient for me to have shown the right and kingly way, wherein every one may go that listeth, that so he may arrive to his wish't end.

But as for the Key that unlocks the Closet of Art in true Alchymy, I do confidently affirm, that Salts are such Keys, and especially Salt-peter, and also common Salt and Vitriol, each of which is of it self efficacious enough to open the Door which shuts the Parlour or Closet of Arts in Alchymy. But one Salt joyned with another as is expedient and in convenient wise as Art requires, does effect more and show greater power than if it abode alone, and this my Writings do too and agger largely shew. But those Salts are in an especial manner more excellent as to power and virtues than others are, those I say which being first made volatile or spiritual are afterwards made corporeal, like as the following example doth evidently demonstrate.

*An evident demonstration of the possibility of transmuting the viler Metals by Salt and Fire into more noble ones.*

TAKE of Vitriol two parts, and of good Salt-peter one part, mix them well, and being mixt distill an *Aqua Fortis* therefrom, with this Water, dissolve Silver or Lead, and pour into the Solution some Spirit of Salt, or else some common Salt only dissolved in Water, that so the dissolved Metals may be turned into white Powder, and precipitate to the bottom of the Vessel. This done, wash off the *Aqua Fortis* from the Calx of Silver or Lead, with Rain-water, and you shall find it to be one quarter part encreased, and this augmentation cannot be wash't off with any Water. Now these saline Spirits do make the *Lune* and *Saturn* so very volatile, fusile, and flying, that they melt in a small heat and penetrate all hard Bodies. Upon this account I called those fugacious and fusile Metals, by the name of a *Mercury*, which said *Mercury of Lune*, or of *Saturn* hath assumed to it self onely so much of the Salts as it needeth, to amend it self in the Fire, when they mutually act upon each other, and the Salt maturates the Metal.

But what course shall we now take with these Metals, seeing they are so very volatile, that they cannot resist the indifferently strong force of Fire, and therefore go away in fume? And so far as they abide not the Fire and do not die, by what means can they be amended?

There is no better way to be taken with them here, than (for prevention of their volatility) to add to them some metallick body, into which the fugacious exceeding fusile, and Salt Metal may hide

it self, and so brook the Fire. And amongst these fix metallick Bodies, I know not as yet of any better than Tin reduced into Athes, which is most fit for this Operation, because it is the most unfit or hard to melt of any the Calxes of the rest of the Metals.

If therefore you will make experiment of this Operation, adjoyn to one part of the *Mercury of Lune* or *Saturn* two parts of the white Athes of Tin, which being well mixt and put into a Glas Cucurbit well fenced with Lute, set it into Sand, put Fire therein to by little and little untill the matter in the Glas be well heated; in this darkish red hot heat, leave it so long untill some part of the matter doth ascend by sublimation up into the Alembick placed at top, and up the neck of the Cucurbit. Then you must put on another Alembick, and take out all the sublimate out of the former Alembick, and put it back upon its matter in the Cucurbit, and it is to be again left so long in the Fire, untill there doth again ascend some part by sublimation into the Head. This being taken out of the Head is to be again put into the Cucurbit, and to be added to its own matter, (and to be proceeded with) till again some portion sublimes up out of the matter into the Alembick. Now these labours are to be so often repeated, untill there ascends no more matter up into the Head, and all the matter abides behind in the bottom of the Cucurbit fixt. This being done, a stronger Fire is to be admittred, that the Metals may be operated upon by the Salts. For by how much the more and longer they endure the violence of the Salts, so much the better do they grow, which being taken forth and reduced by the adding unto them their due matters and being separated by a Cupel do yield forth a notable encrease of Gold and Silver.

This undoubted Experiment and evident Demonstration, doth (by its evident Operation) clearly and perspicuously teach and prove the melioration and transmutation of the Metals into better and more pure; but if this way seems to any very laborious and full of troubles, I will show him a more commodious way and such as is of less labour, for the sake of searching out the truth.

Fill a Hassack Crucible (one of the best make) with the self same mixture, viz. one part of the *Mercury of Saturn*, and two parts of Tin-thes, and squeeze in the matter therewith with your Thumb pretty hard, and fit at top of this Pot, another somewhat lesser, so as that they may shut close and tight at their mouths, and one may not fall off from the other, if they be turned (topside turvy:) Now in this upper Pot, put some Plates of Copper in, afore you place it on the lower one, yet on such wise that in the turning the Pots (up and down) they fall not out of their places. Each Pot likewise is to be well fenced with Lute such as will not chap when it is dried, and yet it may be mended if it should a little cleave by dawbing some more on, and this is done, that no fume at all get out. The Lute being dried, place this double Pot or Crucible in a circular Fire, and augment the Fire more and more, and move it nearer and nearer it untill it be well heated. Then put thereto larger Coals, and cover the Pot all over with them, that it may be every where red hot, in which great heat of the Fire it is to be left some two or three hours. Then being cool, take out and open your Pot, and you shall find the Copper Plates in some fort tinged with a white colour, but yet this colour is not so constant and fix as to abide in the Cu-

pel or on the Test with its Body. Therefore necessity requires that those Plates be dissolved in *Aqua Fortis*, and be precipitated by pouring thereon Salt dissolved in common Water, in which precipitation the Silver Calx settles to the bottom. This Calx being freed of its Saltiness by pouring Water thereon, and being dried, is to be wrapt up in a Plate of Lead, or some theret Lead made as thin as Paper, and be put on a red hot Test, in which there must be a little Lead in Flux, which may the more readily receive the silvery Calx wrapt up in the leaden Paper, and which is volatile, and may hinder it from going away in fume; the Lead being consumed, there will be a grain of Silver abiding on the Test, which being dissolved in *Aqua Fortis*, will let fall some Gold to the bottom. If any of the remaining matter in the Crucible be to be reduced, then boil it with Lead, and let it be reduced into *Scoria's*: out of the *Regulus* will there also remain on the Test a grain of Silver containing Gold in it. But this way brings no profit, as being here taught for this onely end to demonstrate the possibility of the thing. But if you would get any profit by such an Operation, it will be altogether necessary to use such Vessels in which nothing at all may go away in fume, but all the matter may abide together, and may so get a fixity and constancy; and this cannot be done in Crucibles, but it will bring a profitable melioration by the said way.

Some may now demand from whence that Gold and Silver should come: whether out of the Lead or out of the Tin? doubtlessly it comes from both. And therefore seeing the Copper Plates in this Cementatory Powder, which in the heat of the Fire penetrated the Copper, and amended it in so short a time. Is there any one now so blinded as that he cannot here see, that this bettering the Metals proceeded from Salt and Fire. Certainly no body will be able to heal him that is blinded with such a darkness of his sight, and therefore must he even lie all his life time in such obscure mists. For this Operation is set down so clearly and evidently that it may be even felt and perceived with the hands.

N. B. If to be any one is desirous of getting more Gold and Silver by the help of this Operation, he may use the *Mercury of Lune* instead of the *Mercury of Lead*, for it will yield far more than *Saturn* will.

I could exhibit so small variety of these kind of Experiments, but that the shortness of time bids me stop, and forbear their description; those that cannot learn ought from these things, greater ones will not be at all useful unto them. Thus have I a new evidently demonstrated, that a particular melioration of the Metals is done by, and proceeds from Salt and Fire alone.

*An infallible demonstration, that a true tincture or universal Medicine may be made by Salt and Fire, for the melioration of Metals.*

RECIPE one pound of the *Mercury* of Lead, or rather of *Lune* of the Athes of Tin two pounds, mix these matters together and put them into a Glas

Retort



Retort coated, and put it in Sand, or rather in an open Fire, and give a Fire by degrees. In this Operation, the Salts inhering in the Mercury of Saturn or Lume, do display or exercise their virtues upon Jupiter, and seize upon it and leave the Lume or Lead, and ascend up into the neck of the Retort like Mercury sublimate, and are very heavy and ponderous, and do very rarely fall down into the Receiver, because they presently settle as soon as ever they feel any Refrigeration. Therefore it is needfull that the neck of the Retort be somewhat wide, that so the Mercury sublimate may meet with space and room enough, and may not by wanting room break the Retort. Now when the Retort has been kept three hours in a red hot heat, which time is requisite for the Mercury sublimate to ascend in, then cease from continuing or keeping on your Fire, that so it may cool. Then take out the sublimate out of the neck of the Retort when cold, and you shall find about some eight Lots 4 Ounces, and proceed with it the way following, as we shall by and by tell you.

Mix the Reliques or what is left, with two parts of Regulus of Antimony made with Iron, and melt it into a body: Wash off the Regulus and Tin from the Silver with Salt-peter, and you shall have your Silver not only encreased by the Jupiter, but also induced with somewhat of a golden nature; as much as the Salts could mature in so short a time, which is indeed a speedy Transmutation. But if you use Mercury of Saturn, there will not follow much amendment in so short a time. Yet nevertheless, that even the truth it self may even by this means be searcht out, there may be added a little Lead, and be boiled and reduced into Scorria's, in which there will remain a grain of Silver, which will give you information, how much melioration the saline Spirits are able to bestow in three or four hours space.

But this is not the right way of getting profit, for as much as it shows only the possibility of the thing.

But if you would have any profit by such an Operation, you must get you a Cucurbit for this sublimation made of good and vitreous or glazefying Earth; and the sublimed Mercury must be taken forth of the Alembick, and be again added to the dry matter lying in the bottom of the Cucurbit, and this Operation of subliming it must be so often repeated, till there ascend up no more, and that all abides fix with the Tin. Then is a stronger Fire to be put thereto, and the Jupiter and Saturn will be matured by the Salt as we taught afore. And if now any be minded to take that same sublimated matter, as it ascend in the first sublimation, and would make it fix and constant (*per se*) in a Glass, he would get a Tincture that will in projection tinge with a white and red colour, but yet I never have as yet tried the latter of these. However I doubt not, but it may be done. For seeing that this sublimed matter, doth (though it be so volatile) penetrate the Plates of Copper, by three or four hours time cementation, and turns somewhat of the said Plates into the nature of Gold and Silver by graduation, how much more would it do, if being brought to a due fixity and constancy, it should be projected into some molten and flowing Metal? For that in such a white sublimate (principally in that which proceeds from Lume) there lies hid also an occult redness, and may be manifested by the Fire, this I say, mine Eyes have seen, and mine hands have felt, but have not as yet brought the Operation to its compleat end, by reason of various lets and want of time.

Farther, by such a sublimate Mercury may likewise be wrought various Transmutations, which I think not fit to divulge. It is in its nature fugacious and volatile, and yet notwithstanding doth it in process of time make all other volatile and fugacious matters, such as are Arsenick, Auripigment, Cobolt, and even the most flying of all, *viz.* common Mercury, fix and constant, which effect is to be attributed to the Salt only. He that knows rightly to manage this Operation, will not labour in vain, but will be rendred a partaker of great secrets, which thing I leave to the Sons of Art, as a Testament or Will.

But yet that I may kindle some little Torch for to guide the desirous Reader, and may make him more certain of a true Tincture, which this abject Mercury sublimate showing it self in a white colour hides in it, I have thought good, yet farther to add this following way.

Extract out of this sublimate a running Mercury, vivifying and separating it by apt and magnetic subjects; and evaporate a little portion or particle thereof, of about the bigness of a Pea, in a Silver Spoon; when 'tis all gone, you will find a purple Powder left in the Spoon. If you cast this Powder upon hot boiling Lead, you will find after its blowing off, a grain of Gold on the Test. The Spoon it self will bear the mark of a purple spot in that place, in which the Mercury went away in fume, and it cannot be blotted or rubbed out, because the Mercury hath deeply impressed the Tincture in the Spoon.

Now may some or other say unto me, whence did that little grain of Gold left on the Cupel, and that purple spot which ringed the Silver Spoon, proceed, came it from the Lead or from the Tin, or from the Silver, or out of the saline Spirits? The greatest part of Men will say it proceeded out of the Lead, Tin, or Silver. But I say, that it did indeed come out of the Lead, Tin or Silver, but that the Tincture adjoynd therunto is for the most part the true Soul of Niter, which the Mercury took unto it self, and again left it and forsook it as soon as ever it was vexed or forced with the Fire. But I doubt not but that if such a Mercury impregnated with the Soul of Niter, were fixed and made constant in the Fire, it would afford an universal Tincture.

I confesse I have tried many a time this Operation in small Experiments, which sometimes answered not my desires, what diligence soever I used thereabouts; but when I attempted it in a greater quantity it never succeeded. This thing seems to be poised in the will and pleasure only of the Omnipotent God, who will not have those his so great Mysteries and Gifts profaned. I have indeed (like unto *Abies*) seen the promised Land, but yet I do not know whether or no God will bring me thither in this Life, that so I may enjoy those most precious Fruits.

And if God should not vouchsafe me that benefit, yet do I willingly rest content with this, that I have seen with mine Eyes, and felt with mine hands the truth of the Art more than once, which Art somany thousands of Men do so greedily gape after, but yet not with such good hap and success as to find it out or see it.

I have I say seen the truth, but not the Tincture brought to its end or perfection, but yet have I seen its beginning which makes me certainly assured to far, as that I dare to affirm, and confidently aver, that there is in nature such a thing as a true Tincture, and that it may by Gods blessing be prepared by an Artificers hand. I have not yet had so much

quite

quiet and so much time as to undertake this so weighty a Work. Yet now I have a resolution to set aside all worldly cares, sollicitudes and busineses, and to attempt and wait upon this kingly Work, and expect what the divine grace will bestow upon me. For we are to look for all good things from above, for else we labour in vain, whatsoever diligence we make use of.

These things I was willing to publish for the Affection sake of the truth, and to prove that there was in nature a true Tincture, that so it may evidently appear that Metals may be transmuted both universally and particularly. And if by some desperate Men or by a sudden and immature death (which chances God of his mercy graciously keep from me) all the Medums or means of perfecting so great a Work, and finishing it should be cut off from me, yet notwithstanding the truth it self will be able to bear witness to my sayings when I am dead and gone. For I have by me even yet those Silver Plates tinged with Purple Spots, which can at all times witness the truth of these things I have here delivered. For it is an impossible thing that Silver should be tinged with a purple colour without a Tincture. If therefore there is to be found the truth in that white and fugacious sublimate, what I pray would be found in the fix and Fire-abiding red Tincture? Would it not be, that effects of far greater moment would be produced by such a Tincture. The Ancients therefore that desired firmness of health and a long life, bestowed such labours and sweats upon getting a true Medicine for humane and metallick Bodies, and some of them arrived to their wish-for end, but the greatest part of them were deceived with vain labours, and frustrated of their conceived hopes.

If any Man did certainly know that there were in some places to be found mighty treasures of Gold, Pearls, and Precious Stones, and it were granted every one to search after them for his own proper advantage, what think you, he would be lazy and slow, and would not set himself to seek after them. But if any should so order his search that like a blind Man, he neither knows nor sees what it is he seeks after, or in what place it is to be sought by him, certainly such an one would labour in vain, and lose both his time, pains, and costs; and this usually beides the greatest part of Men, for they spend their labours in vain in their search after this Work, because (like blind Men) they neither know what they are to seek, nor where. But yet 'tis credible that there would not such a multitude of them have strayed from the truth, had but any one so clearly and perspicuously shown and pointed as it were with the Fingers at the place where the Treasure lieth hidden, as I have now done.

And although the envious and lying Devil should oppose the truth even with his greatest power, and should most cruelly rage against it, yet notwithstanding he will not be able to shew us any one Man that hath produced and brought the truth forth to the light with greater perspicuity and evidence than Glauber hath.

I have therefore yet once more at present shown by a most evident demonstration even before the whole World, and have asserted it for a truth, that not only the more imperfect Metals do admit of being really transmuted by Salt and Fire into the more perfect ones, but wishall, that by them, [*viz.* Fire and Salt] a Tincture may be made.

And now let all mine enemies visible and invisible

ones, open and secret ones, what name soever filled by, come forth and publicly produce the true Transmutation of Metals, with a clearer and more conspicuous manifestation than I have here done. I acquiesce with what I have hitherto spoken; if God shall please I will divulge admirable things in my next third Century. In this little Treatise there are laid open only four secrets, but yet so clearly and conspicuously that no body hath as yet manifested such and so eminent things with clearer and more perspicuous expressions.

For that first Instrument is clearly enough described, by the help of which, not only a great plenty of all sharp Spirits may be prepared with very little costs and ease labour, and the four-fold use of these Spirits is able to bring most great profit to the Country.

1. All Gold, Silver, and Copper are thereby extracted out of the poorer sort of Oars which Germany abounds with every where, and that in a far easier manner than by fusion, and are so brought to a very gainfull improvement, to the great benefit of all Germany, the which hath never been hitherto done.

2. Of the said Spirits is made a Water-attracting Magnet, for the bettering of poorer Wines, that so they may keep good, and be the easilier transported out of one place into another, as I have signified in my second Century. It is a secret which offers gain both to the rich and poor, and may be prepared in great plenty.

3. The imperfect Metals are sundry ways bettered by those saline Spirits, of which may be made vast quantities as I have shown in this Work or Book, and this melioration my Writings do variously reach and treat of.

4. By the help of these fiery Spirits of Salts, preparable in mighty plenty, which is a thing commodiously to be done by the Instrument described in this Book, may the Turks who are the Enemies of the Christian World be resisted without any Blood-shed. Concerning these fiery Waters, which being such a notable destruction on the Enemies, this is here to be noted, that immense quantities of them are easily gotten without any Distillation and with very little expences.

For if much be to be effected by them, it is necessarily requisite to have vast quantities of them in readiness, without which, no great matters are in this case to be accomplished. But as concerning the manner of so greatly endammaging the Turks by these moist Waters I cannot so accurately describe the same here, as being a meer stranger to, and ignorant in military affairs. However I will briefly and in few words shadow out, what way I think it may be done by, *viz.* to resist and mightily endamage the Enemies by them.

First of all, this is the nature and property of these moist Waters. As to outward view they are like Water, and may be handled or dealt with as other common Waters, but their inward virtue is nothing but a meer Fire. And because these moist Waters may be thrown not only with the hands, but with greater Warlike Engines or Guns a good way off, by artificial Instruments prepared for that purpose; therefore is the use of them manifold, and as necessity requires may they be used several ways for the expulsiion and overcoming of the Enemies. We will illustrate our meaning by an example. Suppose I am in a City or Castle besieged by the Enemies, and that I have by me some of those kind of Instruments

u u u u

which

which are accommodated to this use for the moist Fires. If now the Enemy should set upon the Trench, Wall, or a Bul-wark, and I were furnished with that defensive Water of mine, should stand behind the Wall or Bul-wark in that place which the Enemy sets upon, he could not possibly come at me; for those moist Fires may be cast by the said Instruments far without the City, like a fiery shower of Rain, or like a Cloud, which Rain being forced out of but one onely Instrument would dilate it self far and wide upon many hundreds of Men, and whatsoever it touched it would hurt and burn like common natural Fire, and it would especially blind their sight, so that the Men would not be able to look up or see. If now the Enemies should make their attempt upon any place, and there should be shoured down upon them such a fiery Rain, and by hurting their Eye-sight make them quite blind, how would they be able being blinded to get over the Walls or Bul-warks? I do believe that if they should have gotten over the Walls or Forts, and be made thus blind, they would be heartily glad if they could but get out again and recover their own party. But it would be better to beat them off, and blind them when they come with their Ladders to scale the Walls, than to permit them to approach any nearer. But yet if it should so happen that the Enemies had gotten even into the City it self, and there were some Houses in the principal places or streets in which the defendants may rally themselves and that such Houses were furnished with such moist Fires, and that such fiery showers were shot out thence so blinding them that they durst not open their Eyes, what I pray would they be able to do, being blinded and clearly deprived of the use of their sight? Would they not throw away their Arms and solely mind the getting the Fire out of their Eyes, and yet it would hardly be so done in half a days time, may if it should touch their Eyes in pretty quantity, it would scarce be quenched in two days time, and if they should go to wipe their Eyes with their hands, then would they make their torments much more intolerable, and would add more Fire to their Eyes, because their hands are likewise moistened and plagued with that continual shower. And now may not such unbidden Guests be overwhelmed and slain with Stones cast on them out of the adjoining Houses? And may not one single Woman with such a little Instrument onely filled with these moist Fires defend her House against an hundred Soldiers. Verily in my opinion there may be made a better defence with such a little Instrument that one may carry about with him, than with ten or even an hundred Muskets. For 100 Muskets require 100 Men, all which when they have discharged their Guns once, and have slain some ten or twelve Men (and yet it is not wont usually to happen so in such cases neither) they need some time to load their Muskets again, if they would keep on shooting. But this Instrument may be used even by Women, two or three of whom will haply do more hurt to the Enemy than twenty or thirty, yea haply one hundred Men are able to do with their Muskets. And if the Women and other weak Men do but blind their Enemies, the armed Men may take them thus blinded Prisoners; that so not being killed but made Slaves, they may be set to Work and Till the Land, and this would be far more profitable than the killing of them would be. So then, may not an hundred Soldiers by the help of my Instruments defend

any Fortresses with greater and more certain defence than a thousand Men could otherwise do. Verily I believe they may. For these blinding Fires of mine, or fiery Clouds and Rain being adjoynd to other usual and customary military Weapons, will most mightily endamage the Enemy, nor will there need so many Soldiers, for the Citizens themselves may use the other [customary] Arms, and the Women and Children may use the Instruments, whereby they would haply defend themselves more strongly than if they committed their defence to chosen and regulated Souldiers.

For these Instruments, (by which the moist Fires are driven far off upon the Enemies like fiery showers and Clouds of Rain, and that without intermission, and as oft as ever need requires) although they be great, yet a few Men may govern or manage them, so that it will be impossible for the Enemies to effect any considerable enterprize in besieging any City. But it is needfull to place such Instruments that thus squirt forth Fire, behind the Walls and Bul-warks, that the Enemies great Ordinance may not hurt or destroy them. Verily I cannot so very accurately and completely show what [the best] way [is] of endamaging the Enemies by the help thereof, for this practice it self will better shew us. I can furnish forth the Instruments themselves and the moist Fires belonging thereunto. I commend the use of them unto the Souldiers, who may learn to use them as they shall find good by experience. I do again repeat what I have hitherto so often spoken, and I do affirm, that with one such Instrument may some thousands of Men be blinded in a moments time, and being blinded what I pray can they then do? If so be that others shall endeavour to come to help them and fetch them off, they may likewise be blinded, nor can they run away, and therefore must necessarily be taken Prisoners. And this in my judgment may be done in Hostile Invasions and Sieges.

But now whether or no there may be any use of such Instruments in Battailles and Conflicts with the Enemies, I do not well know, but that a City, Castle, or House may be defended by their means, and so drive off the Assailants, is a thing evident and undoubted. Should there be a thousand Enemies beset the House of some particular Citizen, yet must they depart if onely such a fiery Cloud or Rain (the Doors and Windows being shut) should be shoured down upon them. For so they would be rendred blind and not be able to see or find the Door, as it was in *Lots* time, when his Enemies environed his House to have out those two Strangers, they were smitten with such blindness that they were constrained to leave the House, and it was permitted *Lots*, and his, to pass out of the same without any impediment. And is it not lawfull for us to smite our Capital Enemies the *Turks* with blindness, and to defend our selves, our Wives and Children?

God himself saith, I will encompass those that are mine, with a Wall of Fire, and defend them against their Enemies. Briefly, this invention of mine, of making such a fiery Mist or Rain, is an incomparable defence and safeguard, the like of which was never as yet known in the World. And now may any one easily conjecture what may be done offensively with this same invention. For example, suppose tis necessary to take such or such a place from the Enemy, but now there is not time enough left, nor are there Souldiers enough for the enterprize; and therefore some Stratagem must be used to become Masters

of one of the Gates at least whereby the Souldiers may be let in.

And now in my judgment some Gate may be seized on and that easily by the help of these moist Fires of mine, and tis thus, let some Souldier or other fit for such a design, be taught the use of my Fire-spitting Instruments, and when he understands it, he may be clad in Countrey Habit, and so let him go to them upon the Guard, and in the Court of Guard-houses in which they be, let him shour in upon them a fiery, Eye-blinding, and forcibly hissing shower. [This done] how can the Guarders possibly resist those that come to the Gate and are ready to enter in? Nay more, the Souldier thus clad may have a Granadoe given him to carry in a Sack, which being filled with those moist Fires, may of its own accord (without any benefit of Gun-powder) leap allunder and fill all the whole room with his blind making Dew, he may throw into those Watch houses where they keep Guard, and so make all that are there present unfit to fight. And if so be there should be more of those Houses than one, the same Souldier may likewise have more such Granadoes given him, one of which he may throw into each House. Nay farther, if need be, and that you would have it sadge better and have it more certainly succeed, there may be sent several Souldiers with such Fire-breathing Granadoes to several Gates, to overwhelm the Watchmen and possess them. For the Watchmen suspecting no evil from one Countrey-man onely, will not cry out Arm, Arm, but let him in without any impediment. Such Fire-breathing Balls or Granadoes may be made of Iron, Copper or Earth, which however, properly are not Fires as long as they feel not the Air, and they then become Fires onely, when any one is so minded to have them such, breaking every thing in their reach like Gun-powder burning, and depriving all such as are present of their sight, and making them Sick. Granadoes made on this manner, and of about the bigness of a Mans Head, do not of their own accord conceive a flame without Air, nor do they fire allunder, or at all operate. But if you would that the Air be let in whereby they may operate, there must be a little Spicket or Tap to be drawn out of the Granadoe, that so the Air entering in may vivifie the Fire that lies in the Ball or Granadoe. Such a Granadoe being thrown into any Watch house, the Watch men will without doubt presently run and take it up and see what it should be, and what end it was thrown in there for; then as they all of them stand round and contemplate upon the novelty, if any of them hap to draw out the Spicket, which without all question they would do, the Air gets in, and the Fire enkindles and breaks that Granadoe thus stut with that venomous Fire all to pieces, and so will strike them all down together. And may not now the Souldiers in the mean time hasten and break in to that fenced place without any let, and become Masters of the Gate? Verily methinks it should succeed very well. I tell you my thoughts of the business, I never tried the thing it self nor do I ever desire to try. Such as have a desire to try it, and have occasion and opportunity of doing it, may more accurately contemplate thereupon, and so will they find what way they may most conveniently deriment their Enemies most of all by. I have laid the foundation, others must valiantly proceed on and bring the thing to a most useful Issue. However I do not doubt but that the most part of Men that shall hear me say, that there may be such

effects produced by these fiery Waters, that may equal the dreadfull Operations of Gun-powder, will mock at me, and judge it an impossible thing; nor will it be any thing strange they should, because they have not any knowledge of nature.

Before those dreadfull virtues of Gun-powder were known, certainly no body would have believed the same, had they heard it told, that it were a possible thing to hurry or throw such a great Ball of Iron, into so far a place with so little Powder. And now it is a thing so very common, that he that will not believe it will be laught at. Even so, those things I have here mentioned of moist Fires will seem extraordinarily wonderfull and absurd to the ignorant, until they shall see with their Eyes, and feel with their hands, that the *Turks* shall even this very Summer feel it if God permit, and vouchsafe me health so long. If God (I say) shall permit, which I would have you understand, as thus, viz. unless the wrath of God shall be so enkindled against the Christians, and shall therefore put a stop, and prevent the accruing of any benefit, by any help how great soever it be. For when God pleaseth to punish any Countrey with deserved afflictions, certainly no Instruments of defence will at all help or doought.

These things was I willing to declare at present, to demonstrate in what manner the Enemies power may by such Artificial moist Fires, and a peculiar kind of Granadoes, such things as never were as yet known in the World be broken. There are verily other far greater effects, and which exceed Mans belief, that may be effected by these my newly found-out Fires; and such as are not to be written but to be revealed onely unto those that are truly well Willers to the common Weal, and who study how to destroy the Capital Enemy of all the Christian World. But thus much I add, that by these Artificial, Secret, and unknown burning and flame-conceiving Fires, far greater things may in my judgment be effected at any time whensoever one is minded, than by Gun-powder, for that it operates not afore it be enkindled with the Fire. But my Fires are enkindled and inflamed by the Air, and therefore must necessarily exceed Gun-powder in the production of greater effects, and this time will manifest.

Those common Granadoes being thrown into any City may be covered with wet Hides or Cloaths and be quenched, so as not at all to operate, but it cannot be so with my Instruments. And therefore it is not without cause that I prefer them afore Gun-powder.

Tis not expedient to make any larger discourse concerning these matters, and to take up any more room by revealing more. I could verily in a few words disclose these things that every one might be able palpably to feel, and visibly to see them, and so as that he would assuredly know that far greater things might be effected by these my Fires than by Gun-powder. They may together with the Gun-powder use these my moist Fires as they think good and as need requires. And I do not question but that hereafter Wars will be waged after another manner than hath hitherto been done, and force must give place to Art. For Art doth sometimes overcome strength. We will illustrate the business by an example.

When any little weak Man Fights with a bigger and stronger than himself, and they have both of them like skill in the use of their Arms, the stronger over Masters the weaker and Conquers him. But

now if the little Man be better skilled in the use of Weapons than the greater and stronger one is, he beats him and becomes the Victour. And when two are of equal Stature and Strength; they smite alike forcibly, and beat one another alike, just as your Laundresses that beat Cloaths with a wash Beetle, so do these lay on blows on each other with like measure. So among the Ancients did they fight Man to Man, and the strength of the blows prevailed. But when Gun-powder was found out, then a few could kill and put to flight a greater number than themselves.

And now again 'tis every where known, that Men now a days do again fight with equal hand, as 'twere, neither party having more help [by Art] than the other party hath: save that the stronger party doth for the most part get the Victory, so that the Wars in our time consist not in Art, but in the multitude and company of Men. Mean while I firmly hope that if the use of my moist Fires be but known, there will be another kind of Warfare than now is, by fighting on equal Terms with blows as the Countrey fellows do, and whereby the stronger can overmaster and subdue the weaker. But now by the help of Art, the weaker may overcome the stronger. And if so be that Art and strength concur together they are wont to be most efficacious. *David* with his sling showed the skillfulness of his Art, and subdued that great *Goliath*, who little expected such a mischance from such a little Shepherd. And like as *Goliath* mocked at *David* with his Sling, so perhaps will the *Turks* have us in derision, should we meet him with such Water-throwing Instruments. But even as that great *Goliath* was smitten down by a Stone of the Shepherd, so may the *Turk* be easily burnt and radically rooted out by those moist Fires, if the Christians will themselves.

But some or other may here object and say, suppose some perfidious Christian should happen to flee to the *Turks*, and put such Weapons into their hands, to use against the Christians agen, what shall we do then? [I answer,] such [a mischief] may be prevented by an accurate diligent wariness, that these secrets be not revealed to every body, but to such onely as are known, and that have possessions, Wives, and Children: for such will hardly be allured or corrupted with any reward. Besides too, the vulgar will not be so easily apprehensive of all things hereto requisite, seeing the Art consists not barely in one or two, but in many things [or circumstances]. It cannot therefore be that such inventions should so easily fall into the Enemies hands, and that for several causes which I forbear to reckon up here. Nay more, if necessity should require there mought (by accurate mediation) a farther inquisition be made, whereby more such inventions mought be found out. For this may easily be effected by Men of a quick piercing Wit, viz. by their diligent search to add to what is found out and to better the same, for 'twill be a facile thing to do. For nature being so most exceedingly richly stored can never at any time be thoroughly found out. And therefore even I myself do hope in some short time greatly to augment [or meliorate] the said Inventions of mine. If God vouchsafe me life, there shall be even yet produced by me to light wonderfull things, which will miraculously promote the safety and happiness of my Countrey, and especially if I shall but find amongst Men a thankfull remembrance thereof.

Moreover, I doubt not but that abundance of Men will wonder if they shall see these my newly invented Warlike Instruments to be published in Print, which is a thing that I would never do, for I have resolved to make such onely partakers of the knowledge of the same, as stand in need thereof.

But because I have conferred with one or two (whom I thought to have borne me a loving and friendly mind) about these things, and spake to them too openly about the very business it self, they got some part of the Art it self, and saw the very Instruments in the Workmens hands whom I had taken order with about making them, and without doubt persuaded themselves that they had the full knowledge of the whole Art. Presently upon this they were become invisible and withdrew themselves, inso much that I suspect that those perfidious Men have repaired to the Courts of some great Men, to offer and sell these my inventions as if they were their own. Now then to meet with such treacherous perfidiousness, I thought good to publish openly somewhat concerning these matters, that so every one may know that whatever Men shall sell such secrets as their own, they were not invented by them but by me, and they have fraudulently stolen them from me. But I except those here, to whom I have revealed them to this intent, viz. they may make use of them against the *Turks*.

And because I can methinks prophetically as it were conjecture that these my newly invented military Instruments will be desired and sought after by a great many both high and low, I judged it a thing worth the while, to take care for the getting some of those same Instruments, and also those moist Fires thereunto appertaining to be prepared, and sent to those places, where they may detriment or annoy the *Turks*. For without doubt there may be far stronger resistance made with these newly invented Instruments against those our Capital Enemies, than can ever be done with Gun-powder. For Gun-powder is never wont to operate afore it be kindled with the Fire, which kindling and inflammation Water will hinder, and now my moist Fires are not at all impeded thereby. And upon this account it is a thing altogether possible that a fiery Globe [or Granadoe] may be as well emitted [or be as forcible] out of the deep Waters with [or by] them, as it may with Gun-powder out of the Water, the which seems indeed incredible, but yet is very easie to him that is endued with the knowledge of these things.

There yet resta few admonitions to be given, viz. that no body pass his sentence upon these my secrets here disclosed, with a prejudiced and forefallen judgment, unless he has a mind to slur himself with an infamous mark, but let him have patience, till he of his own knowledge perceive the whole Basis of the business. Many things there be that lie as yet hid-den, which (as Prophetes tell us) must be manifested before the Worlds end. This time draws nearer and nearer, though so few believe it. For my part I am verily of this Opinion, that there is such a wonderfull time at hand, the like of which hath neither been seen or heard of from the time of the Flood even to these our days. I pray God to Defend the Pious, and to Convert the Wicked, Amen.

The End of the First Part.

THE  
SECOND PART  
OF  
GLAUBER'S  
WORKS.

The First CENTURY,  
OR  
Wealthy Store-House of Treasures.

BEING

A General Appendix to all his hitherto-published Writings.

The which doth not onely illustrate all obscure places, as well in his Philosophical and Medicinal as Chymical Writings, and explain those hard places to be understood; but also do so abundantly supply those which are defective, that the learned and the unlearned, the highest and the lowest, and more, the meanest Workmen and Husbandmen, may sufficiently be able to comprehend that *Glauber* hath in all his Writings, written the pure and simple Truth, and hath again brought to light the most noble Art of Alchymy which hath so long lain hid in darkness hitherto; and hath discovered it for the common good of Mankind.

L O N D O N, Printed in the Year MDCLXXXIX.