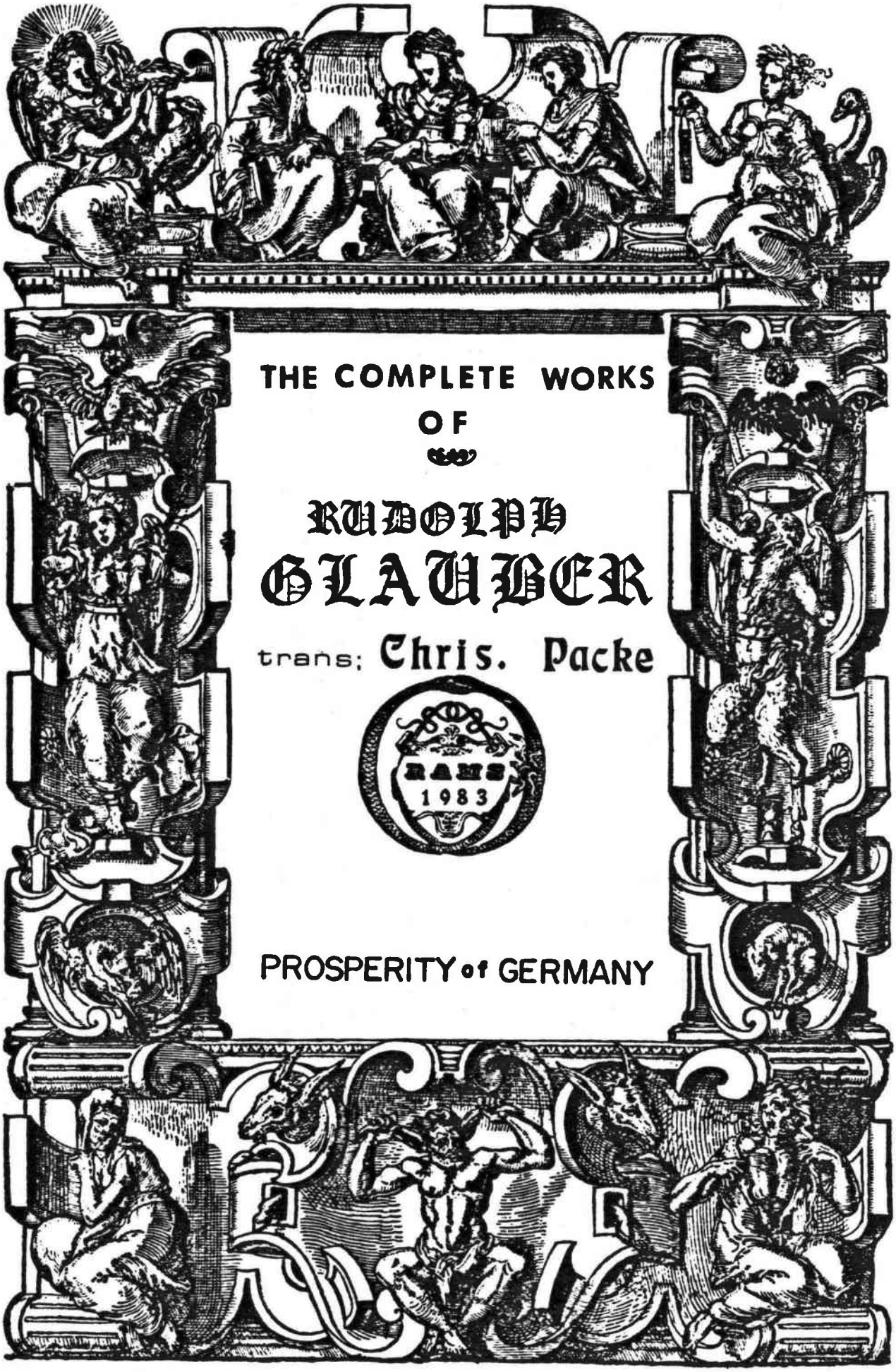


THE COMPLETE WORKS
OF

RUDOLPH GLAUBER

trans: Chris. Packe

RAMS
1983

PROSPERITY of GERMANY

THE

FIRST PART

OF THE

PROSPERITY OF GERMANY:

Wherein is Treated of

The Concentration of Wine, Corn, and Wood, and the more profitable use of them, than hath hitherto been.

TO

All those Patrons that Love GOD, and favour their Country,

HEALTH.

To Pious, Prudent, and you Country-loving Patrons.

The most Excellent Glorious God, and our most Merciful and Bountiful Father, hath (out of his great Love unto, and Fatherly Care of us, from Eternity) set Nature before our Eyes, that he might signifie to us his Will; which said Nature, is no other thing but the proper, eternal and only Will of God. To this Nature, God hath (as to his obedient and faithful Instrument) absolutely delivered, and committed his Will and Command to be by her faithfully and diligently performed; she accomplisheth the Task imposed on her, without intermission, nor resteth she one moment of time from doing the Divine Will with her utmost study and endeavour.

Therefore, deservedly ought we to learn to know, whrship, and love the Creator above all things else whatsoever, seeing the Creator is known by the Creatures.

If his Creatures be great, and unperceivable to our sight, and so wonderful; cetainly it of necessity follows, that the Creator is far greater, and far beyond all Human Understanding; and this, every one may easily understand: 'Tis therefore clearly and evidently manifest, that God Created all things for the service of man, that he might thereby acknowledge the Divine Bounty, and Honour, and fear the Creator, and bestower of all good things, and yield him due Thanks for his Gifts.

But seeing that it may so be, that the most just God will sometime or other, at last (being provoked by the perfidious malice of men, avenge himself on the most Impious living of this perverse World, by bringing scarcity of Food, (War, and the Plague) and seeing that it may so be, as that the small Company of the Pious, lying hid amongst the Impious Crew of the wicked, may partake of the same punishment: Therefore I thought it very expedient, with a cheerful mind to publish (to the Honour of God, and my Country, and for the comfort and solacing of its Pious Inhabitants) the Talent that God hath vouchsafed unto me, by the help of which, very many such Calamities as may come, viz. Famine, War, and the Plague, may be prevented.

But the way I have pitched on to serve my Country in, doth chiefly consist in the manifestation and Revelation of those most great Treasures that lie hidden in GERMANY, being such as by the regardlessness of Men have been hitherto unknown, unsought, and not gotten forth. I have therefore endeavoured, faithfully to manifest in this present Treatise, by what means those Treasures are to be sought for, and rightly ordered for the profit of my Country; and withal, to open the Treasures of the Noble State of GERMANY, wherewith it is most abundantly enriched, beyond all the other Countries of EUROPE, and hath hitherto enjoyed, and used (but not so

well as it should have done) viz., Wine, Corn, Wood, Minerals, and Metals. For Ungrateful Men have extremely wasted unprofitably, the most wealthy, and rich Benediction of God, who hath bestowed Wine and Corn on them, in abundance, and the Relicks (which they spent not) have they suffered to corrupt and perish with lying. Nor is there any body that doth in the least entertain any thoughts, by what means such an abundance of so great Gifts, might be kept and preserved for future years, which may be accompanyed with extream scarcity and Dearth. Every one shifts for himself and his, with that plenty of Goods he enjoys; and leaves another to take care for himself, and to see for time to come, that he provide himself for things necessary whereon to live. And it is come to such a pass, that the overplus which remains of the abundance of the Blessing of God, is meerly cast away through a careless disregard, and so nothing is preserved for after times. And yet our Lord Jesus Christ himself when he fed many thousands of Men with Bread, commanded his Disciples carefully to preserve the remaining Crumbs, that nothing might be lost; the which without all doubt he did for no other end, but that we might have the Gifts of God in high esteem. But where shall we find such as will imitate, and do the same; certainly no where, which is inexcusable with God and good Men. Certainly such a largess of Divine Gifts, is not bestowed on us, that they should miserably perish, or be cast away, but we should rather labour and take care of diligent laying up and preserving (like so many Laborious Ants) all that overabundantness which we cannot make use of. Let it be but considered, I pray, in what great heaps Corn lies heaped horded up, and is spoiled. And is it not the same with Wine which being gathered in such overgreat quantities, is become vile and abject, or cast away?

What, cannot there be store laid up out of this very plenty (which now is grutched at, as 'twere) as so many great Treasures for future Calamitous Years?

Well however, though as yet this hath been left undone, yet I

am confident, that some good Householders will be found, that will not despise this Instruction and Admonition of mine, but will condense the so much superfluity of Wine, and Corn, and preserve it against future Years scarcity. Nor do I at all doubt, but that others, after they have by this Book well learned the manner, will turn the superfluous, and cast away Wood (which lies and rots, and is reduced to nothing) into Salt-petre in great quantities; that by its help the Enemies may be resisted, and the Inhabitants defended. But in the three following Parts, which treat of the Concentration of Metals, and Minerals, wherein all kinds of Medicaments resisting natural Diseases, shall be taught, I know that every one will find refreshment, and help, against the future Plague, and Contagious Diseases. So then, when we have Food and Drink necessary for a Livelyhood, and Salt-Nitre to defend us against our Enemies, and Medicines serving for the preservation of us in Health, there remains nothing else we can desire, save a little Gold and Silver, by which we may exercise Trade, or Merchandise, and furnish our selves with Outlandish Wares. The which, that we also may get out of those Mountains, we every where meet withal, and out of those abject, and given over Mine-pits, I question not, but (God permitting) to effect it, and clearly to shew it in the three following Books of the Concentration of Minerals and Metals. Upon this account I would no longer keep by me this small Book of the Concentration of things, but publish it to the Honour of God and my Country, (it being a Talent vouchsafed me by God).

I do therefore Dedicate it to all Pious, Faithful and Good Householders, hoping that my sincere Admonition, and Instruction, will find some place, and not be rejected.

The three Parts I promised, shall shortly follow: Furthermore, I offer my most faithful help to every one in the opening and revealing the said Concentration Wine, Corn, Wood, Minerals, and Metals; for all things being in a readiness, I can easily shew

the manner of Concentration. And seeing I am ignorant, how long a time the most Merciful God will vouchsafe unto me, the use of life and light; I would not willingly bury with me a Science so eminent, so Noble, and so profitable to my Country. But if now it should so fall out, that few or none should at all mind it, yet have I done my part, and satisfied my Conscience: Though indeed I do not in the least doubt, but that there will be some good and faithful Householders, by whom these Profitable inventions of mine, will be regarded, and be made use of for God's Honour, and for the Conservation of the Country, and its Inhabitants.

This I certainly know, that if this Counsel, or Direction of mine, concerning the Concentration of Wine, Corn, Wood, and Minerals (which proceeds from the simplicity and sincerity of my mind) shall find any place of entertainment, that our most praiseworthy Country of GERMANY, will in a few Years space become most exceeding happy, and be so enriched, that both high and low will be much joyed, and praise God, and give him thanks.

But I easily conjecture with what various and different Judgements this Off-spring of my Brain, will be expounded. One will haply give credit to the things I have said; but another will condemn and disdain them, as mere Impossibilities, and Dreams. But however, the truth will at length break forth, and the work it self will purchase to its Master due Praise, and herein I content my self. The most Blessed, most Merciful God, and our Father, that great Householder, bestow on us his Divine Benediction, that so we may institute in most places of this our most dear Country this Concentration of Wine, Corn, Wood, and Minerals; and may by the help thereof obtain such Treasures, as may serve for the sustaining of our life, in time to come, and for the resisting of our enemies, and for the Glory of God, and the help and succour of very many needy ones in Distress.

THE PREFACE.

If the Proverbs of the Ancients are to be embraced as Wholsom Doctrines, then certainly this (being none of the least) is not to be rejected; and is thus, THAT HE THAT WILL NOT HEAR, 'TIS FIT HE SHOULD AFTERWARDS FEEL. The meaning of it is this; If so be any one be regardless of a warning, and so come to damage, every one is wont thus to say of him, He is but justly rewarded, why did he not yield to a faithful warning? Who will help him now?

But however, I have endeavoured (for the Honour of God, of the Magistrate, and of my Country, and the benefit of my Neighbour) to shew, by good Admonition, and by a profitable Testimony, by what means, that great plenty we have in these as yet prosperous times, wherein we have abundance of Corn, Wine, and other things in great plenty throughout all GERMANY, may not unprofitable be lost; but be preserved for support in those years of Scarcity that are next to come, according as JOSEPH that most excellent Steward mentioned in Holy Writ is said to have done.

And now that there may be as much prevention as is possible, that the Wine, and Corn perish not with lying, but be preserved against a future Scarcity, I have published this little Book for every ones view, concerning the Concentration of Vegetables, Animals, Minerals, and Metals, in which, the prosperity and felicity of all GERMANY, and indeed the Universal Treasure and Wealthiness of the whole World, is seated.

And because such an abundant plenty of all these things begets a nauseating and loathing, as it were, of those Minerals, Metals, Wine and Corn, wherewith GERMANY exceeds all the other Countries of EUROPE; I judged it well worth while to constringe, or concentrate this plenty into a little room, and preserve it from the loss and destruction of the same, arising from Negligence and Contempt. For when such vile, or cheap things are driven into a small compass, the baser and unprofitable part goes off, and this nobler and

better part is driven together, and preserved, and doth not so easily become corrupt as afore, when both good and bad are commixed together.

And this is to be understood of the Minerals, and Metals, and of Wine, Corn, and Wood. For where the Water is separated from the Wine and Beer, and the more Noble Parts are concentred, as it were into a Centre, you may even preserve them as long as you list. And when you need either Wine, or Beer, the concentrated parts may be relaxed by the apposition of Water, and be enlarged, insomuch, that one Vessel will hold six Vessels of Wine; and this, taking up but one place, and yet contains six times the quantity, there will not need so much costs, nor will so much Wine be spoiled by vapouring away, as would be by six Wine Vessels, which must always be kept full. Besides, this farther benefit ariseth hencefrom, viz. That out of such concentred Juices (if they be at hand) there may be made every AUTUMN new Wines sooner than ordinary, 4, 5, or 8 weeks time or more, and be sold at a bigger rate, than in the very AUTUMN Season, when the Grapes are ripe, and every Body furnished with Wine.

N. B. For such a work there is requisite a certain peculiar Instrument, and artifical knack, by the help of which the Must may be holpen to a speedy fermentation; there are also other Conveniences which arise from these thus concentrated Musts, which for Brevities sake we here omit. So likewise Beer being after the same manner concentred, doth bring a many more Utilities than ordinary Beer. For that Corn which eight Barrels were scarce sufficient to put in the Beer Vessel, will not turn into Vermin; nor will it flie out of the Barn, but may be used after IO or 20 years. Such Artificial Factitious Ales, seeing they are (in their condensation) boiled a longer while, are far better than the common sorts which are made of dried Corn, or Malt. Whosoever therefore shall in a great plenty of Grain, buy up Corn, and condense it by such Artifical Concentrations, and so lay it by, till a scarcity comes,

will gain abundantly, and will not only get to himself an honest, and to others no ways injurious profit; but will withal (being thus studious of Charity and Mercy) deserve exceeding will of his Neighbour, if he helps him in his great necessity, and he will readily pay him for his Corn, whereby he may get Money to sustain his Family and be a profitable gainer.

So then, no body is injured by this condensation, and concentration of Ale, or Wine, but both the Buyer and Seller are Gainers, and this should of right, be in every Man's heart, what condition soever he be of. It would be well done of Noble Men, Princes, Kings, Emperors, and other Magistrates and Common Wealths, if they would provide in their Store-houses for Warfare, such kind of condensed Liquors, and Juices, that so the poor may in a time of Scarcity be made partakers of that plenty, and they will have no loss thereby, but rather benefit.

But the Condensed ... Wood, and turning it into Salt-petre or Nitre, is far more profitable than that of Wine or Ale; for wood may be had even as it were GRATIS, and be with a very small Cost transmuted into Nitre; the which may be kept without hurt in the Storehouses for a long time, Seeing it is not wont to corrupt or perish, and be there conserved until it be made up into Gun-powder with Coals and Sulphur, both which are also not subject to corruption; so that it is not so every necessary (nay, rather it is hurtful) to have such vast quantities of Gun-powder in their Castles and fenced places. There are examples enough of Towers in which Gun-powder hath been stirred up, which either through negligence, or else by lightning, being fired, have in less than a moments time overturned whole Cities, and slain abundance of men. Now this mighty inconveniency may easily be prevented by this only Remedy, viz. If the Powder be not made up, but the matter thereof (viz. Nitre, Sulphur, and Coals) be only kept in readiness, wherewith the said Powder may be made, as necessity requires: Besides, herein also doth the concentration of Wood exceed (as to profit) the

condensation of Wine and Ale, not only because there lie vast heaps of Minerals in GERMANY, (which not containing a fixt and corporeal Gold, are therefore disesteemed) that admit of the separation of their better part, and fixation of it by Nitre; but withal, the meaner Metals (their superfluous Sulphur being burnt up) may be transmuted into better; and the perfect Metals, viz. Gold and Silver, may (by the help thereof) be destroyed, and be enforced or concentrated into a better part; the which thing the following SECOND, THIRD, and FOURTH PARTS treat of.
So then, this Transmutation of Wood into Salt-petre or Tartar, of both which not only great quantities may be sold, but may be also applied to sundry uses, will bring to our noble Country of GERMANY (in which there is an incredible quantity of Wood to be had almost every where GRATIS) a most notable encrease of Power and Strength, not only against its future, but its present Enemies.

Whosoever therefore shall have abundance of Wood, shall likewise be enriched with store of Wealth, provided he will but set his hand to the work, and not fear that ever SALT PETRE will be such a Drug, as to be of no value, and not vendible: And yet if it should so be, yet in the Explication of my MIRACULUM MUNDI, already published, I have manifested so much, and will, in the three following parts of this Book, manifest such things as concern the use of this SALT, that there will never want such, as penetrating into the knowledge of these Secrets, will not full well know its Use.

He that hath Eyes, let him look about, and use them, for the time comes, yea, and by little and little approacheth, in which Knowledge will be a profitable thing; and it will be well for those who are seasoned with the knowledge of things profitable. Verily, Knowledge is better than store of Goods, for no body can carry them with him, nor (in some cases) help either himself or his Friends with them. Happy is he that can say with the Philosopher , ALL THAT IS MINE, DO I CARRY WITH ME: How injuriously do they speak of the most bountiful Lord God, who accuse Him for that He hath forborn

the bestowing of Wine, plenty of Corn, Pome-Citrons, and Gold on some Countries, and yet fully as great Treasures are to be found there, if the Eyes of the Inhabitants were not darkened? If there were nothing else, yet certainly there is Wood to be found, which without any labour, costs, or trouble of Rich or Poor, doth grow night and day, and offers it self unto us, and as it were, saith unto us in these words; WHAT ! AM I OF NO USE? DO NOT I COME FORTH TO THY VIEW, THAT THOU MAIST BY CONTEMPLATING ON ME ACKNOWLEDGE THE DIVINE BOUNTY, AND MAKE USE OF ME WITH THANKFULNESS? There is not therefore any reason why one Country should exalt it self before another, because it is better; or contrarily complain, that the Divine Benediction less regarded it than other Countries; no, each Country hath enough, if it would but be content with what is possesseth. As for those Countries which are even destitute of Wood, they do nevertheless abundantly enjoy the Divine Benediction; witness ISLAND, and other cold Northern Countries, which have their Corn, and other Neccessaries for Life, brought them out of other Countries. But now on the other hand , these Countries afford Cod or Stock-fish dried; and so, though they want Trees, Fruit, Corn, and Wine, yet they do not want, and are equally as well nourished by the Divine Bounty as the rest be. Though they want Wood, yet have they Pit-Coals; for the Earth there is very sulphureous, and at the Mountain HEKLA it burns perpetually, and casts out fire, smoke, and ashes, and yields to the Inhabitants a great quantity of Brimstone, which they dig out and sell to our Country Mariners and Traffiquers, thereby sustaining themselves.

Some one or other may object to me and say, Seeing that SALT-PETRE is to be accompted of us an UNIVERSAL SUBJECT, and to be found in all things, it must necessarily be, that seeing ISLAND has no Wood at all, the SALT-PETRE is to be found in the dry Stock-fish, for otherwise this Salt can't be said to be UNIVERSAL, as being not to be found in such or such a Country.

Well then, to clear this doubt, I do affirm, (as I said before)

that Nitre is in Fishes also, though not in such plenty as in other subjects, viz. in Wine, Wood, and Corn: But it is found far more plentifully and potently in Stones, with which those Countries are well-stored; and any one may easily guess what Riches they would produce, were they but versed in the knowledge how to extract it; for in Stones which by burning are turned into Lime, (the which may be done without Wood, even by dried Turf or Pit-coal, and that easily). Nitre is as abundantly hidden, as in Wood, and in other Vegetables: Nor is there ought else requisite, save the knowledge of the way of its extraction.

If therefore that harsh and wild kind of Country, wherein nothing grows, be put in the Philosophical balance, with the most rich Country, it would (seeing it contains hidden in its Earth and Stones such great Treasures) easily exceed it; and obtain the chiefest place. There is therefore no reason why any one should complain before God: A smallman doth usually exceed, as to swiftness and agility, one that is big and tall: A weak man may oppose the acuteness of his wit against the strength of the lusty: A poor man ehjoys Quietude, and patiently undergoes his more hard fortunes; but contrariwise, the rich is invirened with cares. And this may be also understood of other living Creatures. These things being well considered, every one may understand and percieve, that God hath satisified every one, and that there is no Creature that can justly complain.

It is reported of the PERUVIAN part of AMERICA, That it is enriched with the most abounding Silvery Mountain POTOSI, seated in a part of that Region, and is about some 50 GERMAN miles in compass, and that it doth by its exceeding cold Air hinder the growing of any Vegetables, and yet notwithstanding, there is such a notable power and excellency obtained by the Riches of that place, that the City there founded doth abound with the best Wine, Corn, Sugar, and other such like necessary things, and is scarce inferiour in bigness and fair Buildings of any City of GERMANY, and from this

very Mountain only receiveth in this felicity. It is hence evident, that all such things are not unprofitable, which (by reason of the meanness of the outward shape) are not so well known to every body; for sometimes a Countryman throws a Stone at a Cow, which is far more worth than the price of the Cow is, and yet it is contemned, because unknown.

The external and superficial Figure therefore of a thing is not always to be regarded, but its inward parts are to be searched into and viewed; and that we may attain hereunto, ALCHYMY points out to us the way, (she being the Instrument of the true praise-worthy Philosophy) and opens the Gate, whereby we may search into the inmost bowels of every thing.

He who well knows the fire, and the use thereof, will not be distressed with want. And he that has no knowledge of the same, neither will he throughly search into Natures Treasures: From these things it is evident what Treasures we GERMANS do unknowingly possess, and yet convert them not to our use; And were not foreign parts as ignorant too of these things as we our selves are, they would readily have upbraided us GERMANS, that we spend more time in eating and drinking, than on good ARTS and SCIENCES.

Now as concerning my writings about the concentration of WINE, CORN, AND WOOD, and the condensation of 'em, I shall never be better able to prove and confirm the Truth of the same, than by producing it to manifest light, that so the Eyes seeing it, all admiration may cease, and all incredulity vanish. There is credit therefore to be given to all the things mentioned in this Book, as to an experienced Truth, and which are not made publick for any other ends, Save only that those natural Sciences may tend to the utility and benefit of my Neighbour. Whoever therefore shall believe them, will purchase Honour and Profit; and contrariwise, he that will not believe, will get only disgrace and detriment.

I will therefore predict or foretell, that this one only Artifice of making Salt-Petre in such great plenty, and the way of using

it to metalline works, will bring incredible Treasures to our Country of GERMANY, if we be not too negligent, or let it slip by a sluggish slothful drowsiness. I do verily believe, that if God doth yet vouchsafe me one years life, that this said Artifice of SALT-PETRE will be profitable to very many; but if so be that it shall not please the Divine Majesty to prolong my life so short a time, it may however be accounted of, that God hath indeed shewed us GERMANS, as heretofore he did to MOSES, the LAND OF PROMISE, but hath, by reason of our sins and incredulity, shut up the passage against us.

But that I may absolutely, serve my Neighbour, and that he may have no cause to complain, as if I had served him but by halves, in that I have not described the Press for Wood, together with the appertaining Instruments, I do now therefore certifie every one, that all the things necessary and requisite for the concentrating of Wine, Corn, and Wood, are to be seen in my custody in perfection.

If now any one be desirous of receiving benefit from his Wine, Corn, or Wood, and that he find it highly to concern him to get this knowledge he will well know, by the inspection of the Work presented afore him, wherein Lay the defect as to the getting this thing, and what means the said defect is to be holpen by; but the Instruments that I have mentioned, shall be no longer to be seen, than from the Calends of MARCH to the Calends of SEPTEMBER, this present year 1656. viz. six months time; for I have purposed to my self, not to render my life burdensome always unto my self, by carrying such troublesome burthens about to and fro, but at last to get a quiet seat and abode. So then it will by this here spoken, be evidently manifest to every one, what he is to do as touching this matter.

The three other Parts concerning the concentration of Minerals and Metals, shall (if God permit) shortly also follow.

But because Nitre is the alone Instrument of that work, and that

no body can get any eminent profit, unless he can have NITRE at a very cheap rate, it is wholly necessary that some Labour be bestowed about the procuring it, which if you can get good store of cheap, then will the hoped-for profit be perceived, both out of Minerals and Metals: If not, vain will it be for you to make your search into that Mineral Kingdom.

Well, I do affirm, That by the benefit of Nitre, things wonderful may be effected in Metallcik Labours; yea, ten times more than what I have described in my small Treatise, called MIRACULUM MUNDI, or dare to describe for the future; for all things requisite to true ALCHYMY, may be perfectly accomplished in it, by it, and with it.

Herewith I conclude this Preface. Whatsoever is here wanting in this Treatise, for brevities sake, the demonstration visible exposed to view, will afterwards compleatly recompence, insomuch that any one will easily wind himself out of all doubts. And here we rest for this time.

THE FIRST PART

OF

THE PROSPERITY OF GERMANY, ETC.

In the Name of the most Holy Trinity do I begin to describe the most great Wonders of God, that I may manifest to every one (without concealing ought) His Grace and Mercy, which He embraceth Mankind withal; and I pray God, the Father of us all, the merciful Creator of Heaven and Earth, to guide and direct this Work, that it may serve to His Divine Honour, and tend to all our Welfares. AMEN.

We will enter into FRANCONIA, and see what a wealthy and large Benediction of God is to be found therein: And I will first begin with Wine, none of the least of the most noble Creatures of God, and will demonstrate how ungrateful we shew our selves to the bestower of all good things, and how basely we abuse His Goodness.

Every one knows what a noble Creature wine is, how strained from the Grape and made, and therefore this thing needs no further description, forasmuch as others have heretofore sufficiently enough done this task and daily Experience is an abundant testifier of the use of the same. It is behoveful here, that we only signifie how it ought to be handled better than it has hitherto been, and may so likewise bring a greater profit and utility to the tillers thereof than hitherto. Every one knows, that wine is the noblest amongst all drinks, and most conducive to health, and may and ought to be called the Purest drink: It cherisheth old men, and heats the cold, but such as are of a tender age, should deservedly shun wine, because being drunk too soon,it easily inflames the Liver, and dries it up, and stirs up various Diseases, and at last causeth Death it self. So then, there is nothing so good, but may also do hurt, nor is any thing so evil, but doth sometimes bring some benefit, according as the difference of the use is which it is applied unto; as is here evident in Wine; the which being drunk moderately, and at due seasons, doth not only excellently well digest and concoct the Meat in the Stomach, but likewise evidently strengthens the Heart, brain, and Vital Spirits, and generates pure and sound Blood and Flesh. Contrariwise, being immoderately taken, it overflows as 'twere the Stomach, Lungs, and Liver, fills those Vessels with many evil humours, and obstructs them, so that they cannot well perform that office whereto they are destinated by GOD and NATURE, but are overwhelmed with whole Troops of Diseases; for the Heart and Brain is set upon by their spiritual efficacy and hot nature and property, and is weakened, and the vital spirit is overcome and suffocated as we see in the fire, the which when greater doth always suppress and overcome the lesser.

Hence it comes to pass, that men that load themselves with daily drinkings, do little differ from new-born Calves and Geese, and are wont to be neither profitable to God, nor to Men, nor to themselves.

IN THE NAME OF GOD, therefore, we will proceed on in the matter we have proposed, and see by what means more profit may be reaped from Wine than hath hitherto been.

In the first place, he that aims at the bettering of any thing, must know what the thing is which he studies the amending of, and of what parts it consisteth.

Therefore as concerning Wine, it consisteth as well as the other Vegetables of three principles, viz. of SALT, SULPHUR, and MERCURY (that I mayuse the Philosophers terms). The MERCURY is its insipid moisture, and the SULPHUR is that burning Spirit which is extracted or drawn out thereof. You shall thus know the thing, by this following Experiment. Put a Cucurbit full of Wine in a B. and with a gentle heat draw off what will come, but yet so, that the parts which in the distillation alter or change themselves, be each of them received apart in its peculiar Receiver. For example; If there were I2 parts of wine, or I2 measures, there ascends first only one part of spirit, which is the soul and life of the wine; after it, come ten parts or measures of insipid water; the remainder in the bottom of the Glass is a thick and austere or harsh matter, which being the Tartar or Salt of the wine, is also almost one part or measure of the wine. Of these three parts all wine is compounded, but yet partakes of one or the other of the Principles, more or less, according to its being more or less mature, or its growing in such or such a place. As for example;

The Austere Wine hath always more Tartar and less Spirit than the Ripe Wines; and contrarily, the ripe wine doth abound with more Spirit than Tartar, as the SPANISH and other extraneous wines witness, which do always abide sweet, and plainly have no Tartar in them; the reason is this, Because in those warm Countries they

are brought by the Sun to meer sweetness, and so are ripe; so that the austere Tartar or Salt is throughly changed, and concocted into a sweet Sugar. Hence it comes, that the said wines do not in the afore-proposed Examen leave any austereness, as our wines in GERMANY do, but rather yield twice as much spirit, and scarce the half part of insipid water: Whenas austere Wine yields about a twentieth part of spirit, the ripe GERMAN wine yields almost a twelfth part, and the SPANISH a sixth part of spirit, four parts of water, and one part of faeces without Tartar. So that from good GERMAN wine there comes (as I said afore) one part of spirit, ten of water, and one part of austere or sowrish matter.

He that knows these things, will easily contrive and prepare for himself by the help thereof, at all times, be it hot or cold, good and constant, or durable wine. Neither is there any room left a man here of complaining, as if God shewed greater bounty to men one year than another. The fault of this defect is not to be imputed to God, but to our own selves, who know nothing, nor are willing to know, nor study how to help Nature; for Art can bring an assistance and help to Nature when she is impeded in her work, and is unable to bring her Fruits into a maturity, provided the Artist removes away that which the wine naturally abounds withal, and addeth thereunto what it is destitute of.

For example, Let us examin a thin wine, which being not sufficiently concocted and ripened by the Sun, is endowed with too much sharpishness and water, and contrarily has but little of spirit; if now to such a wine, when it begins to boil or ferment, some spirit shall be added, so that it may work together with it, it will be even as well ripened in the wine-vessel, by the benefit of this fiery spirit, as if it had been ripened by the Sun, as it hung upon the Vine; insomuch, that by this means there ought be made excellent wines every year, if any had but the knowledge of thus helping them.

N. B. But now such a spirit must not be such an one as that

common Adust or Brandy-wine is, but a grateful and pure Essence of wine; the manner of making it I have described in my VEGETABLE WORK. Now by how much the more this Spirit shall ferment or work with such a wine, so much the stronger and more efficacious doth the wine become: Forasmuch as all the Virtues of all the whole wine consist in the Spirit only, and the Tartar or Salt doth by its muchness make it austere and sharp. But MUSTS being by such an Artifice made stronger and more efficacious, do keep a longer time afterwards without corrupting, and may be carried or transported whithersoever one please; whence it comes to pass, that they are never spoiled, as they are otherwise usually wont to be, when 'tis not of ripe growth.

From these things 'tis evident, that out of one MUST, grown in one and the same AUTUMN, there may with ease be made wines of 3, 4, or more kinds, according as there is more or less of this spirit added to the MUST and fermented with it.

There is also another way, by the help whereof every austere wine is easily corrected and amended, thus; In the Vintage time, let the liquor of the MUST, or of the expressed juice of the Grapes, be so boiled in peculiar Vessels, that the unprofitable moisture or tasteless water do exhale by little and little, until thou hast as much as thou wouldst, or as the efficacy of the wine, or the degree thou wouldst by correcting reduce it to, shall require: For, in the exhalation of the superfluous moisture nothing goes away, save that insipid water; but the sweetness and the austereness remains in that thick and condensate juice, like to Honey; so that that boiled mash comprehends all the strength and virtues of the wine, concentrated as it were, and condensate, and will again disclose them, if it doth again work, with water thereto added in a due proportion; but the use of this condensate MUST, which as yet hath not wrought or fermented, is this, That it can be at all times carried, and most profitable sold in far remote Countries, which thing could not afore be done.

For every one knows, that when there is a cold Summer, Wines become immature and acid, and are not wont to keep; for as soon as they come to be a year old, they are covered over with a filmy skin, and being mouldy-corrupt, because they have not in them spirit enough. From whence it comes to pass, that many times Vintners, or Vineyard -keepers, suffer great loss, after that they have diligently betook themselves to dress the Vineyards for an whole year, and have lived sparingly and hardly, and working hard, have sustained their lives with Bread and Water, hoping that upon selling their wine they should scrape together a little Money, to buy them some Clothes and other Necessaries for their Family's supportation; for the expected plenty of the wine hoped for, and of the profit accruing, by the store of Money for it, when sold, hath proped them up with this hope; but now the wine fading and deluding their hopes, and turning into an acid and austere taste, they cannot sell it, seeing 'tis scarce worth the carriage; or if it be sold, 'tis at such a mean rate, as scarcely sufficeth to discharge the Cost of dressing it; and what shall now be done for Food, Drink, Raiment, and other Necessaries to sustain the Family?

And yet the Vines must be dressed for the next year too, and more Monies laid out upon them; but from whence shall Monies come for Food and Raiment, in the mean time? Alas, what course will they take if some such like years should follow one another together? Either the poor miserable men must, together with their Wives and Children, famish, or else turn Soldiers, and be killed, or be made so desperate, as to betake themselves to thieving and robbing, and so finish their days by an Halter: For the present world is so much estranged from Mercy, that one will not use so much Christian Charity, as to help another in his necessity.

And besides, the ingratitude it self of men doth sometimes make others slow and fearful of administring and affording a mutual help; forasmuch as very many, when they are rid out of their incumbrances, do refuse to restore those things, or by labour to

requite or make amends for the things by which they were delivered out of their Straits.

Hence it comes to pass, that he who does a friendly good turn, for such an ingrateful man, loseth his Money, and by reason of that so ill placed formerly, abhors the lending his helping hand again.

Now, that such great inconveniences may be removed, and the Vine-dressers somewhat holpen, so as that they might every year sell their wines at a beneficial price, and may never be oppressed with that foresaid detriment; it may very conveniently be done by the help of this concentration or condensation, by evaporating the MUST to the consistence of Honey, the which may profitable be carried into far distant places, in which no wine is accustomed to grow, and be there sold. Such now as buy up such Must this condensated by boiling, do now know how by dilating it with Water, to reduce it again into good wines. This Artifice therefore being so-laudable, will be helpful to both, to the Vine-dresser, in yielding him presently ready Money for his Must, and to the Merchant, in easier furnishing him with Wine, and quitting him of so much Charges in the Carriage.

But that the business may be yet the better and more clearly understood, let us see by making computation, what the benefit and profit of this condensation is.

Let us suppose then, that a Wine not ripe remains acid and weak, and that a FRANCONIAN Urn, or half an Hogshead of FRANKFORT measure, yields scarce a Florin, or a Doller at the utmost. Such a Wine as this will not quit the Costs of the Carriage, though but for I2 miles; (a GERMAN mile is three of ours) For it degenerates by the carrying it, and becomes mouldyish, as 'twere, and turns sowre, so that the Huckster can't sell the same, and he'll have a care how he buys such wines another time; and the Vineyard-keeper is even enforced to keep them to his great loss, forasmuch as all his safety or dependance is built thereupon.

As for the Rich men, tho' they have some acid wine, they are not

undone by the loss, for they have still by them other better wines, which they mix those worser and more acid wines withal, and so sell them off; or else they keep such thin wines till the Autumn comes, and with more plentiful and riper Grapes, and to the Must proceeding from them, do they pour this thin Wine, and let it work therewith anew, and by this means it becomes vendible. But yet the Gain arising hencefrom, is sufficiently poor and mean: For by how much the thinner the acid wine is than it ought to have been, tho' it be mixt with good Wine, yet doth this become so much the worser; nay, it sometimes happens, that both are corrupted and lost; for as much of help as the acid Wine gets from the good wine, so much of goodness doth depart even from the good wine, So that such kind of bettering after what manner soever it be instituted, cannot be very profitable or advantageous.

For example, that I may be the better understood, let us instance in two pieces of Gold, each of which should be the value of 25 Imperials: Let them be put in the Balance and examined, and being examined, let one of them be the due weight, and let the other be less in weight or price the value of four Imperials. If now you are minded to take so much away from that piece, which is of current weight, as to make them both of alike weight, you may indeed so do. But yet you are no ways benefited thereby, but rather suffer loss; Forasmuch as you took away from that piece that was of due weight, and added unto the other piece that wanted of weight, so much of its value is departed, and both pieces will be unfit to go in payment, as wanting their due value and weight . What profit therefore can hence redound unto any man? Even so is the case with the Wine, for if one should get some two load of wine, and could sell one of them for 20, and the other but for IO Imperials, and yet should not be accounted of as vendible Wine, and now the Merchant should mix that thin wine with the better, that they may both be equal, would not that better wine become worse, and that thin wine be rendered not much the better? For

my part therefore, I cannot see that such a kind of meliorating can bring much profit.

But as for my bettering and correction, it is always profitable, whereby the acid wines are not corrupted by the acid, but the good and superfluous humidity only is separated by the benefit of Art, and the good part being condensate in it self, and by it self is reduced into a narrower compass.

N. B. He that is so minded, may separate from the sweet Must, a fourth part only, or a fifth or sixth part, by evaporation, and presently bring it to such a pass, as to work or ferment; for they become so much the better, by how much the more water hath been consumed by evaporation: If the Quintessence of wine be added to that working Must, the wines become the better, and the more generous. This kind of way may be made use of in those places in which the wine doth for the most part remain acid; for there needs not this Art to those Vines that Nature hath ripened.

Besides, the wines may be condensated to the thickness of Honey, that they may be thereby rendered the fitter for Transportation. Six Hogsheads, or OME, of Must, may be so condensated, that one Hogshead will hold them; the which (if need be) may again by the apposition of 5 Hogsheads of water, which quantity it lost in the condensation, make 6 Hogsheads of wine of the very same goodness, and efficacy as it would have been of before the condensation, if it never had been condensated, but been presently put out of the Press into the Barrels, to have fermented and worked into wine after the usual manner.

N. B. But now if any be desirous of making his wine better and more noble than it would have been afore the Concentration, then he must not put five, but only 4 parts of water; for should he add but three Hogsheads or parts, it would be yet better and nobler by one degree than the others. Hence is it manifest, That it is in the hands of the Artist to make and alter these wines at his pleasure, and to render them strong, stronger, and middling, and

by the addition of water, to give them even what efficacy and what virtues you list. But now, to all the mixtures he may add the soul of wine, if he has it, that the wines may thereby be the sooner clear and pure. For the Quintessence of any wine being conjoined with new Musts, and working with them, brings them in a short space of time to clarity and purity, so that they become transparent, but principally when they are tartarized, or full of Tartar, for the Spirit of Wine brooks not any Tartar, but precipitates it in the fermentation to the bottom, or drives it away from it self, and so by consequence makes the Wine clear and transparent. But as concerning, what means the Tartarized (Spirit or) Essence of Wine is to be artifically prepared by,'tis needless to repeat here, forasmuch as it is already described in divers of my Writings hitherto published, but especially in the Vegetable Work.

Besides, it is not so convenient, that every one should know, by what means the concentrated Musts may be prepared with water, and the Tartarized Quintessence. It is sufficient in this place, to know how the Musts are to be concentrated, or brought into a narrow compass, that so they may be transported and sold. Let this be the care of the Merchants to know how to use them when they have bought them. For the Brains of the Vineyard keepers are incapable of these things: Yet nevertheless, there will be some Men who will know how to make a due use of such boiled and condensed Musts, if they can but get them, and every one may be Master of this Affair, if he has but Coppers and Kettles, necessary for such an Operation; whereby he may make store enough of Juice. But yet every Country-man can't get such Kettles, neither will it be worth while, forasmuch as a small Portion Wine, will not be able to quit the Costs. But whosoever bestows his Study and Moneys in exercising this Artifice, will reap thence from a great deal of Utility and Advantage. But whether he does these things, or does them not, he neither benefits, nor injures me. 'Tis sufficient, that I have evidently demonstrated to the Vineyard Masters, by what

means they may always sell their Wines, whether they be ripe, or have come short of their Maturity.

But for the better instruction of the Courteous Reader, I will compute the Charges of this Operation, and show, what gain is to be expected from the Condensation of these Musts.

In the first place therefore, let us buy some Musts in those places, in which they are thin, and are sold for a mean price, viz. twelve Urnes, or six Hogsheads, or Oma's, for xij Imperials; (an Imperial is about 4 s. 6 d) this Must we will condense to the Consistency of Honey, so that there may be but one Hogshead, or Oma remaining. Let the Costs requisite to this Concentration (always provided you are furnished with the Copper Vessel) be valued at half a Dollar, or thereabouts; and the charge of the Wood we'll count an Imperial for. The Wine Cask which is to be filled with this condensate Juice, we will value at half an Imperial, its carriage forty Miles, we'll reckon six Imperials for. All which Charges being summed up, make ninteen Imperials and an half. And so much will be the Charges of one Hogshead, or one Oma of this Condensate Must, and its Carriage forty Miles. This Must now being brought into such a place where Wines are dear, you may at any time of the year, by the addition of Water, and by Fermentation transmute into good Wine. And that one only Hogshead being the condensate Juice of six Hogsheads of Must, will yield thee so many Hogsheads of such Wine as the Must would have been afore its Concentration. And if thou desirest to have thy Wine stronger and nobler, than as it comes out of the Press, and then it could be afore this Condensation, you may omit the putting thereunto so much water as it lost in the Condensation, and lessen it proportionally, that so those six may make no more than four Hogsheads, and they will be the more generous; the which thou shalt far better have by this means, if viz. You know how thereunto to adjoin a Quintessence.

If now, that one Hogshead of juice, which afore its Condensation

was six Hogsheads, doth again yield four (and no more) it must of necessity be much better, and more noble than otherwise it would have been, had it been made after a Natural manner, (viz. just as it came from the Press). And by this means too, it will last the better, and may be the easier transported and sold.

So then, if in such a place as is 40 miles distant from Wine-making Countrys, an Hogshead, or Oma, is sold but for twelve Imperials, and you have of six Hogsheads of thin Wine, made four of better, and each of these you sell for but I2 Imperials, yet you shall have 48 Imperials, out of which subtract your I9 and ½ Charges, you shall have clear Gains 28 Imperials, and ½. But I have set a most low price on this Wine, for in such places, which are about some 40 miles from these Countries, in which abundance of Wines grow, and Hogshead, or an Oma, is not usually sold at the Rate of I2, but of 24 Imperials. The gain therefore of about a Wayn-load of such a thin Wine, which haply would have corrupted with lying, and never yielded any profit, doth at the least yield above fifty Imperials.

Every one now may easily see how much Gains this Artifice of the Concentration of Musts doth bring. For besides this Commodity arising from this Labour, viz. That the Musts being presently sold, yield ready Money; there is this also, that the Money being again presently disburst, opens the way for the next years profit. The Merchant also has this benefit by this Labour, that he is not enforced to pay so much Water's carriage so long a Journey; and that he may even at his pleasure make his Wine more or less strong and efficacious; for what a deal of profit is this, for to have all the Wine of six Hogsheads, carried in one Hogshead.

Besides, the Merchant doth not only gain the price of the Carriage of those five Hogsheads, but also is quitted of the fear of the Carter's corrupting, or spoiling that Juice by the way, as is usual with them to do with Wine, drawing it out, and filling up the Vessels again with Water. This danger these Juices are not

subject unto; and may be kept in great plenty in fruitful years of Wine, until you need them. For they are not wont to be corrupted, if they are but kept in pure, and well shut Vessels. By this means every Vintner may in such exceeding plentiful years, furnish himself with a great Treasure, and store of Wines, and so afterwards, when a dear year comes, reduce his Juices into Wine, and enjoy a great deal of profit.

I have to this end described this so famous an Art, that the common Vine-Masters, may have present sale for their Musts, and not be enforced so long to keep them, till some Carrier comes and enquires after Wine, but may presently get their Moneys, and may profit themselves by bestowing them to the use of their Family. So then, it fares not only well, which the Vine-Masters, and the Merchants, but also with all such as dwell in those places which yield no Wine, because by the benefit of this medium (or Artifice) they may also drink Wine at a cheaper rate. For if any Honest Citizen provides himself with an whole Hogshead, or half an Hogshead of this Juice, he may turn it into stronger, and weaker Wines, and all times of the Year make new, and as yet fermenting sweet Musts, whensoever he pleaseth, and as oft as his need requires, and may by the apposition of Spices, or Herbs, make Aromatical, or Physical Wines; which thing cannot be effected without these Condensate Juices; forasmuch as Sweet MUSTS, cannot be carried by Land to any other place, for that they presently ferment, and boil up, and will either break out of the Vessels, or rend the Cask, and be lost, which (by having these Juices) is not at all to be feared. I do therefore think that I deserve exceedingly well of very many, by the faithful manifestation of this Artifice; which deed of mine, whether it be praised, or dispraised, yet will it not be despised by such men as shall apprehend, and perceive the benefit and Commodity of so great an Artifice.

It remains now, that we also describe, and set afore your Eyes the Instruments and Vessels serving to this Condensation, (without

which this Concentration cannot be effected) and withal shew the manner of proceeding, which is to be thus ordered.

In the First place, provide a Copper of such a bigness as you shall judge needful for the great, or less quantity of Juice you have; let it have a plain and even bottom, and let it have the sides about a Span high, and get it will Tinned over in the inside, and not Leaded, the which Vessel you must put in a Furnace of a sizeable bigness, and so order it, that being set in the Furnace, the Flame may come but only to the bottom, and not be able to touch the sides. The Walls of the Furnace are to be some two foot high, and must have an Iron front, or Stone Door, serving for the putting in the Wood, and registring the Fire, by opening and shutting it. At the backside is to be an hole of such a bigness, as may suffice for making the Fire burn by the access of the Air, and for carrying away the Smoke and flame. But it must be so ordered, as to be covered with a broad stone, if need be, that so the fire may on such wise be registred, that the Juices may not boil over by the overmuch fire, or taste of burning. These Juices are to be so long boiled with the wood, until they begin to wax thick, and then more new Must is to be thereunto added, this addition is to be so long made, and so often repeated, until the Copper be almost filled with those thick Juices. Then the holes of the Furnace that serve for giving air, are to be shut both above and below, that there may be no flame under the Copper, but the bare HEAT of the fire, and a sweet and gentle warmth, which will bring the Juices by a sweet decoction to the consistence of Honey, and will condense them without any adustion, insomuch that they will become as sweet as Sugar.

These Juices, you may let out by a Pipe, or Cock placed near the bottom of the Vessel, and shutting it again, pour in more to be condensed after the same manner, until all the Musts are condensed, but you must not presently put the Condensate Juices, as soon as ever they come hot out of your Copper, into your Barrels, but let

them run first into some wooden Vessel, and be there left so long till they are cool, then put them up in your Barrels, and shut them up tight, and so may you keep them whole and sound, and free from Corruption, even as long as you list: For if you should put them hot into your Barrels, and so shut them up, the Barrels would burst, or else when you open them, would (by reason of the pent-up Vapours, which can have no exhalation) break or run out.

N. B. And here comes a notable Secret, which I think good to add. When the Juices have rested some two or three weeks, and be afterwards dissolved with warm water, the residue of the Tartar which would have made the wines acid, will fall down undissolved to the bottom, in the form of small and big Crystals, and being washed with common water, may be used instead of Tartar forasmuch as it is nothing else than a meer absolute Tartar. Now this separation of the Tartar, is of great concernment as to the Wine, for it thereby becomes much better than if those Crystals had remained dissolved with it. Nor is any thing lost by this means, for that the Tartar is of as much value as the Juices: And besides, the Wines will be by this means freed from their acidity, and rendred better and sweeter; which thing verily deserves to be esteemed of as a great and profitable Artifice; and which, many there are that will know to use it to their great profit.

Verily, he that is of so dull an Apprehension, as not to be capable of understanding these things, that are so clearly, and evidently manifested, will not be any whit the better by larger Discourses. But he that has a desire of setting about this work, will insinuate, or work himself by a farther Meditation into the inmost centrality as 'twere of this so great an Artifice, and will with a far juster mind bear with me, in that I have not so much time at present, as to use a more prolix or larger Stile.

But if so be, any do desire to have this Artifice declared unto him, by a more clear delivery, let him read my Elplication of the Appendix adjoined to my Fifth part of the Philosophical Furnaces;

as also the Vegetable work, and there he shall find more such Artifices. Or if haply it concerns him, he may see in my Laboratory, the Furnaces and Coppers requisite to such a work, together with the Manual Operations.

I am even constrained briefly, and as it were by the bye, to insert thus much, that if some more than usually unskillful Men cannot understand those things which I have declared concerning the three Principles, viz. That all Wine must needs consist of the same, to wit, Salt, Water, and Spirit; I dare boldly and confidently averr, that he who knows how to conjoin (according to Art) these three Principles, may every where make good Wine.

N. B. But yet I would not have such an one perswade himself that he can do any good, if he mixeth Tartar, Water, and Spirit of Wine together, no, no, that is not the way for him to be Master of his desire. There are far other-guise Manual Operations, requisite to this Artifice, and such as I think it inexpedient to manifest in this place. Let every one be content with the things at present shown him, haply God will sometime or other bestow (on him) better.

Chapter II.

Treateth of Corn: Shewing what means it is to be Concentred, and Condensated by, so as to be Exported in great Quantities into other Countries, whereby both Gain and Moneys may be thereof made.

I have instructed you in the foregoing Chapter, after what manner such Wines as are of a mean price, may by the help of Concentration be conveniently transported out of one Country into others remote, where no Wines grow, and produce good profit. The which Artifice may be of most great benefit to the Inhabitants of such Countries as abound in Wine, and want sometimes Chapmen or Merchants for the same.

'Tis very well known to every one that in most places of GERMANY (but especially in FRANCONIA, and in the other Countries adjoining) Corn is so exceedingly plenty, and of so vile a price, that the Inhabitants know not what to do therewith; and for that reason it lies and rots in their Barns and Granaries, the exceeding abundance thereof either hindring the sale of the same, or the great costs and charges of Carriage hinder the Transportation of it into the lower Countries of GERMANY, where 'tis dear enough.

Hence comes it to pass, that the miserable Inhabitants have indeed Wine and Corn enough, but want Moneys to pay the Tributes due to the Magistrate; so that tho' they have such plenty of the Divine Gifts, and so much Riches, yet for all that they are in great penury and want, in that they cannot sell off so much as to pay their Family's expence, viz. Men-servants and Maid-servants wages, or so much as to sustain them. Verily, this is a punishment from the hand of God, and a singular one too, by which he corrects us ungrateful men. In time of the Wars, when a huge Scaricity pinched the inhabitants of GERMANY, then the common outcry went up to Heaven, and promised largely an amendment of life; but when the War was over, and all quiet, and a most wisht-for peace returned, then all men generally became worser, and more wicked, tho' the goodness and bounty of God had bestowed on them such a great plenty of things so exceeding necessity: And now such great Fulness being enjoyed, they now gape after Money too, and murmur against God, as the ISRAELITES did, who loathing, as 'twere, the plentiful abundance of things necessary, murmured at MOSES.

The reason why Corn is so exceeding plenty, is this: After the making of Peace, and sending away the Soldiers, many Commanders being weary of warfare, and abounding with Money and Horses, bought (or rather squeezed out) of the poor Inhabitants, every where destitute of Money, most notable Farms, for a very mean price, and did set themselves with the utmost of their Industry to till the Earth, which had lain fallow a long time; which Lands became so fruitful

that it even amazed all men. The poor Inhabitants too, who now had gotten a little Money, they also set their hands to the Plough, and used even the utmost of their endeavours in the tillage of the Earth: From hence it came to pass, that they were so furnished with such a vast deal of Corn in a few years space, that they knew not at all what to do therewith. As for carrying it into far distant Countries, the troublesomeness and charges of the Carriage were too great an hindrance: To lay it up in the Granaries, that the Air will not suffer them to do, tho' in the time of JOSEPH such a thing was done in EGYPT, where the Air being Nitrous, dry, and not so easily subject to corrupting, as ours is, preserved the Corn from Corruption.

What I have here written, hath proceeded forth from a good mind and sincere intention, and I hope 'twill do more good than hurt. I know that the eyes of many will be opened to see what a BABYLONISH Confusion the present World is in; I pray God to be an helper to the Good, and to be a reducer of the Wicked from the course of their Impiety, into the Right way.

The Process of Concentrating Corn is this:

In the first place, you are to make a Malt of your Barley, Wheat, Oats, Spelt, or any other kind of Grain or Corn, the which dry either in the Sun or in the Air, or else in an Oven heated a little, and not to be scorched and parched as it were after the Brewers custom; for so the sharp fume of the wood would stick thereunto, and make it black and bitter, and it may easily be conjectured, that there would be no good come of it, for by this means the smoak of the wood would stick on to the Corn and the Sprouts it has thrust forth, and are moistened, and so would make the Ale that is boiled thereunto unwholsome, and of an ungrateful bitter savour: But now such Malt as is dried in the Air, Sun, or in a warm Stove or Oven, has no such ungrateful taste as comes from the smoke of the wood, but remains sweet and pleasant.

NB. Else you may do thus; The Corn, after it hath sprouted and hath been thrown abroad on some Floor, open to the air, and thereby been a little freed of some of its moisture, may be dried purely and quickly too-in the Brewers great Coppers, in which they are wont to boil their Ale or Beer, provided it be continually stirred about with some wooden stick without ceasing, that it may be all over hot, ans so become dry. But yet you must have a care that your fire be not too strong under your Copper wherein you dry your Malt, and so burn the Corn, and make it taste untowardly; this done, the dried Malt is to be ground as other Malt which is used to make Ale withal is wont to be, but yet so, that it be not too finely ground nor too grosly; for if it be too gross, and the Grains be unbroken, the water cannot sufficiently get out the Virtues and Juices in the boiling, but that the best part will remain in the boiled Grains, and so be thrown away on the Beasts in their nutriment; but if it be ground too small, it will run into heaps, and hinder the straining out of the Ale; therefore a mean is to be observed, and care taken that no errour be committed, by either excess or defect. The Malt being on this wise prepared, every one may boil his Ale according to his custom, and so much thereof as his Vessels, Coppers, and Coolers will admit of: Some do pour boiling water on their Malt, and mix them both by stirring them well together, and then let them settle for some time that the water may take into it self the strength of the same; then they draw out that water by a Tap, and pour on more, and repeat the Infusions so often, until the water can get out no more sweetness, and there remain nothing but the insipid Husks, the which are nourishment for Cattle.

NB. Othersome that have no Vessels to extract the Virtue out of the Malt in, by boiling water, do put the prepared Malt in wooden Vessels or Tubs, and pour thereon warm water or cold, and stir it very well about, and leave it so for some hours, that the Malt may be macerated; then do they put it in a Copper, and pour thereunto

so much water as may keep the Malt from burning to in the boiling; and having boiled it for half an hour, they pour it out upon a bed of straw, fitted for that purpose, and placed over a Cooler, and so strain the Ale: This Labour of pouring on, boiling, and straining, is so oft repeated, till the water sucks no more sweetness out of the malt. This manner of boiling Ale is used by those only who want store of Vessels, and pretty large ones: The former way is not only better and more commodious, but likewise more fit for the boiling of a greater quantity of Ale.

NB. This is to be observed in this place, when the best and first Juice or Extraction is drawn out of the Vessel by a Tap, and fresh boiling water poured a second time on the malt in the Copper, and again drawn off by the Tap, those two waters in which the chiefest Virtue of the malt is, may be boiled and thickened by little and little in a plain or flat Copper. The third and fourth pouring on are indeed as yet good, but yet not fat enough, and seeing they are not very strong, are not worth the boiling away, for they won't quit the costs of the Fire, and therefore are to be applied to some other uses. Now when a man is about this work, he may so order his boilings, as to have several of them one after another; and then those pourings on, viz. the second and third, remaining of the first course of boiling may be poured on the second pouring on (and which contain in them the chiefest Virtues of the malt) may be boiled to the consistency of Honey in a Copper made for that purpose, of Evaporation; and the third and fourth pouring on may be always kept for the next following course of boiling, and be poured on the malt in the room of bare water, and so are to be condensed by evaporation in a Copper, as the first and second pouring on were done withal in the first course of the boiling; and so always the 3rd. and 4th. pouring on of the former course of boiling, is to be the first and second in the next following course of boiling; and this way of proceeding draws out of the malt its best and chiefest Virtues, and lessens the charge of the

boiling: For the Costs would be far greater, if the third and fourth pouring on were to be boiled off per se.

NB. The Coppers and Pans necessary for the thus reducing these extracted Juices to the consistency of Honey, are already described, where mention is made of the Concentration of Wines. He that can't well enough understand me, may take the pains to come and see my Furnaces, Coppers, and other Instruments appertaining to this work; as likewise the manual Operation, for I cannot help him any other way. And as for a larger description of these things, my time will not permit me at this instant to make it. The Juices being condensate, are to be drawn out of the Copper by a Tap fastened therein, or layed out, and being cool, put them up in Barrels, and shut them up tight, that the external air may not get thereinto; for thus may you keep them uncorrupt, even as long as you please.

NB. In your boiling them you must be very diligent that the Juices be not burnt to, by the overmuchness of your Fire, or that by being heat too hot, they boil not over; all which may be prevented by Registers (as the CHYMISTS call them) destinated for the regulating of the Fire. This is a most compendious way of extracting the Virtues out of Corn, and of reducing them into a narrow room, the which if you order according to Art, that nothing of your Juices be spilt or lost, 8 Barrels of Malt will yield you one full of Juice, and which contains all the Virtues that were in those eight Barrels; the residue serves to fatten Beasts withal.

NB. He who knows how to convert those remains into his use, in another kind of way will do better, and extract thereout of so much as he is constrained to lay out in buying his Corn, insomuch that he can have his Juices as it were even GRATIS. But of these things more hereafter.

As touching these Juices, they comprehend in them the whole Virtue of the Corn, out of which you may when you please boil Ale, make Adust or Brandy-wine or bake spiced Cakes; for if it be used to them instead of Honey, it makes them much the sweeter.

These Juices therefore are to be prepared in those places in which Corn is sold at a very mean rate,and which cannot be exported to foreign parts, and is there in such great plenty, as that the Country-men know not what to do therewith, but there it lies in great Stacks and rots. Farther, they are yet prepared with greater benefit and more gain where the plenty and cheapness of wood is, the which yields no small encrease and addition to the Gains.

But that the nature and condition of this Labour may be the better understood, the following Computation will shew. Suppose I take 8 Barrels full of Corn and bring them into Malt, then boil it into Ale after the aforesaid way, and condense it into a Juice, wherewithal I fill one Barrel: This one Barrel now is far more commodious to be carried into foreign places either by Wagon or by Ship, thean those 8 Barrels, and will bring me double or treble the profit that 8 MEDINNI (a Measure containing some six bushels, or the eight barrels) of Corn. Why? Because the greatest labour is already over, and there remains but very little to boil the Ale out of the Juice, as the following Example will demonstrate.

I buy me eight barrels in that place where Corn and Wood are to be had at a mean rate, and there passeth some River or other by the place, as the MHENE in FRANCONIA, NICER in SUEVIA, VISURGIS in HASSIA, and the Dikedome of BRUNSWICK, ALBIS in SAXONY and MISNIA; for in all these places there is abundance of Corn, and store of Wood, and the price of each, mean enough in conscience. If now one MEDIMNUS (or six bushels) of Corn be esteemed at the price of one Imperial, eitht MEDIMNI will yield eight Imperials; the Wood will cost one Imperial, the Labour one Florin: The juice out of the 8 Barrels of Corn may be put in a Fir-Cask, as they use to do with Honey, that so in paying the carriage, it may not be accompted for Wine or Ale, but some dry Goods, and so valued by the hundred, as other dry Wares are priced; so then the Barrel will cost the Carriage by Water to some of the Maritime or Sea-coast Cities, two Florins. Now if we sum up all these Expences

upon the Corn, Carriage, Fire, and Labour, they come to I2 Florins or 8 Imperials. But now, out of that one Barrel of Juice there may be made eight Barrels of the best Ale, and if you will have it somewhat smaller, than 'twill make I0 or I2, according as you boil your Ale to a stronger or weaker degree. However, this is certain, that one Barrel of Corn will yield more than a Barrel of good Ale; so that out of one Barrel of Corn may be made one and an half of strong Ale. Now then, if one of those Barrels of Ale yield three Imperials, the eight Barrels, which cost the buying, and reducing into one Barrel, and the transporting it, eight Imperials, may there be sold for 24 Imperials; from which the eight being substracted, the remainder of the Gains is I6 Imperials, which verily is enough upon those 8 Barrels.

But put case the Corn were dearer, and the Carriage of the Juices to those places did cost more, and that those 8 Barrels of Corn, or one Barrel of Juice, did yield (besides all the costs) only 8 Imperials profit, yet would this be profit enough, and may well content a Man. I forbear to mention the other benefits and profits arising over and above besides this Gains; for by this kind of way is saved and made vendible that Corn which would else be spoiled: Besides in a plentiful time the mean-prized Corn may be bought up, concentrated and kept till a scarcity come. Nor is there any cause of fear that it will be devoured by Mice and Rats, or be spoiled with lying, or wax mouldy, or be any other way corrupted.

Nay more, it occupies less room than the Corn would; for where one Barrel of Juice lies, there should have lain eight Barrels of Corn.

Besides, the Magistrates and Subjects may by this means reap much profit and help. The Magistrate may be satisfied by taking Corn of the Inhabitants instead of tribute. The Subjects may by the benefit of this Medium satisfie the Magistrate, and there will not need the selling his Cattle, or Sheep in the Fold, or to borrow Money upon use, and to give his Wife and Children for pledges.

For there is requisite no other labour than that the Magistrate appoint a place to boil his Ale, in which the Corn may be malted, boiled and thickened into Juices. As for Wood, that he has himself and needs not lay out a farthing upon that. So now, by this means may a Country be brought to that degree of happiness as never to want Money, Corn, or any other necessary things. For where the Juices can be but brought to the Sea-towns many thousand Barrels full may be sold to those Magistrates and Merchants which send their Ships into the EAST and WEST-INDIES; in which Countries may be made good Ale at any time of the Year, even in the midst of Summer, or in the Dog-days themselves, if you have but Hops and Water at hand; the which is far better and more profitable.

For in the room of this one Barrel of Juice, there must have been stowed 8 Barrels, and yet that sometimes turns sour too, and is spoiled, the which never betides these Juices. Now such Ale prepared of the Juices by means of Hops and Water are much wholsomer than the common Ales are, because that the Fire hath consumed all the Crudities; in the boiling of the Juices or hath corrected them, and this every one will readily believe or assent unto.

Nay more, these Juices may (and that with very great profit too) be sent into those places wherein (by reason of the abundance of People there) Corn and Ale is much esteemed, as in HOLLAND, and the bordering Countries. If the Ale-brewers could but once get such Juices, without doubt they would not be at the costs to brew it out of the Corn, for they would not need so much time to brew in, nor such Coppers, nor so many Mens help, all which they must necessarily have in the common way of brewing. In these Juices, there is much sparing of Fuel, (the which makes the common way of brewing Ale, more costly,) and of Men's labour which doth likewise prove chargeable. Nor are we silently to pass over that great benefit which they have hereby, for that good Ale and such as will not sour may be made without any dsnger even in the midst of the Dog-days. Every one knows what it is to brew Ale (then) and that the

brewing is at other times sufficiently troublesome, viz. so to order it as to prevent the danger of souring. But now this brewing (that I mention) is void of all this kind of fear of souring; whereas the usual kind of brewings do for the most part (in the Summer season) become sour either in the straining it through the Grains, or by standing in the Coolers; but these labours are in our brewing already dispatched, and that in those places where the charges of Labourers, Wood and Room fit for boiling it in, are not so great.

This work therefore is of mighty profit both to the buyer and seller: For the seller can afford his Corn at a reasonable rate. And the buyer need not be at any other charges in brewing good and wholsome Ale at any time of the Year save only the hire of one man that may prepare or fit the Juices, and Hops, and Water for the boiling, and set it a working or fermenting and pour it into the Vessels. Whereas on the contrary in the common brewing of Ale there needs many mens help, huge Coppers, and wooden Flats and a great deal of room to brew in, and store of Fire which is sufficiently dear in some Countries; all which are avoided in the brewing with Juices. Do but consider I pray what a notable and profitable thing this would be in great Cities, and especially in those places where Houses, Fuel, and Mens labour are very dear, if such kinds of Juices were set to sale; that so every Master of a Family might buy up some Barrels of this Juice, and dissolve them at his own home with Water and Hops, in a small Copper according to his pleasure, and make the said Juices into Ale, as fat or as lean or small; and as bitter or as sweet as he listeth; and then put it up in his own purified and well cleansed Vessels, and he and his drink thereof all the whole year; and if need be, might make either Physick-drink or Spiced-Ale. And would it not be much better than the buying such Ales of the BREWERS, which are sometimes either too new or too stale, and oft-times acid, impure, not well boiled, and stinking, and instead of Hops have Aloes, Xanthium or

Burr, Henbane and such like Herbs put in them. For in some places, the BREWERS use such kinds of Herbs and the like hurtful things, instead of Hops, to make their Ale bitter, and to save a few charges in the making their drink. Therefore all such as use to drink of such kind of Beer are never wont to be in compleat health; and especially in watery and moist places they are for the most part afflicted with the Scurvy, Melancholly, & etc. which is the usual fruits of such kind of Drinks, for they obstruct the internal parts of the body and the principal members, and stir up such Diseases. But our Ales that are made of the Juices and good Hops do not only not stir up such Distempers, but do even (by their purity and clearness) resist them, and preserve men from them; but especially if such Juices be made of such Malt as has not a smatch of the smoke of Wood, but is dried in the Air, and which are so handled in the fermentation or working of them as that all the defilements settle to the bottom; for then will you have such Ale, as doth both in wholesomeness and sweetness exceed such Wines as are infected with, or have a tang of SULPHUR, or that grow in a soil abounding with Chalk. They dull not the head, they do not cause windiness, they puff not up the body after the manner of other Ale; they do not stop the Urine but provoke it, and keep the Belly soluble: They are Medicinal without the addition of Physical Herbs, are sweet and wholsome, and of an excellent taste, and such as the like of them cannot be made without this medium or way.

Such Ales deserve a peculiar praise, and many would there be who would drink of Ales often, could they get but such; and would leave off the drinking troubled, unwholsome, and sulphured Wines. For my own part I will make use of such kind of Ale, and Wine, in my own house for the sustaining of mine own Family.

I could mention much more concerning such Ales if the time would permit me, but I have spoken enough already. And as for what remains unwritten here, may be gotten out of, (or understood by) the things here described. I question not but that good(or

provident) Masters of Families will set about this business of preparing these Juices, and of sending them into such places where they may be sold to Ships that are bound for far Countries, and so mightily enrich those Countries with store of Money that abound with Corn.

Besides, the BREWERS of Ale or Beer that are in great Cities will not disdain such an excellent Art, but will themselves buy such Juices at a considerable rate.

Princes, Nobles, and great Cities, will also provide (or buy up) great quantities of such Juices, and lay them up in their Forts and Castles, and in their Store-houses as a good Treasure, that so they may have it to use in time of necessity. Nor will good (or provident) Householders neglect to furnish themselves therewith, that so they may have wherewithal to sustain them and theirs in a time of scarcity.

In the time of Wars, eminent Captains and other Military chieftains will take care to have them, and carry them into their strong holds, and there loosen them (or put a proportionable quantity of Water to them) and turn them into good Ale; as for Water, there's to be found (enough) of that every where, and so need not store up that, and as for Hops that is easie enough to be bought.

So then, there will be a notable benefit by this Artifice to strong Holds and Castles, and such fenced Places as fear a Siege. Briefly, Words cannot express the benefit and profit which will redound to all places, by these Juices, in times both of Peace and War.

Therefore every Magistrate, who has a care of his Subjects health and preservation, will worthily and with his utmost diligence carefully provide for the having such prepared Juices, that so in times of necessity they may be at hand for use.

But now, some may object and say: I perceive and well see that this Artifice is good and profitable, but 'tis not so easie a matter for every one to purchase himself Coppers requisite for this work?

To such I answer. 'Tis not so needful that every one should furnish himself with such (utensils); if there be in every City but one man only that is imployed thereabouts, who may buy off his Neighbours Corn and pay them their Money for the same, 'tis sufficient. And if others also betake themselves thereunto, there will be the more Money gotten, and the Country made the richer; neither is any reason to fear or doubt, but that, if he shall bring eight thousand Barrels of Corn condensed into a thousand Barrels of Juice unto the Cities on the sea Coast, he will sell it off for ready money. Will a thousand Barrels (think you) be sufficient (or be a drug) in some populour City wherein are daily drunk some thousands of barrels of Ale? Verily he that shall expose to sale in such a like City many thousand Barrels, would not stay long there, but would be loaden (or furnished) with ready Money for the same, by those who knew the Art of making Ale with such Juices.

I do verily believe that it would be althogther much better to sell Corn after such a manner, and so to have profit by it, than let it perish with lying; which is a great sin before God, and a shameful disgraceful thing before Men.

But further, It may be objected and said. If this Artifice of making Ale were set up in those places, in which there is wont to be a certain Tribute paid the Magistrates for every Barrel (of Ale) it would not be allowed of, because by this means the Tribute or Customs due to the Magistrates would be diminished. This inconvenience is easily prevented, if the Magistrate impose the same Tribute of Ale on the Juices. For by this means the Tributes or Customs would not be at all diminished, but be equally as profitable upon the Juices, as upon Ale. The like may be done with the condensate Juices of Wine.

So then 'tis clearly evident, that there cannot possibly arise any detriment from these Juices, but rather infinite profits and commodity. And therefore every Magistrate should seriously cause his Subjects to make these kind of Juices of such Corn as they

cannot sell, and instead of spoiling it get riches by it. Certainly this would be far better, and far more profitable for such Subjects, as are very poor and go miserably tattered and naked, and have nothing to help themselves (of which sort there are not a few.) Verily there would be no want of any thing, but the Subjects as well as their Rulers would have enough: And for this reason have I willingly undergone this trouble and this labour in manifesting and laying open this Artifice.

And although I am not to expect any reward from any body for manifesting a thing of so much concernment (for this is an unthankful World) yet have I obeyed the will of God and have out of a Christian love benefited my Neighbour, and in this well-doing do I rest, no ways doubting but that God the rewarder of every good (action) will recompense in another place, this my well-doing which I bestow upon the World.

Farther, I can in a kind of a Prophetical manner predict, that if regard be had of this my wholsome Doctrine and Admonition, many Countries will in a very short time recover their former happiness, and both the highest and lowest will live in a prosperous condition; but especially those who first set upon this business afore it becomes common, will get great riches. Now then, whosoever they be that by the help and benefit of this way shall get the blessing of God, let them not forget the poor, but bestow the blessing on the cherishing and comforting poor Orphans and Widows, to the Honour of God. For the Treasures and Riches in this temporal Life cannot be better laid out, and laid up, than in distributing them amongst the poor. For by that means there's no fear of being spoiled of them by Thieves and Robbers; And more, in the Life to come, they shall be recompensed with a ten-fold reward.

Chapter III.

Of the Concentration of Vegetables.

We have already taught in the two foregoing Chapters by what means Wine and Corn are to be by an Artifical condensation reduced into a narrow compass, and brought to be, a gainful Merchandice. It now remains to shew the way conducing to a condensation of the Virtues lying hid in Herbs, Bushes, Shrubs, and Trees; (which Vegetables do most plentifully abound in most places and yield no profit) that so even out of them as well as from Wine and Corn may be reaped a very great profit. No body is ignorant of this, viz. That there is nothing more vile and of less esteem than the Grass (or Herbs) of the Field, and Briars or Bushes, and Shrubs, and lofty Trees too, especially when being at a good distance from Men's dwellings they cannot be applied to any use, and upon this account are they not valued at all, nor by reason of their distance profitable to any, but there they grow and perish in those vast woods, and desart places. And this is to be seen in those most huge Woods of GERMANY, such as are the INGRIONES, the Wood ARDEUNE, the OTTONICANE, HERCINSAN, SEMANE, and BEHEMIAN Woods, and the woods of other Countries, in which woods there rots and is spoiled above ten times more wood than men make use of.

Now no body hath hitherto known what use to put those Woods unto; such Woods as are not too far off from Cities or Villages, do Men make use of for building, for firing, for boiling, or brewing, and for baking, and other occasions, so that the Wood which is daily used, and every year fetched from the bordering Woods or Forests, is thereby saved from rotting and being spoiled.

But as for such wood as is in Mountains and Woods scituated far off from mens dwellings, and which are not frequented, that is not of any use at all, they are Dens and lurking places for cruel Beasts, as Bears and Wolves; which said wild beasts do annoy and

hinder other profitable ones, as Staggs, Does, Boars, Hoggs, Sheep, etc. from feeding on the wild Fruits of such places. But who is there will amend it, and bring such places to a due or good use? What ! should such vast Woods, which are the receptacle of those cruel wild Beasts, be cut down and lie a rotting, or be consumed by Fire, so to destroy those wild beasts? Surely no body will attempt it, as fearing the toilsomeness requisite hereunto: And besides, forasmuch as no other profit is to be thereby expected, save an extirpation of those wild beasts, there's no body will take that Task upon him. Nor is it a thing so behoveful to Fire, and burn down such huge Woods, as we read in History, that some have heretofore done, viz. most great Woods have been burnt, meerly to destroy Insects, and other hurtful, wild, and ravenous beasts. There is an hazard run in so doing, for such a Fire may spread wider, and do a great deal of mischief.

There are such Examples which may be produced, which witness how that Fire being put to Heaths, have (by burning thereof) crept into the bordering Woods and destroyed them, and mightily injured the neighbouring Inhabitants: And therefore 'tis not so advised a Work to consume Woods by Fire; and to cut them down, that so they may lie and rot, and be thereby rooted out, cannot be done, because of the great cost thereto requisite.

So that such places must of necessity even remain the Receptacles of hurtful Beasts and Thieves; for allbeit that sometimes the Glass-makers do in suchlike places build their Furnaces or Glass-houses, yet they fall far short of consuming so much Wood by their making of glasses, for those Woods are scarce the thinner or lesser for that: Tho' they spend daily in every such Glass-house twenty loads, yet such a vast quantity as that is, will not decrease. Besides, the Glass-men do not use all the wood without making any difference, but make choice of the streightest and smoothest wood, such as they may best and easiest leave: As for shrubs and knotty OAKS and BEACH, those they touch not. So then the best Trees only

are used about their Glass Works, and the brushy woods, as BRIERS, THORNS, & etc. and which are the most commodious hiding places for the wild Beasts, are unmeddled withal, as being unprofitable for the Glass-makers: Nay, they let most curious arms or branches of BEACH lie a rotting, and make use only of the body of the Trees. Moreover, in such Woods as are far off, the Glass-makers build no Houses, but do erect them as near as possible they can, to such places as are inhabited, because they must of necessity have commerce with men.

Farther, 'tis not a little wood that is spent in the Mines about Metals, especially in such Mines where Iron is molten; but what we said but not touching the Glassmen, the same is to be observed here; for such metal-melting Houses are never erected on the high Mountains, or are built in far remote Woods, because they must have the assistance of Men, and water to drive their bellows-mills, and besides the place must be such, as that all Necessaries may be brought them in Wagons, and their Iron transported into the Cities or Towns. Nor do the Metal-melters indifferently use any wood they meet with; nor make they their Charcoals of every kind of wood, but leave the shrubs and bushy woods as unfit for coaling. And therefore those great and vast woods, tho' there be, Glass-houses and Metal-melting shops in many places, do remain untouched, because no body knows the use of them.

But now, forasmuch as I have all my life time most accurately searched by a diligent observation into the wonders of God, and have not spared any labour or costs about the secret wonders of Nature, and have learned from Nature her self, my instructing Mistress, that God being a true and just Lord over his Family, did neither do, make or create ought without certain and just causes, which notwithstanding is not regarded by the most part of us men, who imitate the irrational beasts, and always live without the knowledge of God and of His Works. Verily, we have no colour of Reason at all for it, not considering that men were created and

appointed by God for another-guise end, than the brute beasts, which are void of all Reason; and we regard not the Truth of that old Saying, GOD AND NATURE, NEVER MAKE ANY THING IN VAIN.

So then, whereas this is a Truth (as assuredly it is) certainly we may see that these huge Woods were not in vain made, but that they have some benefit (for so they have) viz. a most great Treasure for such who know it, and know how to use it. Which I will therefore shew, as clear as the Noon-day Sun, and will so set it afore the eyes of the blind and darksom world, that the Deriders and Contemners of natural Philosophy, such as is to be Learned only by the fire, and not out of ARISTOTLE, may be even enforced, will they, nill (?) they, to confess and grant that the Fire is the true Teacher and Master of natural Arts, and so will be; for whosoever they be that are Ignorant as to the Fire, and that know not its wonderful efficacy tho' they may be most skillful Proficients in foreign Tongues or Languages (which in the more-secret Philosophy makes not at all to any purpose), yet nevertheless they will not be able to accomplish any the least matter in things of so great a moment: I do therefore say, that such men as are skilled in natural things, are not of right to be contemned, or secretly backbitten by those who say, Believe not such a man that hath not attained the empty vain Title of a Doctor in the Universities. I confess ingeniously, that I never frequented the Universities, nor ever had a mind so to do; for should I have so done, haply I should never have arrived to that Knowledge of Nature, which I mention without boasting, as I now possess; neither doth it ever repent me, that I have put my hands to the Coals, and have by the help of them penetrated into the knowledge of the Secrets of Nature; I do not desire to disturb any one in this way, or to thrust any out of their places; I never was willing to live on the costs of great men, but have with my own hands gotten me my Food and Raiment, always advisedly thinking on that most known Verse; Alterius non sit qui suus esse potest.

Let not him anothers be,
Who can of himself live free.

But to return to my concentration of Wood, I can with truth affirm, and will experimentally demonstrate it, that the greatest Treasure of the World; yea, as great or greater than is in Wine or Corn, lies hidden in Wood. Wine and Corn do require the Labour of Man for its growth out of the Earth; but Leaves, Grass, Briers or Bushes, Shrubs, Twigs, all sorts of Trees great and small, do come forth out of thier seeds and sprouts and grow up and encrease infineately without any help of man at all.

Therefore I say that more profit may be reaped of Wood than of Corn and Wine, were the Art of extracting thencefrom so great a benefit but known to any.

So then, forasmuch as this little Book (as being the first part of the Treatise of concentration of things) treats of the emendation of Vegetables only; and that of Wine and Corn is already finished; I will now in the name of God set about Wood, Leaves, and Grass, and lay open those most great and hitherto hidden Treasures and Riches and set them forth before the Eyes of the whole World. And I pray God, the Omnipotent, Wise, Unsearchable and Merciful Lord and Father of all Creatures in Heaven, in the Earth, Water and Air, that he would so govern and guide my hand that I may here write and teach nothing save only such things as serve for the Glory of his Divine name and the health of all Mankind. Amen.

We have shewn in the two foregoing Chapters how Wine and Corn are to be condensed into their Juices, that so they may be commodiously sent into those places, in which profit may be gotten.

Here now falls in this question, How the Juices are to be squeezed out of Herbs, Twigs, Shrubs and great Trees, and being pressed out what good they serve for, seeing they are not of use for meat and drink like those which are extracted out of Corn and Wine.

To this question I make this reply, that indeed there is not any

food to be prepared from them, but that yet other things are thence preparable, and such as men cannot be without, viz. Wholesome Medicines, and likewise Gold and Silver wherewith a man may also buy, besides Wine and Corn, other necessaries as Garments and other appurtenances which men stand in need of, besides meat and drink.

But to begin the work it self, we should in the first place teach the way how Juices may be squeezed out of Leaves, Grass, Shrubs, and then afterwards shew their use. But forasmuch as none is of so weak a judgement as to lay out Moneys or things valuable, and to bestow his labour and sweat on such a thing whose use and profit he is ignorant of; 'tis therefore necessary, that (before we come to teach the way of squeezing out the Juices) we first shew, what benefit and profit ariseth from that kind of work; that so a Man's labour may not be spent in vain: To give satisfaction herein, I affirm, that the greatest and best virtues of all Vegetables are hidden in a certain Salt which the physicans and Philosophers call the Essential Salt. Of this Salt all Vegerables are full, but yet, one fuller than another as experience testifies. Such Herbs as have not much taste, as Lettace, Coleworts, Rapes and such like have a less portion thereof, and are therefore easily putrefied. But such as are sharp and bite the Tongue, as WATER-ROBBIN, ARSMART, LAUREL, PEPPER-WART, SCURVY-GRASS, all the kinds of CRESSES, all the sorts of RADISHES, LEEKS, ONIONS, GARLICK, MUSTARD, and such like; also all bitter Herbs, as CARDUUS BENEDICTUS, WORMWOOD, FUMITORY, ESULA, & etc. all such as these are full of it. Besides, all such Vegetables plants as are naturally sour, yield much of that Salt; amongst which, may be reckoned, unripe GRAPES, sour APPLES, sour CHERRIES, Wild PLUMS, rough (or wild) GRAPES, the unripe MULBERRIES or BLACK- BERRIES, the unripe BARBERRIES, & etc. But yet some of them yield more, others less Salt; which inequality and changeableness is accidental, for they are as to their natural foundation like each other.

N. B. Some Herbs and chiefly those which have a notable bitterness, as CARDUUS BENEDICTUS, WORMWOOD, FUMITORY, do (after their being squeezed, and when their Juice is depurated, and the Phlegm draw off, and the remaining Juice concreted or condensed in the cold) yield natural Nitre, and such as being put upon a burning Coal will presently burn up in a flame, like the common Salt petre which is usually extracted out of the Earth digged in Stables, and so concreted or crystallized: As for other Herbs and Fruits which are not bitter, but have a piercing sharpness, as all the CRESSES, they (after their expression or squeezing) yield a volatile Salt, which does not burn like that which is drawn out of bitter Herbs; Such as have an acidity in them, as SORREL, BARBERRIES, RIBET, curled GRAPES, wild APPLES, and Orchard ones, and other unripe Fruits, do yield another Salt, viz. a Salt tasting like the acid taste of Wine, and resembling Tartar of Wine, in taste, virtue, efficacy & propriety.

And now albeit that these three kinds of Salts are unlike in taste, yet nowithstanding the one is most easily transmuted into the other, insomuch that Tartar may be made Salt-petre, and Salt-petre Tartar. The third sort which is more volatile than the others, and which proceeds from the CRESSES, MUSTARD, ARON, PEPPER-WART, & etc. will easily be turned into either of the former.

But as concerning this last, it is virtuous in Medicine, as I have hinted to you in several places in my other Writings, but (set aside its Medicinal use) and it is of but little benefit. The two latter, viz. The Nitrous, and Tartarous are of various use. The Dyers use Tartar in Dying their Cloths, and Salt-petre is used to make Gun-powder withal, and for the Transmutation of Metals, and other such like Arts, as I have clearly proved in my Explication of my MIRACULUM MUNDI. Forasmuch therefore as both sorts of Salt are used in great quantity throughout the whole World, and that there can scarcely be had so much as serves for necessary use, and upon that account are always good Commodities,

and that Salt-peter is twice the value of Tartar, therefore 'tis but fitting, and well worth while to extract Salt-petre out of the Juices of Herbs and Trees, it being of more value, and better price than other Salts. But if it should so be, that there should be so much Salt-petre as that it should be of a poor price, then may the Juices be turned into Tartar. But forasmuch as it will not easily so happen, that there should be such a glut of Salt-petre, it will be the best way, to improve those Juices on the making of it; and specially because it may at all times serve for the profitable bettering of Metals; nor can ever so great a quantity be produced, but that it will sometimes sell off. 'Tis more profitable, and better to use it for the bettering of the meaner Minerals than to make Gun-powder with it; and were not that most pernicious Art already too well known, it were better to be without it, than to make it, so far should it be (from any one) to describe the manner of making Gun-powder.

But forasmuch as neither my desire nor will tends to be any occasioner of hurting my Neighbour by the help of Salt-petre, but inclines rather to benefit him thereby; and to this end I have already clearly enough disclosed many most profitable Arts which proceed therefrom , viz. in my MIRACULUM MUNDI, and in the Explication of the same, and moreover shall do in the following third and fourth part of this Book, about the bettering and concentrating of Metals: I am, verily, confident, that none will interpret it in the worst part, if I shew the way of making Salt-petre out of Wood and other things, that so, our Country may by the benefit of (such) Herbs, Grass, and Wood, which otherwise, lay rotting, and are of no profit, be enriched (if it be only sold) with abundance of Treasure, and may afterwards be spent on most profitable Arts, as may be seen in the MIRACULUM MUNDI, and in the Concentration Of Minerals and Metals. So that he that would not make it into Gun-powder, has no need so to do.

Besides these Virtues of Salt-petre which we have reckoned up,

there do daily more and more new and admirable ones spring up out of the dark, all which, were they here to be summed up they would even draw the whole World into an admiration of them. But we will forbear to multiply more words concerning things of such moment; for it may easily be perceived from what has been hitherto demonstrated, and from those Publications I have made (by my Writings) that many more, and greater things lie hidden in this Subject, which neither I, nor others know of. Deservedly therefore may Salt-petre, or Nitre, be termed an Universal Subject, and Wonder of the World, notwithstanding many rude and unskillful Fellows, will upon this saying, shrink up their Noses, and audaciously contradict me (and say) that Nitre is not the true and Universal Dissolvent.

But if Nitre be not that Universal Subject, then let those that prate against this Judgement or Opinion of mine, produce another and better Subject; which yet, in my Opinion they will never be able to do. If it were not an Universal Subject, how comes it to be so plentifully found to be in all things. Is it not found in all Vegetables? Is it not in all living Creatures that live either under the Earth, or in the Waters, or in the Air, or on the Earth? Is it not met with (or found) in the inmost Bowels of the Mountains, and even in the most hard Stones? I will demonstrate it in this small Treatise by most clear Arguments, and will most evidently evince it.

In the first place, that all Vegetables have it, is already clearly demonstrated and proved, for I my self (and) I am the first, as I know of, made trial and turned their Juices into natural Salt-petre. But I will now so evidently shew the truth of this thing, that even those blind Back-biters and Detracters shall feel it with their hands.

In the first place therefore, I demand, whence the common Nitre is gotten? Is it not out of the Earth, which is digged out of the Stables where Beasts stand? For it has insinuated it self into

(or joined it self with) this (Earth) passing out of the Excrements of the Beasts in length of time, and hath coagulated it self therein, out of which it is at length drawn by pouring on of water, and then is boiled up into Salt-petre. Who can deny this? I think no body can. So then if this be granted, that Nitre is found in the Stables where Cattle stand, the Question is, By what means, and way it came into the Stables? It is by the help of the Urine and Excrements which the Beasts have there cast forth. Then again, I ask, whether,whether or no those Beasts have those Excrements from their Meat and Drink, or from elsewhere? They cannot arise from water, forasmuch as they drink nothing but Water: So that they must necessarily have their rise from the food they eat, and that consists of the Vegetables, Grass, and Herbs. Therefore we affirm, that the Salt-petre was of necessity in these Herbs, and Grass, afore the Beasts feeding on them. For if it had not been there it could never have been made in the Beasts Bodies that which it was not afore. For their Stomachs contribute nothing to this Operation, save a bare putrefaction. And besides, the Countreymen do even the same thing, for they gather up stubble, the Leaves that fall from the Trees, the Grass, and such like things, and put a great quantity of them into a Pit together, and there leave them so long, till by the help of Putrefaction they are all turned into Dung, and therewith do they afterwards Dung their Ground (in such wise) as is wont to be done with the Excrements of Beasts. Therefore, forasmuch as that putrefied Grass and Stubble doth dung the ground and render it fruitful, (as well) as the Excrements of Beasts, it must needs be granted, that they have likewise Salt-petre in them. For it is not the Dung, but the Nitre in the Dung that is, the Author of that Dunging Impregnation and Fertility, as I have already confirmed by Arguments in my MIRACULUM MUNDI, and which will be sufficiently convincing proofs here in this place.

I would therefore fain see that Man that dares be so bold and

heady as to deny this thing, that the Essential Salt neither is, nor can be made, Nitre.

And now we come to treat of the Beasts in the Fields, of the Fish in the Waters, and of the Birds in the Air, that so by a thorough examination of all these sorts we may see, whether or no they are enriched with Salt-petre, and whether or no their Essential Salt be like the Essential Salt of the Vegetables, and can by the same means pass into Nitre.

In the first place, and above all, this is here to be considered, as a main principle, (viz.) That all those things which dung the Fields and Lands, and fatten them, most necessarily contain in them Salt-petre. For from this only, and alone, comes all the fertility throughout the whole Earth, which Axiome cannot be gainsayed. But now, that the Animals, or Beasts, Birds, and Fishes are Partakers of the same Virtues, I firmly gather from hence.

First of all, it is not unusual for the Gardiners to put the Horns, Hoofs, and Bones of Beasts, to the Roots of Trees, and so cover them over with Earth, and that on this account, because they make them exceeding fruitful. This now is every where used: Likewise the Gardeners do every where buy up Hens Feathers, Hens, and and Pidgeons Dung; as also from the Tanners and Curriers the Offals or Shavings of the Beasts Skins, and their Hairs, and use them to enrich their Gardens. The Vine-dressers also buy up the shavings of Horns of the Comb-makers in many places where they can get them, by which, they fatten their Vines, far better than with Dung, and that lasts for nine or ten years. The Gardeners do likewise buy up from the Tailors bits, or pieces of Woollen and Linen to dung their Gardens when they plant Colworts. If they did not find any Nitre, or Fertility in them, to what end would they lay out their Money on so base a Matter? To the Ignorant and Unskillfull , these things may seem wonderful and incredible, because such a kind of dunging Land is not everywhere in use. He that is incredulous, Let him go to CELON on the RHINE, and there he'll find that I have

spoken nothing but the truth. All these things do the Gardiners make use of according to their ancient custom, for from their Predecessors learned they these Secrets. Nor knowing they what other reason to alledge for their doing this, but only tell you, that they serve exceeding well to enrich their Fields and Vineyards.

But I do assuredly affirm, that 'tis the Nitre that is hidden in these things, performs this effect: There is therefore far more abundance of Salt-petre in the Superfluities (as Nails, Horns, Hair, & etc.) than in their Excrements, or Dung. And I thus prove it.

First, Because they will give you for one Sack full of the Shavings of Horns, half an Imperial, which is as much as will buy four or five such sacks full of Cow, or Sheeps dung.

Secondly, They will give the Tanners, or Curriers, above an Imperial for one Cart-load of the Shavings of the Hides, whereas with the same Money they may buy three or four Load of dung. Rags are sold for a quarter of an Imperial. Were they not virtuous or effectual, why should they be so dear? This here spoken, we have proved so to be, by the customary practice of the common men only, as Husbandmen and Gardiners. Were it lawful for me to reveal somewhat to the purpose, I could teach how to extract out of every hundred weight of Bones, in Beasts, Birds, and Fishes, ten pound of Salt-petre. But this is not to be divulged.

Now it remains in the next place, to confirm, that Nitre does not only lie hidden most plenteously in the Vegetable and Animal Subjects, but that it may be digged, or gotten out, and prepared of Stones, Rocks, Cliffs, Hollows of Mountains, and out of the plain Field in a very many other places; and this is undeniable, for 'tis evidently known, and if need were, I could, for witness sake, make mention of many such Testimonies. He that is desirous of knowing more, as touching this salt of the Earth, let him peruse the ancient Philosophers. But forasmuch, as every one hath not those

Books at hand, and that many Men cannot understand them, I will for Amplifications sake add yet one demonstration, to shew whence that Nitre ariseth, which sticks on to, or swells out of those moist and old Walls of Houses. Comes it not from the Mortar, with which the Bricks are joined together? Not only all STONES are fit for making Calx, or Lime of, but also all kinds of Stones, which break, or grow in the Waters, like Drops, or Pebbles; Likewise, those stony things which grow in the Sea, as Coral, the Pearl shells, or Mother of Pearl, and Shell-fish or all sorts, which being burnt, moulder in the Air, have in them plenty of Nitre, and will easily yield it forth to those who have the way of extracting it disclosed unto them. But this is not the place to mention it in, because I have determined to treat here, of only expressing the Juices of the Vegetalbes, concentrating them, and making them gainful or profitable.

Forasmuch as we have hitherto understood (or shewn) that Nitre or Salt-petre may be had from all things, viz. from Herbs, Wood, fourfooted Beasts and creeping Things, from Birds in the Air, and Fishes in the Water, yea from the very Elements themselves, as Earth, Water, Air, and Fire; It must needs follow that it is that so much spoken of Universal Spirit without which nothing can either be or live: It is the begetter and destroyer of all things; in which all things are, as I have demonstrated in my MIRACULUM MUNDI, out of the most ancient Philosopher HERMES. I therefore hope, that no body will any more doubt thereof or oppose himself with a perverse stubbornness against a truth so manifestly known. Were not the shortness of time an impediment unto me I could most easily produce more arguments and those too more pregnant. If any one is minded firmly to cleave to his own stubborn perverseness, even HERMES himself should he arise from the dead, would lose his Labour in teaching him; and therefore let them keep their contumacy to themselves.

We have sufficiently confirmed and that by arguments enough, that

Salt-petre is an universal Subject, and every where to be found. Hence it may be easily believed that it may also be met with in woods, and that more strong, more powerful, more corporal, palpable, and visible than in any other Subject: Upon this account therefore is it to be also sought for, and drawn forth out of them too. But forasmuch as such an Extraction cannot be made afore that the Juices are prest out of the Wood, out of which Juices the Nitre is to be drawn forth, the whole Art consists in squeezing out these Juices, but yet by another kind of way than is done with Herbs. Therefore the due Presses being fitted ready, I shall be able to shew him who requesteth it at my hands (so as he does not endamage me) the way of squeezing them. For to prostrate a work of such great moment to every ones view, whereby those that are unworthy, should partake of such great Secrets, and by which a thing of so much value should be obnoxious to a common Abuse, is not verily, either necessary, profitable, or laudable. Let not any one therefore take it amiss, that I have so carefull a regard of things so considerable. Let it suffice, that I have detected the thing, wherein such great Treasures have hidden themselves, which hitherto are profitable to no body, but are easily acquirable, or to be had. Do but look a little upon those most vast Woods of GERMANY, which are stored with such mighty abundance of Trees, that wood is of no account. There hath been none as yet that has converted them unto their use, save a few, who in some places make Pot-ashes of the wood they burn; and yet they have but small gains therefrom, because they can't have vent sufficient for as much as they could make by their burning the wood, nor do any use them, but Soap-boilers, and Dyers.

Besides, I never as yet saw the Man that duly attempted that Artifice, and so administred it as to get therefrom a greater gain. For sometimes they gather scarce an hundred weight of Pot-ashes out of the burning of ten or twenty great Trees, and they can hardly have above five or six Imperials for it. And now consider

but the great Labour and Sweat in burning so much Wood into Ashes, and of boiling the Ashes into a black Salt, and then of making this Salt red hot in peculiar Furnaces that it may become white, green, or blueish; all this considered, 'twould make a Man admire what 'tis that could stir up those that follow this work, or order it to be done, to suffer such a quantity of Trees to be burnt up, for so very little profit. But what need many words? They have the wood for nothing, and (as the Proverb runs) THE HALF WHITE OF THE EGG, IS BETTER THAN THE EMPTY SHELL. Haply if they knew how to make any thing better, or more profitable out of their Wood, they would not omit so to do.

How many hundred weight of wood, are they to burn afore they have one hundred of Pot-ashes? But now if the Juices that are squeezed out of them were boiled into Salt-petre, they would get ten times the profit with far less trouble.

Let us compute the case, and suppose that out of an hundred pounds of Wood, there are squeezed forth twenty pounds of Juice, you have some 4 or 5 pounds of Nitre, and that a midling Oak or beach will load, when cleft, some ten Carts, and each load hold twenty hundred weight. Now then, one hundred yielding five pound of Nitre, a load of twenty hundred, yields an hundred pound of Nitre; the Tree that is about ten load, yields a thousand weight.

Now we'll put case that a hundred weight of Nitre yields twenty Imperials, which being ten times multiplyed, makes two hundred Imperials for ten loads, or for that one Tree divided into ten loads.

But to wave so accurate a computation, and not to extend it too far, we will suppose a hundred of Wood to hold only three pound of Nitre, and a load to be about twenty hundred of Wood; this load will yield Sixty pounds of Niter, and the Tree ten loads, so there will be Six hundred pounds of Niter. If now one hundred (of Niter) will cost ten Imperials, that Tree will yield sixty Imperials for the six hundred pounds of Nitre. The smallness of the cost (in

making it) makes the labour the more profitable; nay, if by this invention of mine, the price of Nitre should fall down, even to ten Imperials (which notwithstanding, will not so easily come to pass) yet would the gain thereby be great, yea ten times more than that which comes from the Pot ashes. But he that knows how to use this Nitre, for the concentrating of Metals, (concerning which the three following parts of this Book shall treat) will not have any cause of fear, that this Nitre will lie on his hands and yield him no profit.

By what hath been said, the well-minded Reader will easily perceive what vast treasures are oft-times before his eyes, and through ignorance lie as yet unknown, and not used to advantage. What man knows God's end, in producing to light such great Mysteries and Secrets of Nature, in this most filthy Dregs of the World? To give thereof a Reason, we will not tire our understanding, but give most humble thanks to God for such great mysteries that he hath revealed for the comfort of many men, and will pray unto him graciously to bestow on us his fatherly blessing, to the end that we may well use such great gifts so freely bestowed.

But now if any should be of the mind that it is wholly unnecessary, that this Art should be made publickly known, because that Gun-powder many Cities and most strong holds are overthrown, and nothing is to be expected thencefrom, but Slaughters and Destruction; To such, I answer, That it was not for this end that I disclosed this most great and most profitable Art, that by its base abuse I might help on these horrid Calamities; but my aims have been chiefly at this, if haply any new Foreign Enemies should invade our most dear Country (which is a danger we seem not far off from) we might be able to receive them with like Arms or Weapons, and by a just defence drive away such a Calamity.

And withal, that those most thick and vast Woods being despoiled of their thickness, may not for the time to come be a shelter for Thieves and Robbers, as likewise for wild beasts, all which oftentimes do much mischief .

And farther, That many thousands of Men may get their Food and Rayment more Commodiously and more easily, and may make good Gold and Silver from the unprofitable Wood. For by means of this Art, thousands of moneys may be gotten in our GERMAN Countries, without any hurt to our Neighbour. Nor is it needful to cut down any great Tree, for the superfluous Branches or Loppings, and the shabby briary Underwood which is all about the Trees, and doth chiefly afford a passage to the Stags, and hiding places to other hurtful Creatures, will be sufficient for this kind of use of imployment.

The other Trees that grow up aloft may be preserved to build Houses withal, which may be employed about Hunting: And besides, when the Trees are freed from that thickness, and have thereby a free access of Air, they will the more easily dilate their Boughts, and grow up taller. And then too, those wild Beasts that are profitable, will (when such vast deal of underwood or shrubbiness is taken away) meet with fatter pasture, and with more plenty of Grass, and escape by having a freer Course from the pursuing Wolves, which now they are letted from by those most thick Shrubs and Bushes. But yet if so be that in such places in which is such a deal of Wood, and to no man useful; a good part even of the great Trees should likewise be cut down, and used about this Artifice of ours; yet notwithstanding there would not arise to the Possessors thereof any loss, but much Profit; and when all's done, there would be yet remaining a huge multitude of Trees. Consider I pray those most spacious Woods the ARDENNE, OTTONICK, SEMANE, and BOHEMIAN Woods, and many others which the Countries in GERMANY are cloathed (or environed) with.

Can it be imagined, that they can at all be lessened by the Glass Furnaces, or the melting of Minerals and Metals.

These places that are one year bared by cutting down the Trees, you shall see in few years covered over again, by the benefit of nature, with new Trees; so that it cannot possibly be, that though

even a very great many Presses should be used to press the Juices out; such a vast immensness of Wood should be exhausted, and make any sensible diminution of the Wood.

But now, if any one shall believe these writings of mine, and shall, after the afore-mentioned way, set about the Concentration of Wine, or Corn, or Wood; I do faithfully affirm unto him, that I have in this Book openly proposed the very naked Truth, without any disimulation, and have not omitted any thing save the revealing of the Presses, which for certain causes I conceal.

And therefore I certifie every one, that I will not as yet divulge this most wonderful secret, of thus-boiling Nitre out of the Juices of Wood, or else I would have described the Press too. Besides, though a man should even see the Press, and know how to make it, and were ignorant of the purification and concentration of the Juices, he would not bring the Art of effect; so that, without my instruction, the work cannot so easily be made publickly known. And though, this seems to ba a thing so mean, yet this squeezing out of the Juices of Wood, is far beyond (or richer) than the operations on Wine or Corn. But I doubt not but that many, well considering of this unheard of, and very gainful Artifice, will begin to think whether or no good Nitre may not likewise be gotten out of other Subjects easie to come by. Now then I must me-thinks needs instruct these.

The common Fossile Salt, and Sea Salt may by the benefit of this Art, be also turned into Natural Nitre; but I judge it needless to speak more of this, for as much as that which I have already mentioned concerning the Wood seems abundantly enough. Briefly, God doth in all places set before our eyes His Omnipotency, where he gives not Wood, there vouchsafes the Stones and Bones, out of which Nitre may as well be extracted, by those that are skilled in this Art, as it may out of other things. And where Fire is wanting there is Water however. But I know that it is certain, and past all doubt, that by the certain experience of Art, plenty of good Nitre may be made out of Sea Water.

Now if any shall object and say; Thou affirmest that Nitre is to be found in all places of the World, but especially in Wood and Stones; but yet, that there are many places which have neither Wood or Stones, & have only a Marshy Moorish Soil, which brings forth Grass only: By what means can Nitre be there, or in what things, or what places should it be sought for, thinkest thou there?

I answer; I have already, in what hath been said afore, confirmed, that Nitre may be drawn in large quantity even out of Grass; but verily there's no such need here of so doing, to rob the beasts of their food, and to use the Grass about Nitre making: For the Cheese and Butter, that come from the Grass, will easily yield more than the Nitre that's made thereof, would; God deals not so unjustly or unwisely with the Creatures as to give his blessings with a liberal hand to one, and take the same away from another: No, no; The Treasure of his Riches is inexhaustible, and he gives his Creatures largely to partake of them; nor doth that axiome (or maxime) which is so very usual in this perverse World, prevail at all with him, viz. The fall of one is the rise of another; but his will is, that all should have their necessaries abundantly supplied, that every one should have enough, and that every thing should come to perfection. Therefore it is not at all necessary, that Nitre should be extracted out of the Food which the Beasts live on, because it may easily be extracted out of other Subjects which bring not any profit to Man or Beast, and this in great quantity too. For in such plain low Countries and moist watery grounds, where you shall not meet with either Mountains or Valleys, or Stones, or Wood: The most gracious God hath, like a provident and wise householder provided for the inhabitants, giving them a certain kind of earth inlaid with many Roots and Fibers that grow therein, which the DUTCH call TURFS, the which they use instead of Woods, to boil with, and about other necessary uses; so that they may easily be without the wood, which is yearly brought them in such

vast quantity out of other Countries. Now these same Turfs contain in them the like Essential Salt as Wood does which Nitre is extracted out of.

As concerning Stones, they do not in those places shew themselves to sight, (as laying deep) if you except such as are burnt (or Bricks) and which are brought hither to build houses withal, yet God hath bestowed on them a matter sufficiently apt to make Lime withal, so that they may be without, even Stones themselves. The Shell-fishes of all Sorts (serve to this work), and sometimes the raging of the Sea, drives the Fishes shells ashore by heaps, and like little hills, the which being carryed by the Inhabitants into the Cities and Villages, they put them in the Lime-Kilns, and reduce them by a strong fire into good Lime, and that by means of the Turfy fireing we mentioned but now; so that I do not see any reason why, in these Countries that are destitute of Wood and and Stones, there should be found less Salt-petre than in others, in which huge quantities both of Wood and Stone are found. Nay, rather I affirm, that there is more there, than is in almost any Country of EUROPE; for do but compare the price of Turf and Wood, the Wood is dearer, the other cheaper; besides the Wood is harder to press out, and this yields its juice more easily.

So then, from all the foregoing demonstrations, I absolutely conclude, that there is not any place in the whole World, wherein great quantities of Salt-petre may not be made.

And if I should say, that there is not to be found in the whole world any places in which Nitre may be easier and plentifullier made than in the low Countries of GERMANY, as BRABANT, HOLLAND, ZEALAND, FLANDERS, FRIESELAND, the GRONINGEN FIELDS, the County of EMDANT, and all those Countries which run as far as the GERMAN and BALTICK Sea, in this their moorish kind of ground; verily I should not speak untruth, but if need were, I could witness it of a certainty.

But lest my Writings should remain too obscure and unknown to

such as are unskilled, and that such may not overmuch torment their Brains by unnecessary Pleadings how this may be effected, I judge it altogether necessary openly to confess the Truth before every one, and say, That Nitre or Salt-petre, were but its true use known, is justly and worthily to be accounted of as the greatest Treasure of the whole world, as being a thing by the help of which, good Health, Honours, and Riches may be purchased; and this we shall confirm in the three following parts. If then that this be granted, then this also will be yielded too, that the Subject-matter out of which it is extracted, is not to be despised, but to be highly valued; and therefore ought Wood and Turf to have their due Honour given them, concerning which, I have by many Arguments affirmed, that the one of them is every where in the upper GERMANY in great plenty, and the other in the low Countries of GERMANY, (nor doth these at all come short of the others) and that both may and ought to yield Nitre. Besides, not only the bare Turf is hereto useful, but likewise the hitherto thrown-away ashes, which are every where cast out as unprofitable.

NB. They are not useful in washing, as wood-ashes, with which the Laundresses make Lyes, and being they are not, they are thrown away as good for nought. But yet there is in them a great quantity of a certain salt, which being inverted by Art, passeth into Nitre; therefore through meer ignorance is there cast away, together with those Turfy ashes, a vast quantity of unripe Salt-petre, from whence a mighty profit might redound to those Countries, but being improvidently thrown away, is meerly lost. But yet I would not have any imagine, that the Salt which is made of the Lee of Turf-ashes, is presently Salt-petre; no, for 'tis needful that the subtilty of Art be first thereto used, afore such a Salt be brought to that pass, as to burn like Salt-petre: But yet care is to be taken, that that Art become not common, for then so Noble a thing, and so profitable to our Countries, will be known by Enemies as well as Friends; which to prevent, it must be warily handled, and the

principal work here requisite is this, viz. That it may not be published so imprudently, as to render the ungrateful and unworthy partakers of the same, as well as the thankful and worthy ones.

By these things here spoken may every one see and gather, that God is no respecter of Kingdoms and Principalities, and provides for some better than for other some; All Men are His Creatures and Heirs of all His Goods, if so be they be but willing, and do not stubbornly oppose and slight the Divine Grace, and do not wantonly cast it away and neglect it: Concerning which we shall speak more in the following parts, touching the Concentration of Minerals.

This we must yet farther add, viz. That common Salt-Nitre is in all Coasts, in all Tracts or Continents, and in all Countries; yea, even in all those places in which there's neither Wood, nor Stones, nor Leaves, nor Grass, nor Earth, nor any bottom of Earth: As for example; Near GREENLAND, where the Sea is said to have no bottom, where the Whales are caught, and which do greatly inrich the Merchants with their fat or oil: Did they but know, that the remaining Flesh and Bones were even were even yet of great use, and knew they but how to turn them into Salt-petre, they would preferr it far before their Fat, for the sake of which, so much labour and trouble is undertaken; for in the flesh of one Whale only (which as it is, is not at all profitable to any man) I dare say, that there may be found 20,30,40, 50, yea, sometimes I00 Centenaries, or hundreds weight of Salt-petre. And so likewise the Intrails of the dried Stock-fish that are caught in ISLAND and NORWAY, should I affirm, that they would even almost excell the Fish it self in value, I should not be deceived, I find no difficulty that might hinder me from affirning this to be agreeable to the Truth.

Do not the Salt-petre men preferr the Nitrous Earth that's found in old burying places (if they can have it) far beyond other Nitrous Earths? And this among others, that most excellent Examiner

of Metals, LAZARUS ERCKER, in his Book of examining of Metals, affirms, and gives this Earth the chiefest place. Nor is it to be wondered at, that of late in POLAND, towards MUSCOVY, where formerly great Battles have been, and many thousands of men slain, and by reason of the multitude of them, have (after the Battle) been thrown into deep Caverns of Mountains for the easier burying them) there hath been a great quantity of Salt-petre extracted out of the Earth. Were there not gain and profit to be gotten, those men that are imployed in the extracting and boiling it, would not lay out so much Money on unprofitable Ashes of Carcases.

But to pass this by, let any one make but this Experiment: Fill some Vessel with Bulls or Ox-blood, and put it in a warm place till it putrefie and be turned as it were into Earth; then extract a Lye out of this Earth, and boil it so long, till a little skin appear on the top, then lay it by in a cold place, to shoot into Crystals, or little Stones, and these will be true Nitre.

NB. There is another and more compendious way of extracting Salt-petre out of the blood of Animals, which belongs not to this place to treat of; let us but compute the account a little. If there are yearly killed in some great City some ten thousand Oxen, besides Calves, Hogs, Sheep, and Goats, and the blood be cast away as unprofitable,(now an hundred weight of blood yields some 5, 6, 7, or 8 pound, or more of Nitre.) the question is, How many Hundreds of Salt petre is lost? That this may be the more clearly evidenced, viz. That there is much Salt-petre in all Beasts, Fishes, and Birds, take another Experiment: Let a Beast, Bird, or Fish be laid in some warm place, where no Rain comes, to putrefie, out of the Carcass there will come Worms; of these Worms or Maggots take about one pound, more or less, put them in a Glass with a narrow neck, stop the glass with Paper only, and set it at the Sun, but not too hot, and in a few days the worms or maggots will be turned into water; then pour out this water into a Copper Vessel tinned over, clarify it with the whites of Eggs, as Vegetable

juices are wont to be clarified; then evaporate the clarified Juice, by little and little, by decoction, till it be covered over with a skin, as we have taught you in the Vegetable Juices; then set it by in a cold Cellar, and there will shoot good and natural Nitre, but especially if that Liquor shall have stood a while afore in the air.

The self-same Experiment may any one make with other Vermin that arise from Flesh or Cheese, and he shall find that even living Creatures have Salt-petre in them; so then there is nothing to be found, wherein that Universal salt of the World is not seen to be; but in some the salt doth sooner put on a SALT-PETRE nature, and in others it is already made SALT-PETRE by Nature.

Let this serve as an example, viz. The Essential or Universal salt of Vegetables, Animals, & Minerals, is indeed in its own nature nitrous, but it does not conceive any flame afore it has attracted life and flame from the Air. Further, one salt attracts that Life sooner and willinglier than another does, according as it is by Nature framed. By how much the more volatile and urinous the salts are, so much the sooner do they change themselves into Nitre; and by how much the more biting and more corrosive, so much the more difficultly and slowly do they put on the nature of SALT-PETRE. But because Nitre is a salt that partakes of both natures, viz. of a Urinous and Corrosive Nature, and is compounded as it were of both a Urinous and a Corrosive Salt, therefore by the help thereof one skilled in Nature may easily help the salts, and make of them whatsoever he pleaseth. Nor is there in the nature of things any salt, but may by the help of Art be turned into Nitre; but especially those salts which are sublimed by fire, and are elevated by the force thereof; as likewise those that are in the Urine and Excrements of all Animals; yea more, Animals, Vegetables, and Minerals themselves do easily assume the nature of Nitre: This now is the first degree of salts. Another degree of salts are those that are somewhat fixer, (as the Sons of Art call them) and

are such as are left in the fire, from Vegetables, Animals, and Minerals: These do more hardly pass into the nature of Nitre; but the hardest of all, are those salts which are in the third degree, as common salt, Sea-salt, Mountain or Fossile salt, Alume and Vitriol; for by Art are even these brought to that state, as to pass into true Nitre; but harder than the former, for they need a longer time for transmutation, than the abovenamed flying, volatile and urinous salts. And therefore I would not have any of you to opinionate, that when I say in my Writings, that this or that salt may be converted into SALT-PETRE, as soon as ever it is extracted out of the LIXIVIUM, or by barely calcining with fire, that (I say) it should presently be true burning SALT-PETRE; no, there is a yet farther time thereto required, whereto it may attract its life and soul out of the Air, and become burning or inflamable.

Every common BARBER and mean-pated fellow, knows that the most SALT-PETRE hitherto made, hath been boiled out of a Lee, drawn out of the Earth taken out of old stables, wherein Sheep and other beasts have stood. And why, I pray, out of the old standing places of Sheep, Oxen, and the like Cattle, and not like-wise out of the new? It is on this account, because old Stables do not only in LONG Process of time imbibe more salt out of the Excrements and Urine, and consequently yield more Salt-petre; but also those very salts (that come from the Excrements of the beasts) and which is the main thing, have in long process of time received their soul or life from the air, which new salts have not as yet attained unto. For let any one boil, and try his conclusions on the fresh Dung and Urine of Animals, as much as he list, they will never become Nitre, unless they draw their Life out of the Air. Let any one take some good Salt-petre, and mix it with Earth, and distill off the Spirit in a Retort, there will come over into the Receiver such a sharp and corroding water, as will dissolve Metals, Stones, and all other even the hardest Mercurial Bodies, and yet the Salt-petre was not corrosive, before, but it hath gotten that degree

of corrosivity from the fire's operation. Contrariwise, let some good Salt Nitre be taken, and be calcined in a Crucible, with burning Coals or such like other matters as will burn or calcine it: By this operation it will be changed into a very fiery and fixt Salt, but not so corrosive, and thus it will dissolve all Fat, Oils, Greases, and sulphureous Bodies, which thing the former corrosive Spirit will not do; for such bodies as are dissolveable by this fixt and urinous Salt, the former acid Spirit leaves them untouched; and on the other hand, it will dissolve those bodies which cannot be dissolved by the fixt Salt, and yet are they both extracted out of one and the same Subject, by the help of the fire. Hence may it easily be conjectured, that this is an Hermaphroditical Salt, and partakes of both natures, seeing it puts on both (or either of them); for the Philosophical Maxim witnesseth, that every thing hath its Original out of that into which it can be changed and resolved.

Now when I pour the acid Spirit that distilled over into the Receiver on that fixt Salt again, they are both of them divested of their nature and property; the Spirit loseth his sharpness and acidity, and the fixt salt puts off its fiery nature, and so they both become again an Hermaphroditical Salt, but yet not presently, but 'tis necessary to allow them some time of standing together in the Air, whereby they may receive that life and that burning nature which the Fire hath deprived them of. But yet notwithstanding this comes sooner to pass in this, than in other contrary subjects, because these two Contraries have heretofore already been one Salt-petre; for such as never have been Nitre, but are hereafter to be so, require a longer abode in the Air. These instructions we give to those that might haply think that Salts may be animated, without the help of the Air.

And now, that I may perfectly demonstrate that Salts do get their life out of the air, without any encreasing in weight thereby, and not from elsewhere, I will give you this following example:

Take I l. of Honey or Sugar, and let it be dissolved in ten pounds of Water, and let this Water be set for some weeks in a warm air, the Honey or Sugar will be as a magnet to this Water, and will by attracting a life out of the air turn it into sharp Vinegar, and that without any thing at all encreasing the weight of the same. By this means Water, by the addition of Honey, Sugar, Malt, or any other Vegetable Juice, will, by the operation of the hidden and attracting essential Salt, pass together with it into excellent Vinegar. But now some or other may imagine that the Honey, or the juice of the Fruit and Corn, have in them an hidden acidity, which by the help of the warm encompassing air, hath revealed it self, and so did not attract its birth out of the air: But I will shew you the contrary, as follows: Take a pound of Honey, Sugar, or some other Vegetable Juice, and force it over in a Retort into a Receiver, and you will find that there will distill over IO or I2 lots (or half ounces) of insipid Water, and so many of acid water; the remainder is a dead ashes, and have nothing in them; the Vinegar and Phlegm that ascended, will not yield one pound of Liquor, and the Vinegar it self, with its acidity, will scarce be so strong in taste as those ten pounds of water that are turned into Vinegar by the air.

This now demonstrates, that there was not in the Honey any more acidity than what was thence drawn out by the help of distillation, for the remaining ashes have not any taste at all. But put case that the acidity which is driven out of the Retort into the Receiver by the force of Fire, should be as sharp as AQUA FORTIS, (when as tho' it is scarce as sowre as Vinegar) yet would it hardly make ten pounds of Water so acid as to be compared with the other which is made by the essential Salt and the Air; so that it is evident that the acidity (as being a life) is drawn by the Magnetick Virtue of the Honey out of the air.

But as touching this Essential Salt of Vegetables, its being a Magnet, to extract an acetous spirit out of the air, and communicate

it to the dead water. You are here well to observe, that the universal spirit or soul of the World may be drawn out of the Air many and sundry ways. In the aforementioned Example of Vinegar is a spirit extracted, which is fit for the converting of Vegetable Liquors into Vinegar. In Hermaphroditical salts, the Universal Nitrous spirit becomes burning, as in Wine, Ale, and Metheglin. All these are so made by the means of air, without which no Wine or Ale can ferment, and without fermentation it is impossible for a burning spirit to be generated; which said spirit is easily afterwards turned into Vinegar, and this Vinegar into Nitre, and this Nitre again into a burning Spirit or Vinegar; for every Life is of one and the same original, and may by the benefit of Art be changed out of one nature or property into another.

So likewise the same is to be understood in the generation of Salt-petre, all Salts or Animals, Vegetables, and Minerals are dead, afore they get themselves a life after a magnetical manner out of the Air, and be made into Salt-petre; for amongst all salts, none deserve to be called a LIVE SALT, but that one of SALT-PETRE, which by the Philosophers is called the WATCHFUL DRAGON, which likewise at the beginning was dead, but hath got himself a Life out of the air. By all which it is most clearly manifest, that the life of all things ariseth out of the air, and that those Creatures which come not into the air want Life, and that such things as already have life, are choaked and die if the air be taken from them. Hence comes the death of all things, by a suppressing or taking away of air, (in which air the Life of all things consists) what way soever it be done by, as the aforesaid example of the Vinegar teacheth; for if Honey or Sugar were not made thin with Water, there would never have happened that changing into Vinegar. So likewise GRAPES, APPLES, PEARS, BARLEY, OATS, WHEAT, were they not moistened with water, but remained dry, they never would get the nature and property of Vinegar, and that for this reason because the air could never infuse its life into a dry and shut up body.

This they well know who are imployed in making a quantity of Vinegar; and upon this account do they in Summer time set their Vessels open to the Sun, and in the Winter, they keep them in warm stoves near the fire, and both afore and behind, and at the bottom do they make holes to give the Air entrance, that so they might the speedier promote the changing of the Wine, Air, and Metheglin into Vinegar.

They likewise know this too, that even strong Vinegar if it be a long time shut and kept from Air, corrupts and dies. The which thing, seeing it is to be as well understood of other Subjects, as of these here, viz. Salt-petre and Vinegar, we may affirm thus much, That by how much the more of warm Air comes to the Wine or Ale, so much the sooner will they pass into Vinegar. And by how much the more of warm Air the Salts, draw, so much the speedier will they draw a Life thereout-of, and put on themselves the nature and property of Salt-petre. This is the reason why the Salt-petre boilers do sometimes turn or dig up the Earth from whence they have had Salt-petre, and moisten it with water, that so the Air may the more commodiously penetrate that Earth by its operation, and infuse Nitre thereinto. But yet this business goes slowly on, and may be compared with that where a man presseth out Grapes or Apples a little, and then exposeth those Reliques of the pressed Grapes or Apples to the Air, or else grinds Malt somewhat grosly, and moistens it with water and so sets it by that it may be endued with the nature and virtues of Vinegar: It would indeed come to pass, but yet much slower than if Wine, Ale, or other Drinks were set by so, without the huskiness or bran: The same is to be observed in the making of Salt-petre. By how much the more, the toucheth the Salts, so much the speedier will it reduce them into living Nitre. This may be seen in old walls that are built in moist places, you see how the Lime sprouts out and is converted into Salt-petre. We see not the same thing done in the inside of the wall, where the Air cannot penetrate into it. Hence know I

of a truth, that it is not the husks of the Grapes, nor the husks or bran of the Corn grows sour, but it is the thin Juice or Liquor that is either pressed out of them., or extracted with water. And I likewise see that 'tis not the Ashes, nor Calx vive, nor the like calcined things that becomes Nitre, but only the Salt that is hidden in them. Therefore seeing that all calcined things being moistened with water and for a long time exposed to the warm Air do extract a Life and become Salt-petre, and that the Ashes and Calx are like a dead Earth and never yield Salt-petre, but remain a dead Earth. Likewise, for as much as such Earth doth not at all conferr ought to the generation and making of Salt-petre, but is rather every where an hindrance thereunto, whereby the Air cannot associate it self to the Salt; therefore do I separate the earth, body, shell, and useless garment, and keep the Salt, and I introvert it by the Air and turn it into Salt-nitre, but yet not without the addition of Water, in which the Salt is dissolved and rendred more fit for extracting a Life out of the Air; for otherwise should the Salt remain dry this transmutation would be a tedious while a bringing to the desired end.

If therefore the Salts that are prepared by the fire are dissolved in water, and the water be together with it kept by peculiar Instruments in perpetual motion, and some heat be also thereto adjoined, so that there be not the least Atoms of the Salts to be found which have not the uncessant penetration of the warm air, and which are not animated, (because the warm air and motion do in all places touch and vivify the Salts): Such an operation as this does more in four Weeks, than if the Salt lay in the heaped up Earth and open to the air (far longer) wherein it would not in a whole years time attain to so great a change. But this perpetual agitation and heating consisteth in a certain wooden Instrument which may of its own accord by an enceasing motion heat the Salt-water, so as that every Weeks a growing alteration may be evidently seen and perceived. It is not of any great charge, and one may get ready as

many Vessels to be filled with Salt-water to make Salt-petre with (as he pleaseth) for one Man can manage an hundred of them or more and conserve them in continual heat and motion, so that a Man may keep such an Art secret as long as he pleaseth. And as concorning the ordering the salt by the help of the fire and getting it a magnetick and attractive faculty afore it be dissolved in water to be put into the Vessels; and also how the Vessels are to be prepared, this cannot be conveniently declared in writing, but it is expedient that as well the manual operations requisite for the endowing of salt with a magnetick faculty, as the Instruments necessary for the turning it into Salt-petre be also well lookt into, with all the appurtenances thereto belonging. Any one will easily comprehend them all, and be able to imitate them; yea far easier than any gross or great work, and it may be improved in any subject whatever. It is not any sordid kind of operation, but pure and clean, it needs not any making of Lixiviums, nor any decoction, nor any evaporation, but perfecteth it self without impediment or retarding the work, and coagulates the Salt into Nitre. Verily it is a most delicate and most profitable invention, from which many others may have a beginning and flow.

Thus have we declared and proved that the soul of the World vivifying dead salts, and turning them into Salt-petre, adds not unto them either weight or encrease, and yet nevertheless it is of such abundant efficacy and power as to reduce them all to Life, which Life is no other thing but the little Bird of HERMES, and easily admits of being esteemed for the most noble amongst all the Creatures GOD hath made, set aside but the soul of Man, and may by the help of Art be again extracted out of the Salt-petre. But that I may mention the thing more openly and more clearly; I say, that the salts must (by the help of Fire and Art) first get a magnetick and attractive power and faculty afore they can draw a Life out of the air. Now then, after that the universal Life of the World is caught and fettered as it were by the salts, and hath

turned the dead salts into living nitre, yet that life lies hidden in that Salt-petre invisibly, and can but a little or scarce any thing at all shew out or display its virtues by reason of the Gross body of the Salt.

NB. If so be that any one shall but know how to draw out this Life again out of the Nitre, and bring it into a body, and make it visible, he shall have a thing so admirable that he'll scarce find the like (as I believe) in all natural things. For there is such a sweet and red Liquor, as to sight, thence had, that one only small drop will tinge a thousand parts of water with a Golden colour; which (said Liquor) I have not as yet brought to a constant or fixed Medicine, but do make use of it in Medicine (as it is) and I find in it things wonderful. But this little Bird (as far as I know) cannot be again extracted out of the Nitre by any other subject than with a net artifically prepared of Sheeps-skins.

Such a worthy thing as this is, do I rank in the number of great secrets and mysteries, and I suppose it to be that work which the knowledge desiring JASON, being holpen by MEDEA who was most skillful in the Chymical Art, took away from the Dragon, and called it the Golden Fleece: But I would not have any one perswade himself that I speak here of such a Tincture as is extracted out of fixt Nitre (and likewise the same is extractable out of Salt of Tartar) by Spirit of Wine. No, that is no true Tincture, but the Spirit of Wine is somewhat altered and tinged by the fixt salt. But that Liquor of mine is the true, occult, and inmost Tincture, Virtue, and life of the Nitre, and is of a golden Nature, but plainly flying and volatile, one drop whereof doth so gild an whole Imperial, as if it were gilt over with Ducket Gold. This Tincture cannot be changed or altered by any contrary Medstruum, be it Corrosive or Urinous, no nor by AQUA-FORTIS, or Liquor of Salt of Tartar; the like of which is scarce to be found in all nature.

For if there be a most delicate colour drawn out of the Vegetables, as Cochenele, Saffron, and such like, by the help of the

Spirit of Wine, and there be dropt therein but one only drop of AQUA-FORTIS, the colour will presently turn pale, and if you add more, it will vanish for altogether. Or else if a drop of the Liquor of Salt of Tartar should be put therein, it would presently change colour and become duskyish. But now, this true Tincture of Nitre or Soul of the World suffers not any change from either of the contraries. And should one have even a metallick Tincture, or extract even from Gold it self, yet would it not stand in this tryal, but would be precipitated wither by the acid or the fixt salt, and separate from the Menstruums. But ours doth constantly abide in every trial, and resists both the contraries.

I do therefore repeat what I have often said, that there is more lies hidden in Nitre than many thousands of Men can perswade themselves of. But because it is so vile and abject a thing, no body thinks that there lies hidden any thing of good therein. But do but read the chiefest of the Philosophers, and you shall therein find that they do enigmatically point at Nitre, and do call it the Dragon which is to be slain by its Brother or Sister afore it parts with its Treasure; But enough of this.

The things hitherto mentioned, have I produced for this end, that my Neighbour may be the better certified concerning them. All the Philosophers Books are full of this thing, amongst whom, HERMES, and BASIL VALENTINE excel, who have written most clearly. PARACELSUS saith openly, Alchimy hath found it in Nitre. The late Philosopher NUISMENT, hath published a Treatise of the Salt and Spirit of the World, and is verily most worthy the reading, which (said book) I commend to the Reader that studies these things. Therefore do I here again repeat what I have so oft reiterated, viz. That Salt-Petre is the most admirable, the most excellent, and the most powerful Subject of the whole World, whose wonderful properties cannot be enough searched into. But because it hath its rise from dung and putrid rotten things the greatest company of foolish ones do despise it, but the small company of Philosophers

and Wise-men (who are those that know what admirable virtues it has) do most highly esteem it, and set thereon a great value. The well disposed Reader will clearly find more as to its virtue and efficacy, in the three following parts.

O thou the original of all good things, and Treasure of all Treasures, vouchsafe that we may well and rightly improve this earthly and fading Treasure, and may so search after, and use it unto the end, that we lose not the chiefest good, but may rather find and keep thee for ever.

An Admonition, adjoined as an Over-plus.

In the first Chapter of this first part of the concentration of things, have I plenarily manifested, by what means, new Wines and Musts are (by the help of an Artificial condensation) to be brought into a narrow compass, that so they might be carried into far remote places wherein there are no Wines, and may there be sold to great profit. But yet I forgot to shew, by what means the savour which the winy Juices contracted in their concentration, is wholly to be taken away in the fermentation when they are again dissolved in water, that so the Wines made of those Juices may not have any untoward and unpleasant taste. 'Tis an Artifice without which no man can easily, quit himself in this Art of making Wine. But that I may certify every one hereabouts, the Medium (or Basis) necessary about the precipitation in this work is no other thing but common SULPHUR excellently well purified, a little portion whereof (according to the nature and property or disposition of the Juices) is to be hereto added, which must boil up (or Ferment) with the Wine, that so it may draw to it self all the filths, and all the strange odour, and savour or taste in the fermentation and by precipitation cast them down to the bottom, which being done the Wines become sweet, clear, and get a good flavour. Furthermore it is to be known by what means (seeing that there are many

faeces and defilements that will separate themselves out of those kinds of Wines as well as out of others, and settle to the bottom) even they are to be put to some use, that so there may not be any loss, but that the gain may be by so much the greater. Divers ways are there of making profit from them; as for instance; The remaining Wines may be pressed out in bags, or else they may be turned into Vinegar, or a spirit may be thence distilled, and the remaining gross matter be boiled in water, and the Tartar therein dissolved, and prest out in bags, that it may so shoot into Tartar. But as touching this expression I have taken care to have a peculiar Book published at NORIMBERG, (viz. THE TREATISE OF THE LEES OF WINE). So that it is wholly needless to make any mention of the same, in this place. The Courteous Reader, may use it to his occasions, as being such a Book, in which he will find the said pressing out the Wine and Tartar, and also the making of Vinegar, clearly described, with all the circumstances thereabouts, and without all question if he rightly understands me, and sets about the work, he will do himself a great deal of good.

NB. But if so be that any shall know the Art of turning the Tartar of those Faeces into Salt-petre, (and such a thing may be done and that in a very short time) he will get twice the profit, that is to be gotten by making Tartar of them; forasmuch as he need not put himself to the inconveniency of pressing them.

In the second Chapter of this first part where mention is made of the concentration of Corn, there it has been alleadged that the remaining husks or branny parts which remain after the extraction of the Juices, may be made to yield as much yea more Moneys than will pay the costs about the Corn. But it is well known, that those reliques that are left in your boiling up of Ale, are improved to fatten Beasts with. If now a MEDIMNUS (a measure of about some 6 bushels) of Corn doth cost half, nay even a whole Imperial, those reliques (that are left of it in working) can scarce cost less than one eighth part of that Imperial. And now

out of such a MEDIMNUS or measure of such reliques, they would very hardly when turned in the Beasts, into nutriment, have made in them two pounds growth of flesh, the price of which (said two pounds) would not amount to the eighth part of the said Imperial: Whereas now, if those reliques were handled after the afore-mentioned way of reducing Wood into Juices, they would easily yield as much, or more Salt-petre than the price of the Corn was at the beginning. So that here's an enriching Treasure offers it self to the pious and diligent Householder, whereby he may do good to those in need.

In the third Chapter of the first part, is mention made only of the Concentration of Wood, of the pressing the Juices out of the Wood, and of the making Nitre; But because there is not every where such great quantity of Wood, as to imploy it to the making of Salt-petre without omitting the more necessary use of it, yet notwithstanding the case may be so ordered as that a great quantity of Salt-nitre may be made of the Leaves of the Trees and the Grass that grows under the Trees, and there's no need to cut down the Trees, if a Man has no mind to so do. Besides too, in such places where there's but little Wood and much Corn, even the very stubble or straw (of the Corn) is fit enough to be made into Salt-petre. So that there is no place where there is not matter found for the making of Salt-petre.

And therefore I cannot forbear but must needs teach all pious Householders (whether they have their Houses in Cities or in Villages) a certain easie Artifice, by the help of which they may gather a Treasure for their Children, without any labour and costs and such a one as Thieves can never rob them of.

And now, seeing I have revealed in this small Book, for the benefit both of Rich and Poor, high and low, three Artifices or Workmanships by which, Wine, Corn, and Wood may be made more profitable; but yet have not brought any assisting help to such as want both Wine, Corn, and Wood, I have judged it worth the while (that so even they who have nothing, and yet nevertheless desire to provide

for their Wives and Children in some honest way) to bestow on them a secret Art, whereby they may seek their advantage or profit. And I hope the thing will redound to the Honour of God, and to all our Healths.

Besides, I will shew a way to such as have no inheritance left them from their Parents, nor have any thing come to them by Marriage, by what means they may without labour and trouble get a Treasure for their Children.

First of all, Let such a one take care to have some shade or hovel made, to join to that side of his dwelling that lies in the middle 'twixt the North and the East part of Heaven, or some other more convenient place, so as to admit the Sun and Air to it, but to keep off the Rain. Under this Pent-house or Hovel, let him dig a large Pit, and with the Earth he digs out let him make banks round the Pits-mouth that so it may keep the Rain off of every side. This done, let him each day in every year, or whensoever he can conveniently carry and throw into that Pit these following matters, so long till his necessity forceth him to dig all out again, and to see how much Treasure he hath gotten, even whilest he slept. Now these matters are, All sharp and bitter Herbs, growing in by places, amongst bushes, and in the way sides, and such as the Beasts feed not on, as ESULA, CICUTA or Hemlock, Henbane, Fumitory, the thick stalks of Tabaco that are thrown away in those places where it is planted, the hard stalks of Colwort, which the Beasts eat not of, and likewise all those things they leave in their Trough; likewise Firr tops or Apples if you have them at hand; also the Leaves that fall from the Trees in Autumn are to be gathered; also Pigeon-dung, and Hens-dung, Birds and Hens Feathers; all the Ashes which Women usually make their Lees with, and other Ashes that are not fit for that use, as also such out of which the Lixivium or Lee is already extracted; the soot of Chimneys, Hogs hairs, the horns of Oxen and Cows, and the bones which the Dogs eat not of. All these matters may be thrown into his Pit, and that he may the sooner fill it, he may gather as much as ever he

can from the bordering places, and throw it therein, that so in one or two years time he may with all those things fill up his Pit. Mean while he must pour into the Pit the piss gathered in his House, and that he may have enough he must also get as much as he can from his Neighbours, so as to keep the things thrown in the Pit in a continual moisture, whereby they may the sooner putrefy. In want of Urine, common Water may be taken; if Sea-water or other Salt-water can be had, it will be the better. Also the Brine of Fishes-pickle, and the salting or Salt-water can be had, it will be the better. Also the Brine of Fishes-pickle, and the salting or salt-water that Flesh is macerated (or pickled) in are of good use in this business; likewise the Blood of Oxen, Cows, Calves, Sheep, which you may easily have at the Butchers; all these things putrefying together do put on the nature and property of Salt-petre.

If now, all those matters in your full pit shall have well putrefied, then cease from pouring on any more moisture, and all the things are to be left so long till they are dried. And then if you need Money, let a Salt-petre maker be sought for, and bargain with him about the price of drawing out your Salt-petre by water of making it, and selling it. This done, cast the remaining Earth again into the Pit, together with the remaining Lixivium that shot not into Nitre, and there leave it for a year or two, and moisten it sometimes with Urine, or if you have not this, with common Water. This Earth will again yield Salt-nitre, but not above half so much as at first.

NB. If you stand not in need of Money, let the matter lie, and as oft as it dries, so often moisten it again with the aforesaid moisture, that so the Nitre may more and more grow and increase. By this means shall such a one gather a secret Treasure, & shall not know almost how he came by it. If he needs it not himself his Children will find it. Thieves, & Soldiers will not steal it away. If one Pit be full then another may be made. that so nothing

at all of those matters, which otherwise are most base, (but in this case most suitable) may be lost. Now if there were but only one in every Village that were appointed to exercise this Labour, there would be found out as it were in a small Country many thousand hundreds of Salt-petre, and so these matters still serving for the same use, there would never be any scarcity of Salt-petre. And now, Nitre being present, Gold and Silver are not far off. Let every one observe this, and esteem it. Men will sometime or other at last, become thrifty and wise, and will see what blindness they have been possessed with.

Give GOD the thanks, and be helpful to thy Neighbour. GOD hath bestowed on me, I bestow on thee, do thou likewise bestow somewhat upon thy Neighbour, and it will be well with us all.

End of the Second Part.

THE SECOND PART

OF

THE PROSPERITY OF GERMANY.

Wherein is shewn,
By what means Minerals may be Concentrated by Nitre, and turned into Metallick, and better Bodies.

For the benefit of my Country, and of all such as affectionately and industriously follow after Metallick Affairs.

Friendly Reader,

I have taught in the first part of this Book, by what way the Vegetables, as Wine, and Ale, are to be concentrated, whereby they may yield more profit than hitherto they have done, and also, how Wood is to be reduced into Salt-petre. In this present Second part, shall be taught, how the Salt-petre is to be used, and how, by it Minerals may be Concentrated, and wrought into Metallick Bodies. And as to this Concentration, thus stands the case; that is to say, forasmuch as a good part of Minerals are of very little use, and lie neglected as things of no worth, and prove not profitable to any one, (whereas if there were Men that understood but the Art of it, there might redound a great benefit to the Lands where they are. It hath seemed to me worth while to declare it to my Country, nor doubt I but that there will arise some diligent ingenuities, who will lay the thing to heart, and take care thereabouts, and will even set their hands to the work it self, and thence get much profit; which to me would be very pleasing and acceptable. Therefore (in the Name of God) will I set about the

manifestation of the Gifts of God (which lie every where unknown, and wholly disesteemed, and which yield no Man any fruit) and lay them before the Eyes of the whole World, that so they may be better known hereafter, and be of more benefit to the Country. And I beseech the most Wealthy, and the most Ancient Householder our most merciful Father, to bestow a Blessing, and good Success on this my endeavour, that it may tend to the Honour of his most Holy Name, and the health of all our Souls. AMEN.

Of the difference of Minerals, and what is understood by the Name of Minerals.

As concerning the word MINERAL, why all Fossile and Metallcik Mines are so called afore they have been wrought upon, and brought by the fire into Malleable Metals, I judge it but of small moment to make any tedious Comment thereupon; besides, others have long ago throughly treated of that, and yet it makes but little to the thing it self. But my purpose is (at present) to teach, what means such little esteemed Minerals may be made useful, and profitable by; but afore I begin this work, I will recite, and shew the many sorts of Minerals that there be; then next that, I will shew how, by the benefit of fire, and the hands of the Artificer, they may be converted into better bodies, and become useful, and profitable for Mankind.

Under the Name of Minerals are comprehended, or reckoned these following, viz. ANTIMONY, AURIPIGMENT, WHITE, YELLOW, AND RED ARSENICK, COBOLT, LAPIS CALAMINARIS, ZINK, BISMUTH, or the SILVERY MARCASITE, likewise the GOLDEN MARCHASITE, PYRATES, or COPPERAS stones, VITRIOL of various kinds; as also, its kindred, may be added to the number of Minerals. And albeit, that some do also referr Alume, Salt-petre, Sal-Armoniack, sal Gem, and others of that kind to the rank of Minerals, yet cannot I acknowledge them for such, or reckon them up amongst the number of the above mentioned,

seeing there is nothing Metalline to be found in them: Such only therefore do I call Minerals, that have in them a Metalline nature, and which do admit of being joined with other Metals, and of being molten together with them in the fire, and out of which the known Malleable Metals, may be extracted. These are they which I intend to treat of, and will see, what good is thencefrom extractable.

And first of all we'll speak of ANTIMONY.

ANTIMONY is the noblest Mineral of all, not only because it doth for the most part contain Gold in it, but upon this account too, because more eminent Medicines may be thencefrom prepared for the use of Mankind. In the Mine-pits it has its peculiar Veins; that which is found in TRANSILVANIA, hath some little bigger portion of Gold in it, and is accompted of as the best in all EUROPE, next that is the HUNGARIAN ANTIMONY, which likewise doth sometimes contain no contemptible portion of Gold; next is the FECHTENBERGICK, which is found at a small Town called, in the GERMAN Tongue, GOLD-GRONACK; the POLONIAN sort, and that which is found in most places of GERMANY, contains but little Gold, or none at all; but there is some which has much Silver in it, and (for the most part) is neither wont to be used, nor desired, or sought for, save by the Letter Founders, and these use it to make their Matters flow. Also many do use it (viz. Antimony) in Medicine, and do much good therewith, but it hath certain Enemies who are none of the wisest, and so is hated, and rejected. But yet there lies in it more hidden good, than all its Enemies are able to conceive of, witness my PANACEA, which is mentioned in the second part of my PHARMACOPAEIA SPAGYRICA.

And BASIL VALENTINE, certainly an excellent Philosopher, writ the Triumphant Chariot in its Honour, which is an exquisite Book and profitable to read.

But as concerning the way of making a Regulus out of Antimony,

and as to the uses it serves for, that I have described in the fourth part of my Furnaces. Moreover, as to the manner of depurating Gold thereby, and cleansing it from all Heterogeneous mixtures, and as to the graduating of silver, thereby, that it may become Golden, all this have I spoken of in the Elplication of my MIRACULUM MUNDI; and as to what other effects may profitably be done, therewith in Metallick Operations, shall be shown, partly in this Treatise, partly in the third and fourth ensuing parts. As concerning the way of separating it in quantity out of the Ore, PER DESCENSUM, is to be seen in GEORGE AGRICOLA'S Book, that he wrote of the Metallick Art, and in others; nor indeed belongs it to this place to speak thereof.

Of ARSENICK.

ARSENICK likewise is a good Fossile, or profitable Mineral, and is put to many Uses. It also hath its singular, or distinct Veins in the Earth, whence it is taken; it is forced out of the Ore by Ascension, and Descension, and is purified for use: It is found white, yellow, and red. Also some silvery Minerals or Ores do in their solution, or melting, yield much Arsenick, which the Melters of the Ores do catch in Chimneys or Funnels made for that purpose, and keep it for use; concerning which, you may read in GEORGE AGRICOLA'S Writings. So likewise, COBOLT yields Arsenick, and so do some Golden Minerals, or Ore; that which is separated from a Minera of Gold, PER DESCENSUM, is very red, and auriferous, and this, those that deal with Metals, have experience of; which, if they separate not from the Gold Ore afore they melt it, it carrys away a great part of the Gold, and hides it in its Belly in the melting, so that they would not have so much Gold as there is in the Ore. For indeed, such a kind of Arsenick, is an unripe Gold, as shall be hereafter proved: So then, there lies more hidden in that Contemptible, and Venomous Arsenick, than any one will easily

perswade himself to believe. There are also Medicines prepared out of it, but such, as serve only to be externally applied, in inveterate, and virulent Evils, as the Cancer, and Fistula. It is also used in Colouring and Dying Cloaths, concerning which, you may peruse my other Writings.

Of Auripigment.

This Mineral is in a manner of the same Essence that Arsenick is of; but this does not come forth of Minera's, or Metalline Ores, but hath peculiar Veins of its own, in which it is generated; it is an unripe Mineral, and doth for the most part also contain Gold. It is exceedingly Poisonous and Volatile, and therefore it is but little used, save only by Painters. It can be fixed by Nitre, and it makes Copper white, and brittle, as Arsenick doth: And it suffers it self to be sublimed out of its yellowness, into Transparent Rubies, which are used for Ornaments sake.

Of Cobolt.

Amongst all the Minerals that are to be found COBOLT is the most poisonous; it's an unripe silver, and it ofttimes yields in melting good silver, yet one sort more than other; some also there is which hath not any Silver at all, and is used about the sky coloured Smalt, to help make it, with an addition of Fusile Sand, and Potters Ashes. But when they meet with that which has Silver in it, they separate it thence from by Fusion; besides, it may be so fixt by the help of Salt-petre as to yield permanent Silver, as shall anon be spoken of.

Of the Silvery Marchasite.

The silver Marchasite, or Wismuth, is a known Mineral; it's

every where found to and again in the silver Mine-pits, as well as Cobolt is, but yet it is much more fixt than Cobolt; neither is it of so poisonous a Nature. It is gotten out of its Ore, or Minera, most easily by a small flame of wood fire, and is used by the Pewterers to make their Pewter hard, sounding, and fluxile. Likewise, out of its scoria or drossy parts, is the blue Smalt also prepared, which the Potters use to glaze their Pots, and the Glass-men to make sky-coloured Glasses. It doth very frequently abound with much silver, and 'tis rare to find any that is wholly void of silver: And if it holds so much silver, as is of more value than the Marchasite can be sold for (as 'tis barely BISMUTE) they separate it, if not, they leave it in it. For if an hundred weight doth not contain 20 or 30 Lots, or half Ounces they do not separate it, because the Marchasite will yield so much. But now, the Silver may be gotten out of the Marchasite, by Salt-petre, so as that the remaining Marchasite shall lose nothing of its goodness nor be at all spoiled, as I have shewed in the Explication of my MIRACULUM MUNDI.

Of the Golden Marchasite.

The name of MARCHASITE is proper to every unripe Metallick matter (and is) of as many sorts as there are Metals; hereupon the matter which has Gold in it, is called the Golden Marchasite; that which has Copper, the Coppery; that which has Iron, the Irony, and so that which abounds with Sulphur, is called the Sulphureous Marchasite. But now there is Sulphur in all the Marchasites, and sometimes Arsenick too, but (the Golden ones) have more of Gold than the other Marchasites have); besides, out of all kinds of Marchasites proceeds (for the most part) a Vitriol, which shews the nature of that Metal, which the Marchasite contains; one while Copper, sometimes Iron; 'tis rare to find a Marchasite that hath no Metal at all in it; if it hath nothing of Gold, Silver, or Copper, yet

has it Iron, and gives out of it self a Vitriol useful for Dyers, and which such as prepare AQUA-FORTIS cannot be without.

Of Zink.

ZINK is a Volatile Mineral, or a half ripe Metal when it is drawn out of its Ore. It is much clearer and brighter than Tin, yet not so malleable and fluxile as Tin is, and it is usually put to Tin to make it brighter and harder. We have it not much growing in GERMANY, but great quantity of it is every year brought us by the Merchants out of the EAST-INDIES. The way how to prepare it for Medicinal uses, have I described in the first part of the Philosophical Furnaces. It is a golden but an unripe Mineral, it gives Red Copper a Yellow Colour and turns it into Brass, as LAPIS CALAMINARIS doth; and indeed that same Stone is nothing else but unmeltable ZINK, and this ZINK may properly be called a fusile Lapis Calaminaris; for as much as both of them partake of one nature. But with ZINK, there is most an end conjoined Lead too, and then it is not fit to make Brass of, unless the Lead be first taken thereout of; so it is at GOSTARIA, where together with the Minera or Ore of ZINK is Lead also digged out mixt amongst it, and is called a Lead Ore, though there be contained in that Ore, four times more of Zink than there is of Lead, and yet they burn up the Zink for to have the Lead, which Lead hath some Silver in it. In the melting it flies away in fume, and it is a volatile and combustible Mineral, and sublimes it self up into the holes of the Furnace, whereupon the Melters or Founders are constrained to knock it off frequently, least it should too much lessen the Furnace; this matter they knock off, they call Calmei (which is Lapis Calaminaris) and which turns red Copper into Brass, with encrease (of its weight) and so verily by means of the not-knowing or being skilled in this Ore, a great quantity is yearly burnt up and lost. Sometimes the founders do gather somewhat of the Zink, which is most excellently

excellent; but that Ore might be melted with far greater profit, if they did not so burn up the Zink, and force it into fume; but seeing men are hardly drawn back from an old custom, it must be born with.

But yet (I say again) if that Ore were handled in a due manner, there would redound far greater profit thencefrom than now doth. Such a kind of Mineral as this is doth Westphalia also yield, which the founders there accompt for a Leaden Ore, because it has some load mixed with it, but when it comes to be freed or molten it goes (all) away in fume, and therefore they say, it is also a Calmei or Calaminaris Ore, and so it lies unused.

Of Calmei or Lapis Calaminaris.

CALMEI Ore is digged out in many places in GERMANY, but there is none of such note as that which is found at AQUISGRANE, for that is wholly void of all kind of Leadyness, and much different from that of GOSTARIS, or WESTPHALIA; and therefore it is also very fit to make Brass of, which is there made in plenty, and farther, this has Gold in it, though not so much as to quit the Costs of separating it. But there is no Mineral richer with Gold than this, and could it but be ripened (and I doubt not at all of the possibility of so doing) a good deal of Gold might be drawn out from thence.

As concerning what else may be performed with that Mineral, I have formerly told you in my First and Second Part of Furnaces, nor is it needful to treat of the same thing more at large in this place.

Of Common Sulphur.

SULPHUR or BRIMSTONE is the most known, most used, and most combustible Mineral of all. As touching its uses in Medicine, and in

Alchimy, about the separation of Metals; may you find something mentioned by my self, in the writings I formerly published, and in the writings of others too.

But at present we will only mind you of this, viz. That it is the very Foundation and Root of all the Metals; for tis rare to find any mine wherein SULPHUR does not shew it self. Very many places in the World, is SULPHUR both made and digged out of the Earth, in very great quantity, & that chiefly in ISLAND, and in ITALY, nigh to those always burning Mountains, HECKLA and VESUVIUS; it is also drawn out of Marchasites per Descensum in many places of GERMANY, so that enough of it may every where be had for a little money.

These are the chiefest Minerals that I ever know of, and these are they which are commonly sought after, and applied to use. But now, besides these, there are so many various kinds of Fossiles and Minerals to be met withal, that one cannot reckon them all up, or give them peculiar Names. One contains Sulphur, and Arsenick, another, Cobolt and Sulphur; another Antimony, and Arsenick, and of that kind are there very many more. But yet those that we have reckoned up, are the most known, and most in use, and therefore shall at present be sufficient for us to speak of.

Having now taught what Minerals are, and which of them are most known & used; I will now teach, in the next place, by what means they may (by the help of Salt-petre, & other Subjects) be fixed, concentrated, imbodied, or brought into Metals, so as to be rendred profitable for the use of Mankind, and which otherwise lie every where to and again neglected and, are wont to be of no esteem.

And as to the Concentration of Minerals, thus stands the Case with them; they are either to be fixed & subdued, as 'twere by the help of Salt-petre, that so they may not so suddenly fly away in fume in the fire, and be burnt up, but may abide the fire and suffer themselves to be molten; or they are to be reduced into bodies by the help of Metals, that so they may come in use, and that by

augmenting the Metals, as Lapis Calaminaris does, or they are to be purifyed, separated, and made better, as shall be mentioned of SULPHUR, ANTIMONY, and the others, that so those kind of Minerals of which there lies to and again, at present, great quantities, wholly neglected, and profitable to no body, may hereafter be of use and benefit.

And first of all, as to the fixation of the Minerals, the way of proceeding is thus, viz. The Mineral is to be powdered, and to be mixt with equal weight of burning Salt-petre, and so to be fired, that the combustible and volatile part of the SULPHUR may be forced away, and the Mineral may afterwards brook the fire the better, and be molten and forced downwards (per descension); which operation I have treated of in the explixation of my MIRACULUM MUNDI, and therefore think it needless to repeat the same thing again here. By this mean therefore may ARSENICK, AURIPIGMENT, COBOLT, ZINK, BISMUTE, and other Volatile Minerals be in some sort fixt by the inflaming and burning up with Salt-petre, so as afterwards to endure the fire, and to yield forth the good they have in them. There's also another way of imbodying Volatile Minerals, viz. by the benefit of Metals; if the Metals and Minerals are joined together in a due measure, and be likewise united together by the virtue of a Cementing fire; then doth the volatile Mineral penetrate it self into the Metal, and becomes Metalline, and doth also encrease the Metal, as is evident in Calmei or Lapis Calaminaris, which being joined with red Copper and cemented, enters into it, augments and encreaseth it, and turneth it into Brass; whereas there cannot be any Metal educed out of the Calmei by the usual way of Melting. In like manner may all Arsenical minerals be (by cementation) introduced into Copper, & made corporeal; and these do not colour the Copper yellow as Calmei doth, but make it white, nor is the Copper rendred maleable thereby but brittle, but yet 'tis not without profit; for if that white Copper be handled after a convenient manner of taming or over-mastering it, then the Gold and

Silver that was in the Arsenick, betakes its self into Regulus's, which are to be depurated in a Test or Cupel, or else by the help of Salt-petre; but there cannot any metalline body be made out of Arsenick, Auripigment, or Cobolt, by bare melting. The way of proceeding with it is thus; The Copper is to be cut into small bits, and to be moistened over with LINSEED Oil, and the Arsenick, Auripigment, Cobolt or any other Realgar is to be powdered and strewed thereupon, and so a bed of Copper, and a bed of Arsenick to be put one a top of another in a melting Pot; then the Pot is to be well covered and fenced with Lute, and placed in a circulatory fire, and the fire is to be put nearer and nearer to it, until the Pot is through red hot, then let it cool, and you shall find that the Arsenick hath gotten ingress into the Copper, and makes it black and brittle. The Copper thus burnt, may be reduced into powder, and burnt with good Salt-petre, whereby the Volatile Gold and Silver which was contained in the Arsenick, is made corporeal, and abides as constant upon the Tests as other fixt Metals do; so that by this means permanent and good Gold and Silver may be gotten out of every sort of Arsenick, Auripigment, Cobolt, and the other volatile, venomous and base minerals.

NB. This kind of operation is very dangerous to those that are unskillful, and who being unversed in the Chymick Art, have not learned to take heed to themselves. And therefore it behoves every one to beware of doing ought rashly or heedlesly. He that knows not how to carry himself (or his business) warily, let him forbear to meddle at all with this labour or process: But as for one who is better versed, and pretty well experienced, he may set about this work safely and will gain by it: Because there is oftentimes found Arsenick and Auripigment that hath in it much hidden volatile Gold and Silver, and which cannot be retained in the common way of melting by Fire, but will totally fly away: But now if it be imprinted in the Copper by Cementation, and fixt in the same by Salt-petre, and then precipitated by means of Lead or Iron into

Regulus's, it will render all that fixt which afore was unfixt and flying. But as concerning such a Cementation and Fixation to be done by Nitre, will be manifested by the following process.

NB. But you are carefully to observe, that one minerla must help another in the separation of their Gold and Silver (if you would undertake this Labour for profit): For so each will produce what it has in more abundance, and thou wilt have a greater reward for thy pains and costs. For example, I prove and try Auripigment or Arsenick, and find that it is auriferous, and I have a mind to perfect it and turn it unto my use; hereupon do I look for such Copper as is likewise auriferous, (and indeed there's plenty enough of such every where): Into this Copper do I introduce my auriferous Arsenick by Cementation, and that I may not need to cupellate (or blow off) the same upon a Test (for the very Labour of so doing will cost more than the gains will be of that separation) I do precipitate the Gold that is therein into a Regulus, which Regulus being purified, I obtain the Gold that was contained in that Arsenick and Copper, neither is there any need of cupellating all the Copper. But that the precipitation of the Regulus may be the more commodiously done, I proceed on this wise. I find out some Antimony of a good sort, and which is of a Golden nature; likewise such Iron as hath Gold in it, both which, viz. the Iron and the Antimony, may easily be gotten, and then I set on the separation which I thus institute.

First of all I implant the auriferous Arsenick into the auriferous Copper (if such may be had) then reduce I these into powder, and fire them with an equal admixt weight of burning Salt-petre; by this means the Arsenick is made a little more fixt, and suffers it self to be the better dealt withal in the fire; but if you are well skilled in this kind of labour you may spare your Salt-petre and may melt down your Copper (burnt with the Arsenick and powdered) with an equal weight of Antimony, And if of its own accord it lets fall a Regulus out of it self, then there needs no precipitation,

the Regulus may be laid by, and that which remains may be likewise precipitated into a Regulus with common Iron; and this (last Regulus) is also of use, as shall hereafter follow: But if not (that no Regulus falls) then that Mass may again be put into a Crucible, be molten, and a little Iron filings be cast in to make it settle; the which must be stirred about with a red hot Iron rod, ans when it's well molten, 'tis to be poured out into an Iron Cone; which being cool, the Regulus may be knocked off, in which Regulus will you have the Gold that was in the Arsenick, Copper, Antimony and Iron. This Regulus must be cupellated either by Salt-petre in Crucible, or with Lead upon a Test; which done, you will have the Gold that lay hid, and shut up in the afore-mentioned Minerals.

But now, if one hath a mind to make that separation yet more compendious, and to have greater benefit thereby, he may add to that Copper burnt by the Arsenick, some Silver burnt with Brimstone, and so melt it with the Antimony, and by the means of MARS precipitate them into a Regulus, then the Silver will so much the better draw to it self the Gold out of the Arsenick and Antimony, and yield (in the separation) greater benefit.

NB. If so be a man be not skillful in this operation, let him forbear his Silver a little, and add some Silver to the Regulus by melting them, and then afterwards purifie the Regulus by Saltpetre; for so the Gold that is in the Regulus associates its self to the adjoined Silver, and inricheth it with no little increase, viz. according as the Minerals have had more or less Silver, in the making their separation.

And this is such a work as seems sufficiently able commodiously to sustain life; but it requires an experienced Artist, not a giddy headed fellow. Neither have I written this process for those who are not as yet well versed in Pyrotechny, but for such who are well skilled and dexterous; and although this kind of operation needs no great store of Art, yet notwithstanding, every one will not rightly perfect it, and therefore do I warn such as are not

well skilled in Pyrotechny to desist from this labour, and betake themselves to some other, and set themselves about doing such things in which haply they are better skilled, and not to lay the blame on me, when they are frustrated of their expectation, as if I had not dealt faithfully and sincerly in my writing, but let them rather impute it to their own preposterous rashness and unskillfullness; and what loss soever they bring upon themselves, let them impute it only to their own (misconceptions).

To deal plainly with you, that labour is conjoined with some difficulty; but yet if any one be diligent and well exercised in the Pyrotechnical Art, the operation will succeed in such an ones hands very pleasantly; nor will he want a worthy profit, especially if he takes such Minerals as are richest, and use them about this separation. But some perhaps will say, Whence shall I have those so good Minerals? Who demonstrates to me, which are auriferous, and which are not auriferous, which are good, and which are to be rejected, that so least being deluded in this, I should lose all my Labour? I would have such a one know, that if he has not gotten so much skill and experience as to prove a Mineral, whether it be auriferous, or not, he is not at all fit to take upon him this Labour of separation, and he were far better advised, if he wholly abstained from setting about it. But yet that I may not omit ought which may seem to be desired from me, I will over and above add here in this place, what way Minerals may be proved by, whether they be auriferous or not, and 'tis on this wise to be done; All Realgars, as Arsenick, Auripigment, Cobolt, and others of that kind, are first of all to be implanted into Copper by cementation, then are they to be molten, or throughly purged and subdued with Lead (like as you do with a crude Mineral) after this, there comes out a certain little silvery Pellet, and this you are to prove as you would for Gold. Now according to the moreness or lessness of the same, so is the business to be ordered, and compute to be made, whether or no the said Mineral is worth the pains of separation as aforesaid.

Likewise the Copper it self may be cupellated with Lead alone, and then the remaining silver Pellet be proved for the Gold, with Aqua-fortis; but as for the Antimony, and Iron, they may be well melted jointly together in a Test under a Cover or Muffel, or in a clean Crucible in a Wind Furnace, with this observation, that there be used twice as much Antimony as Iron, and so a Regulus will settle, which is to be purged or tried with Lead in a Test, and kept flowing till all the fugacious parts are evaporated, which done, there is found a silver Pellet, which is to be proved with Aqua-fortis, how much Gold it has.

NB. This probation, or trial is to be accounted of as a certain and lawful trial, but such though as you may easily err in the doing of, and so may have nothing, though it had in it a good part of Gold; for the Antimony will not easily suffer it self to be vanquished, or go off, but it will break the Test, or Cupel, and the little Pellet which is the probatory Globulus betakes it self (by reason of the fierceness, or eating penetrativeness into the Test) so that the Proba or trial it self, may most easily become fallacious, and yield no certain discovery. Which to remedy, the business is to be thus managed, after that your two parts of Antimony shall have been well melted in the Crucible, with your one part of Iron, there must be put thereinto a little dried Salt-petre powder, and the Pot, or Crucible must again be covered over, and care taken to make them melt well together; then are they to be poured out into an Iron Cone fitst smeared over with Wax, and when 'tis cold, the Regulus is to be knockt off from the Scoria, to which must be added twice or thrice the weight thereof of Lead, and the Regulus of of the Antimony doth in the melting pot separate it self by Salt-petre from the Lead, and the Lead is to be afterwards cupellated, and so that goes all off, and the true weight is had. But albeit, that this description be clearly enough delivered, yet certain I am, that one in ten will not understand it aright, and therefore it is behoveful, more fully to inform, and

clearly to shew the Reduction of that Regulus into scoria by Salt-petre. To make this trial or proof 'tis not needful to take a huge vast pot to fill with Iron, 'tis sufficient to take of Iron I00 l. of the smaller probatory weight, and 200 l. of Antimony, both which are to be molten together, and to be precipitated with a little Salt-petre, for so the Regulus doth the better separate it self from the scoria's, the which is then to be washt and purified by Lead and Salt-petre. This Regulus that comes from the Antimony and Iron, put with three times its weight of Lead in a clean Crucible, and make them well to flow in a wind Furnace, but cover your pot close that no Coals fall in, and so hinder the work, then take off the cover and throw in a little powdered Salt-petre, and again cover the Crucible, and above all things have a care that there fall not in any Coals, and let them lie and operate a little upon each other, then the Salt-petre imbibes all the Antimony, Iron, and Lead, and thereby becomes hard. This being done some more Salt-petre is to be again cast in, and you must make them flow togehter, and so all the whole parcel of Antimony, Iron, and Lead, betake themselves into the Salt-petre, and pass into scoria, but part of the Lead remains whole or free, and is not scorified, and therein will the Gold be, which the Antimony and Iron had immixed in them, which if it be blown off on a probatory Cupel, or Test, under a Muffel, there will than remain the true weight.

NB. But it is expedient, that there be a just proportion observed in this kind of Work, that you take not overmuch Salt-petre to this abultion, or converting it into scoria, and so bring all the Lead into scoria, but the business is so to be managed, that there be left remaining one third part at least, of those three parts of Lead you took, which is not reduced into scoria with the Antimony; then may it be poured out into a Cone, and when 'tis cool, the Regulus is to be knockt off from the scoria, and Cupellated.

NB. He that is minded to wash Metals after this manner by the help of Salt-petre, and to reduce them into scoria, must have an

especial care that not a Coal falls into the Crucible, for they will much hurt, and will again precipitate them, which the Saltpetre hath already imbibed, and so render the operation invalid. Besides, it is worth the while to admonish, and tell you that all Arsenick, and Antimony is auriferous, but yet so, as that one sort is richer than another; and that abundance of Copper and Iron hath likewise in it Gold, which no body finds out, nor can it be separated by that old beaten way of Cupellating it with Lead. But some, or other might here say, Where shall I find Arsenick, Antimony, Copper, and Iron, which have Gold in them? Had they any thing of worth in them, other would doubtlessly have extracted it, and not have suffered it to come to my hands whole and sound? To satisfie such an one, I answer thus, tho' those that work on the Metals, do for the most part know, that there is in Arsenick and Antimony, a Volatile Gold, yet know they not how to extract it thencefrom with profit, for the separating way they take would cost more than the Gold they should have would yield, because (according to their usual way and custom of working) all of it would vanish away with fume. And this is to be understood of Arsenick, Auripigment, Cobolt, and Antimony, all which may (by the way we have here mentioned) be tamed and introduced into Copper, and be made permanent and fixt.

But now, that there should sometimes be Gold implanted, naturally in Copper, and should there also be left remaining untouched, is so done on this account, because there is not in it so much as to pay the Costs of the separating it by Lead (for verily the Cupellating it with Lead on a Test, requires great expences). This is the reason why Gold lies immixed in the Copper oftentimes, and cannot be thence extracted with profit.

The same is to be understood of Iron, for a Vein of Iron doth oftentimes offer it self, which is very much impregnated with the more precious Metals, and yet no body either know, or observes it. For the Ore of Iron is for the most part wont to be forced out by

unskillful Men who have no care at all of the Gold, but only of such an Ore as contains a good portion of good and malleable Iron; and suppose they did certainly know, that there were in I00 l. of Iron, some Lots of Gold, by what means (I pray) would they extract it thencefrom? For Iron cannot be dealt withal by Cupellation on the Test, much less can it be separated (as Copper is) by the means of Lead; so that there's no reason for any one to wonder that there are so few to be found, that promise themselves, or seek after much good out of Iron, seeing it is not so apt a Subject to be separated, and subdued as Copper is. But by the help of Arsenick, Auripigment, or Antimony, 'tis no difficult matter to tame, and bring it under, so as to make it yield forth what it has: And 'tis thus. This Iron, which is auriferous, may first be cemented with Arsenick, as we have afore taught of doing so with Copper, then is it to be precipitated into Regulus's by means of Antimony, which Reguli being imbued, or mixed with Lead, and reduced by Salt-petre into scoria, and cupellated, the Gold doth at last offer it self (which was hidden in the Minera's or Ores, and so despised) and that with no contemptible profit. But now if any hath a mind to have the business yet more perfect, he may instead of Lead, add some Gold, and then reduce the Regulus into scoria's, by Salt-petre, and abstract it from the Gold; for so the Gold you put thereto doth the better hold that other Gold which it has attracted out of the Regulus, and there is made a much more plentiful encrease, than if the Regulus had been scorified upon Lead. Nor are the scoria to be thrown away, but they may be precipitated by throwing in live Coals, whereby the Salt-petre doth again let fall the Regulus which it hath swallowed up, and which Regulus you may separate from the dross when 'tis cold. This Regulus may be afterwards commodiously used in other Metallick Operations, that so it may yield anew out of it self the Gold; concerning which business there will a place fall in to speak of by and by. And besides those drossy Offals (which for the greatest part are fixt

Salt-petre) are also of good worth, which may be reserved for the subsequent Metallick Operation, which may be stiled a perpetual Metallick-working artifice; so that there is nothing at all wasted, but all things are of use. And this way of the separation of Metals is so very profitable, as that any one may get himself sufficient gain for to supply the necessities of Life. But if you have no fansie to meddle with Arsenick, or Auripigment, and would willingly shun them by reason of their poisonous nature, they may even be omitted, and you may cement that auriferous Iron, with the Golden Marchasite, melt it with Antimony, and precipitate it into Regulus's. For even by this means too, the Gold that was in the Marchasite, is brought in use, and yields an increase to that Gold which is extracted out of the Iron and Antimony. But if so be there be no Golden Marchasite to be gotten, that separation may be ordered, even with Iron and Antimony, and if the Iron be but auriferous, the Labour will not be without profit.

This kind of separation or eduction of Gold out of the volatile Minerals, and baser Metals will be an egregious aid or benefit to such as have learned rightly to operate in the Fire, and whom (otherwise) a grievous want of things and small estate afflicts; for there is enough of the aforesaid Minerals, every where obvious, but they cannot be well handled, or wrought upon by reason of their unfixedness and immaturity, and therefore do they lie neglected and as it were wholly useless, and are not made beneficial to any. I know that some do well understand the way of fixing Cobolt, and Bismuth by Salt-petre, and do thence get an abundance of Silver; and likewise there are some that know how to tame and subdue Arsenical Realgars by the help of Salt-petre, so that they suffer themselves to be molten, and yield forth their hidden Gold and Silver. But he that shall so manage the business as to adjoin thereto the auriferous imperfect Metals, such an one will make a more successful work thereof; especially if he gets himself some auriferous Iron, the which he may get for a small matter: And besides, if

he makes his Salt-petre himself, then all that whole operation of fixing or separating the volatile Minerals would be done with very little costs, and yield much gain.

NB. But now if any one would yet get more profit by this separatory operation, then he must contrive the doing it not in Crucibles or Pots, but in hearths (or furnaces) where a great heap of the volatile Mineral may by fixing Nitre melt together, and be precipitated into Regulus: then the Regulus may be separated from the Scoria, and be depurated by Nitre in other Furnaces, and be fitted for use; and so by this means may there be so much gain gotten, the like whereof, the great heaps of Ores which Men are necessitated to dig out of the bowels of the Earth with so much expence and charges, will scarce afford.

Likewise all Minerals may by the help of Salt-petre be fixed by the moist way, so as to yield permanent Gold and Silver; whereby (without doubt) full as much, if not more, is obtained, as is by the dry way. The way of operating is this. Dissolve a volatile Mineral, be it Cobolt, or Zink, Wismuth, Calmei, Arsenick, Auripigment, or any other the like mineral, in a strong AQUA-FORTIS; the solution being made, separate the AQUA-FORTIS again; then shall you have remaining a white Calx, which is fixed by the virtue of the AQUA-FORTIS: So that now it will admit of being molten with Lead, of being separated from the Scoria, and of being cupellated. But he that knows how to melt that Calx with Antimony and to precipitate it with auriferous Copper and Iron, gets more Gold than by that operation with Lead. But haply, every one can't perform that separation; for the excoction or melting, the reduction into Scoria, and Cupellating upon the Test, are operations more known and easier to be done.

Moreover, there are also some Minerals, which may be fixed with the moist fire, that is, with a most strong AQUA-FORTIS, so as to yield their Gold and Silver in the SCORIA, but especially Tin, Quick-silver, and Lead: If a vehemently-strong AQUA-FORTIS be but

once abstracted from Tin, it makes it so fixt, as that it will not fly away in the greatest Fire, but will melt into a white Glass. But now, if you would have it to yield forth its Gold, you must melt other Metals with it, into which the Gold may insinuate it self, and be made corporeal, such as are Silver and Lead. Lead, if it be dissolved in AQUA-FORTIS, and precipitated by Urine, it gets such a hardness, that it will scarce melt in a Crucible; if you precipitate it with a Lixivium, it becomes glassy; if with Salt-water, it is rendered exceedingly volatile; for common Salt makes all Metals volatile, and on the other hand, Nitre fixeth them both by the moist and by the dry way, binds them, and constrains them to abide in the Fire; and this you are to know aforehand. Now, for the better confirmation of this thing, see how easily the common Mercury is made to abide the fire if AQUA-FORTIS SHALL have been several times drawn off therefrom, insomuch that it will suffer it self to be made wholly red- hot. But now, if the same be sublimed with Spirit of Salt, it becomes more and more volatile, so amongst all Salts there's not one that fixeth Minerals, save this most noble Nitre, and this hath a natural aptness to do it both by the moist and dry way, as hath been even now demonstrated.

And verily, this way of fixing the imperfect Metals (which is done by the help of Nitre, by either the moist or dry way) is to be preferred far before that which is done only with a Fire of Wood, not barely on this account, because it is sooner and speedier performedm but for this reason too, because it fixeth better and more durably: For if any one shall endeavour to make ARSENICK, COLOLT, or other volatile Minerals, permanent or fixt, by the bare force of common fire, How much time, I pray must he allow it? Haply it willrequire some months for this kind of Work, if not a whole year, yet at least half a year 'twill need; whereas by the means of Nitre it may be done in one or two days: For if a volatile Mineral be mixed with Nitre, do fulminate, and be edulcorated, and that

fulmination be repeated 3 or 4 times, it will afterwards endure a sufficiently vehement melting Fire. Of if a Mineral be only dissolved in AQUA-FORTIS and that AQUA-FORTIS again drawn off therefrom, it will even by this means be rendered fixt and constant in the Fire; so great is the force and virtue that lies hid in Salt-petre: And this the ancient Philosophers well knew, and therefore said that the most vehement Fire of all was to be used to the fixation of volatile Minerals; and this Fire is hid only in Nitre, and is no where else to be found; for the Central Fire hath too soon withdrawn it self from the volatile Minerals and baser Minerals, and left them unripe, and they can be advanced to a maturity, both by our common Wood-fire, and by the fire of Salt-petre, and be fixed. And now I suppose that I have more than sufficiently proved, by what I have said, That Salt-petre fixeth Minerals and Metals, both by the dry and moist way; nor can any one reasonably deny the same. Moreover, I judge it not fit to pass this too over in silence, viz. That Salt-petre doth likewise make volatile, not only the unripe Minerals, but also the fixt Metals themselves; so as that they suffer themselves to be sublimed and distilled wholly (like common Sulphur or Mercury) save the faeces, which are somewhat blackish and stay behind. Any understanding man may easily consider here what benefit is to be hoped for from such a Distillation of Metals; for seeing that all things are by distillation brought to the highest purity (as is clearly evident) it may well be concluded, that when in impure metals the pure parts are separated from the impure, something of excellency must thereform proceed. I will say no more of this matter at present, for I have already clearly enough demonstrated and plainly enough delivered this kind of distillation or purification of metals, in the third part of SPAGYR. PHARMACOP. and have there shewn, that every imperfect metal, if it shall be distilled, yields volatile Gold, and that the volatile Gold may be made corporeal, without almost any cost in a particular way, (and haply also in a universal, which

I confess I have not as yet proved) thither therefore referr I the studious Reader of Hermetick and truly Philosophical ARCANA and Secrets.

But that the difference of those ways of fixing or concentration of the volatile Minerals, and likewise the imperfect Metals, may rightly be perceived and laid open, and that it may appear how much more compendious and easie that way which is done by Nitre is than that which is done with common fire; it will be a good help to set down here a process for an example, by which it will be manifest how labouious this way of doing it barely with Wood is, and contrarily how easie that way of doing it by the moist Fire of Nitre is.

It is impossible to fix ARSENICK, AURIPIGMENT, COBOLT, and such like as these are without the help of Salt-petre, unless they are first introduced into other metallick bodies, and are together with them, burnt with a Fire of Coals, and reduced into Ashes, and turned into Scoria, and wholly destroyed, and then at last reduced again into a metalline form, by the force of the intense fire of a Blast or Bellows; All which, that they may be dexterously performed, you must proceed on this manner, as followeth.

First of all, the COBOLT, ARSENICK, or any Realgar like these, that is auriferous, is to be introduced into Copper or Iron by cementation, in the way that we have aforementioned; then the Copper or Iron thus cemented with the Realgars, is to be reduced into fine powder, and to be commixed with Antimony, Calmei, or Calaminaris, the Marchasite, and such order is to be taken, (if for Gains sake you would do a greater heap of Matter) to have them slowly and by little and little made red-hot in Furnaces or Ovens, such as in which the flame may have room to play, and as 'twere brandish it self at top of the matters, and stir them, and so let them be calcined and burnt into ashes, until they emit no more fume, and this will be in some few days; then are they to be reduced in a convenient Furnace, and restored to their metalline form;

then again must they be put into the former Oven, and there be calcined and burnt into ashes, still stirring them to and fro, and the ashes are to be reduced, by the vehement Blast of Bellows, and this ashifying and reduction is to beso long repeated, till there be a Regulus found in the reduction, and all the residue turns into unprofitable Scoria. This Regulus then is to be reduced on a Test into Scoria, and the Regulus being cupellated, the Gold and Silver which the volatile Minerals contained in them, doth shew it self.

NB. Although this separation is attended on with indifferent labour, yet notwithstanding (if there be a great quantity of matter dealt in) it is also gainful, especially where Minerals and Coals are to be had for a small price, and also the other imperfect metals (as Lead, Copper, and the like) that concurr in this kind of Operation; by which it also comes to pass, that there is a greater quantity of Gold and Silver extracted. For example, I burn Copper or Iron with Arsenick, Cobolt, and other poisonous volatile Realgars, or with bare Calmei only, which also avails to constringe or bind fast; with these I mix Antimony, Bismuth, Zink, and Lead, and melt them together: Hence ariseth a brittle mass, which is to be reduced into ashes, either in Ovens, as is already aforeshewed, with the flame of Wood, which darts it self at top of that mixt matter, and by heating ripens it, or by live-coals in a peculiar Furnace, and that on this wise: let there be built a great or small Furnace, (of good Bricks or Tiles that will endure the Fire) according to the quantity of your matter which you take to prepare, let it be at least a foot over in the inside: in the forepart let it be open a foots heighth from the Pavement or Ground, to this end, that the Grate may be put in and taken out, as need is. Then some 2 or 3 foot higher than the Grate, let a door be made, whereby you may throw in the Coals, and above or at top of the Furnace are to be made Chimneys, fitted to receive and condense the fume of the metal, that it may not fly into the air, but being there cooled,

may be taken out. All this being done, fill the Furnace with Coals, and when they are well kindled, cast in a portion of your metalline mixture, which will quickly melt, and being melted, will run through the fiery Coals, and still keep fuming, and elevate it self up into the appointed Chimneys; that which melts down through the Coals and Grates, and is in the form of metal under the Furnace, (which bottom must be made somewhat shelving, that the metal which falls down may run into a hole or pit, is to be taken up with an Iron Spoon, and again thrown in upon the Coals, and this is to be so often repeated, and so long, till all your whole mixture be burnt into ashes, or carried up in fume, and so shall be ashified and sublimed in the appointed Tunnels or Chimneys, which Flores or metalline Fumes you must take and reduce them in a reducing Furnace, so part of them must or will pass into a fusile Metal, but brittle. This Metal now must be again ashifyed in the roasting or burning Furnace, and be reduced by blast of Bellows; and this ashifying and reduction is to be so often repeated, till all be seen turned into Dross or Glass; which Dross or Scorias are then to be reduced with the most vehement blast of Bellows, and so they will produce a Regulus which is to be cupellated with Lead, as is abovesaid.

NB. But if so be that of the last made Scoria a Regulus cannot be made by the blast of the Bellows, and that the Scoria remain Scoria, 'tis a sign that you have taken too much Tin, or that your Fire hath been too intense; and therefore you must take such Scoria, and beat them to powder, and mix them with a little of either the fluid Ore of Lead, or Spume thereof, and make them flow in a reducing Furnace, then the Lead draws the Gold and Silver out of the Scoria, which may afterwards be cupellated. But as concerning the manner of making the roasting or ashifying Furnace, as likewise the fusing or reducing Furnace, I cannot indeed at present here decipher it, but I will do it in the Third Part following, where more such like concentrations of Metals shall be mentioned and treated of.

And farther, the well-minded Reader must also know, that this kind of Concentration is not at all written for those that are as yet wholly ignorant of the Art of melting metals, but for such only as have already sweated in or at the Fire, and have been often and much versed in such Separations or Liquefactions.

I question not, but there will be many that will despise this my way of operating, and count it an impossible thing, such are to be left to please themselves with their own fancies. But withal, some will be found, to whom the nature of metals is known, and these will give credit to what I say, and will abundantly profit themselves, especially in those places where Minerals, Coals, and other things requisite are to be had for a small price. The greatest Expence in this way of Concentration is the Coals, which too cannot be any thing muct in those places where there are such vast Woods. Every one may have his liberty to try it or let it alone.

NB. But I do openly affirm, that if so be any oen shall know how rightly to handle and manage this Work, it may be compared with the perpetual or always-lasting mines; and where minerals may be had, it will be most gainful; but I will not perswade any to attempt it in those Coasts where all things are dear. Nor do I think it amiss to disswade them that have no experience in these kind of Operations, lest upon the ill management of the Operation, the effect should not succeed so luckily as they hoped for, and that then they should lay the blame upon me. That which I have at present written, is agreeable to the Truth, and may be successfully and gainfully performed by an experienced Artist or Laborator: And therefore as I have afore warned, so do I again advise the unexpert to abstain from this Work, unless he means to lose his Labour and Expences.

Such things as I have here omitted, for brevites sake to speak of the CONCENTRATION OF METALS, the Third and Fourth Part shall abundantly declare; but whoever he be that shall know how to bring to pass such a Concentration, either by the means of Salt-petre,

by the dry way of a flame, or the moist way, by the help of AQUA FORTIS shall have a better effect than he that useth the Fire of Wood; but on the other hand, this Fire by Wood is of less Cost than the administration of the Work of Salt-petre is. Alas! What a deal of costs and labours have I bestowed in my life, in searching out and trying those kind of businesses, and having now brought it to this pass, as to be able to yield me the Reward of my pains, I am not able to manage so vehement a fire, and to order the matters which require so great an heat? Therefore do I now with a willing mind make an offer of these my Experiments, to those who are of a vigorous age, and have Bodies capable of undergoing the toiling in the Fire. But that I may return to the things afore spoken of, and that that ashifying and reduction may not seem to the unexperienced altogether impossible and incredible, I will for their sakes bring undeniable Reasons or Arguments, whereby it shall be sufficiently enough evidenced that such a cineration or turning into Scoria, hath its foundation in Nature, and that after this manner: Whosoever he be that hath seen or experienced somewhat in metals, knows, that the separation of the more excellent metals from the more vile, is to be done by the benefit of the Fire: for if so be that Gold, Silver, Copper, Iron, Lead, Tin, should be melted together into one mass, and you would separate them by the Fire the one from the other; this cannot be done any other way, but by adding to that mixture some other adventitous and destructive thing whereby the baser metals may be dissipated and deprived of their metallick form, of which sort is common Sulphur and such-like; for this works first on the imperfect metals, destroys them, or brings them into scoria and dross, which when they are so, and no more metals, they have no communion with metals, nor desire or love to be commixt with them afterwards: and by how much the more sulphureity there is in Metals, so much the easier doth common SULPHUR destroy them and turn them into Scoria: But , by how much the nobler the metals shall be, so much the less detriment doth SULPHUR bring upon them, and the less able is it to disturb (or

alter) them. But besides, SULPHUR does not only do this, but even the Fire, and Salt-petre both in the moist and in the dry way. It is done with SULPHUR, if the metallick mixture be granulated and burnt therewithal, or that it be despoiled of the metalline Nature, then must it be molten and by precipitation be driven or be separated into divers Regulus's. For the SULPHUR converts the MASS into Scoria; which when they are molten, that which in them is the most noble doth always separate it self from the Scoria, and settle to the bottom; then next the most noble part comes other which is excellent, but yet short of the former, and so consequently it descends from one degree to another, as from Gold to Silver, from Silver to Lead, from this to Copper, from Copper to Iron, & etc. as hath been by my formerly described separatory Art sufficiently enough shewn. But Nitre performs the separations it makes in a different manner: For after that the metallick MASS is molten in a Crucible, and that this (viz. Nitre) hath been thereinto put, it doth in the first place set upon the sulphureous part, and turns that into Scoria, then the baser Metals, and thus it does on, so long till it hath arrracted all the imperfect Metals to it self, and reduced them into Scoria: and so the perfect Metals remain alone, pure; which order or governance of Operation, is also to be again, extant in my Writings.

Again, the bare fire is wont to keep another different way of destroying and scorifying Metals, than Sulphur and Nitre do.

For if a Metalline mixture be put in the fire, the more imperfect part thereof is consumed in the first place, and driven into ashes, the more excellent part gathers up it self into a globularform, and as long as it finds any consumable thing therein, so long does it work and act thereupon, nor leaves it off afore it hath reduced all into ashes. But that part which is of a constant and durable nature, remains unhurt by the fire; but yet if the combustible part be too much bigger in bulk than the abideing part, it does not only carry away with it the silver, but sometimes also a good

part of the Gold, and brings it into ashes. And now, if those ashes shall be molten with a strong fire, then the ashes which arise out of the imperfect Metals, are turned into Glass, or scoria, but the ashes of the perfect Metals do reduce, and restore themselves into a malleable Body, whether it be Silver or Gold, according as it had this or that Metalline mixture in it; and if you proceed yet farther, with melting the aforesaid scoria in the fire, there will a new Regulus fall out, which contains in it that Metal, which is the noblest next Gold and Silver, viz. Lead, and Copper; the Tin, and Iron do for the most part abide in the scoria: Even as it is in Cupellation, or the separation of the Metals by the Cupel, the separation is there also done, by the bare fire only, and when the fire acts upon the mixture, it reduceth the Lead into scoria, or spume, or Litharge, and while this is reduced thus, it spares not the Tin, Iron, or Copper, forasmuch as they are likewise combustible, and of affinity thereto, but turns these together also into scoria, which said scoria do then creep, or sink into that penetrable, and porous Cineritious Vessel, or Test, as long as any of it remains: But the Gold and Silver which know not how to be thus burnt up into scoria or ashes, like the other imperfect Metals are left depured and cleansed upon the Cupel: The like also, is to be judged of the aforesaid incineration of Volatile Minerals, or imperfect Metals; that is to say, when they undergo the force of the fire, they cannot but go into scoria and ashes, and if they have in them somewhat that is especially good, and durable, yet the greater part being combustible, has the prevalency; so that the more excellent part which is in it, is converted together into ashes and scoria. But yet it may be afterwards reduced, for by the vehement blast of Bellows, it separates it self from the more base part, and again assumes a body Metalline, whether it be Gold or Silver.

By this Discourse any one that is not wholly void of all Metallick knowledge may see, that the Metallick Incineration and Reduction,

which we have afore delivered, is built upon a firm foundation: But he that cannot understand or apprehend these things, is uncapable of being holpen by any art. But the following third and fourth parts will yield a more clear light, or instruction. Furthermore you are to observe, that there are likewise other ways, whereby Metals are reduced into scoria, and the better and more excellent part is afterwards extracted out of the scoria, viz. by the help Terrestrial things which are together, sulphureous, of which sort is all sand, Flint, and the like. If ought of this kind be permixt and molten with the metalline Calxes, it retains with it the viler part, and lets go the more excellent; as for instance, there's the Glass of Lead: For if the ashes of Lead be molten with Sand, or Flints, all the Lead together with the Flints is converted into Glass, or scoria, but the Silver or Gold which was in the Lead separates it self like a Regulus, and descends to the bottom.

Some kinds of Salts also are able to make those scorias, viz. those Salts which are extracted out of burnt ashes, and are commonly called Alkalies, such as are the burnt faeces of Wine, the Tartar of Wine, Potters-ashes made of the ashes of Wood, and other such like; these also love to dissolve the sulphureous parts of Metals, and do leave the Gold and Silver that is therein whole and sound, and so make a separation of the good from the evil, and give them a notable splendour: Concerning which washing we will treat more fully in the following third part.

Besides too, even common Salt destroyeth and reduceth the imperfect metals into scoria, but not after such a manner as Alkalies do by washing, but by dissolving and extracting. For if a metallick Calx, or Ore, be powdered and mixt with common Salt, and molten together, the Salt doth more readily seize upon the metal, than on the rest of the drossiness, dissolves it, and turns it into as it were scoria;But to illustrate this thing by an Example, If I would separate a mineral which hath in it, Iron, Copper, Gold, and Silver, and should melt it thus mixt with the Salt, then the

Salt would the first time lay hold on the Iron only, and leave the other metals; but if so be there were not so much Iron, as for the Salt to satisfy its devouring self, it would dissolve the Copper too, the Silver and Gold remaining untoucht; for Salt is a common Enemy to Silver, but a Friend to the Iron and Copper, which it willingly dissolves in the melting, and attracts to it self, whether it be each apart by themselves, or both jointly together, which if you are minded again to separate each from the other, you must powder that molten Mass, and pour water thereupon, and boil it; so the Iron and Copper enters into the water, together with the Salt, whereinto if you afterwards put some Iron Rods, the Copper precipitates it self, and the Iron abides in the salt water, and is made very fit to use in dying like Vitriol; but if it will not be coagulated like Vitriol, then the Copper (which hath precipitated it self about the Iron) is to be washt and molten, out of which comes purer Copper. But yet such a Copper may be converted to better use than to be molten, of which more shall be spoken in the third part.

By this means, may one separate and bring into use those Coppery Minerals, which have much Iron in them, and by which, the Copper is otherwise rendered unmalleable and unprofitable: and this is such an Evil, as the Metal workers have hitherto little known what remedy to apply; whereas in the mean while there lie in many places no contemptible Mines of Copper, neglected and unmedled withal, because they have Iron commixt with them. Some there have been, who have endeaboured to extract the Iron by the help of a Load-stone, but this way is too troublesom, and so is not profitable; but it may be aptly and conveniently done after this manner, did they but know how rightly to use here that aforesaid salt water, and the precipitated Copper: For the salt exalteth the Iron, and the Iron doth again exalt the salt, and animate it, so as that it may afterwards with a little labour and costs be, all of it, and without any loss, converted into good Salt-petre. But some or

other may say, what profit would there redound unto me, if I should season one or two, or more Copper minerals with salt, whereby the Copper may be thence drawn out? I would have such an one to know, that in that Operation, some hundreds, or thousand pounds may be done together, and the business may be ordered upon fire in distinct Furnaces, that so a great profit may be gotten; and not only thus, but the same may likewise be done without any Furnace or Oven, with many hundred, or thousand pounds in one Operation, at the open Air in the Field, or in a Wood, where that Ore and salt are to be found; so that the salt may serve as a covering to the Ore, and the Wood may serve both for the Furnace and fire.

This now in my judgement is an artifical extraction of Copper out of the Mines, (especially when 'tis such an Ore, which (otherwise) is not of any profit by reason of the immixt Iron, or else consists of such a lean Vein of Copper, as will not suffice to quit the costs of getting it out, but yet it may by this means be separated; with no contemptible profit. For there are every where almost such poor Copper Ore as this which lie and are not dreamt of: For indeed it cannot be expected, that, (if when a Copper Mine (or Ore) doth contain in it some small matter of Copper, it being so overwhelmed as 'twere with the muchness of heterogeneal medlies or mixtures, that it cannot precipitate it self into Regulus's but passeth into Scoria) it should answer the costs that are to be spent on the forcing it out; and therefore such Minera's must of necessity remain without use. And how many such kind of Ores have I found in GERMANY, which a man may have by heaps, but no body regards them, for that (as we have already said) they are too barren or poor: Whereas notwithstanding they may be most easily perfected by the help of Salt, so as to be made very gainful, & the costs exceedingly well repaid that shall be laid out upon them, especially in those places where there is such an abundance of Salt, that the Inhabitants know not what to do with the plenty they have of it. Many such places there are in GERMANY, as TIROLE, SALTZBERG,

BAVARIA, and the Diocess that we call BERGTES-GADEN: in which places all the whole mountains do not only abound with Salts, but have no small portion of Copper too: Nor is it so in those places only, but likewise every where; Salt is common and of a small price throughout all GERMANY.

And as we have already shown you, that Iron and Copper may be commodiously extracted out of the Ores by melting it with common Salt, and may be again separated from each other by precipitation: So likewise may the same be done in a moist way by boiling; and is thus, if the Ore be ground and a long while boiled with very Salt-Water, the Copper will be dissolved and passeth into the Salt-water, out of which it is to be precipitated, and so fitted for use. But now, if the Salt be distilled into a Spirit, then is it apt not only to extract Copper, but also Gold out of the Ore, and will be of exceeding much profit: But this operation hath already been long ago described by me, in the First Part of the Mineral Work.

NB. But it will be yet more profitable and gainful to prepare that water out of the Salts and especially out of Nitre, which water is but of small price, and yet notwithstanding it is of that Power and Virtue, as to dissolve or extract all the Metals out of the Ores: and as well the Silver as the Gold and Copper in the solution, may be again precipitated singularly or each PER SE one after another; and this kind of water may you likewise use about all Fossiles or Ores with a most wonderful abbreviation.

But now, if you use common AQUA-FORTIS, it extracts only the Silver and Copper, and leaves the Gold: and if you take common AQUA-REGIA, it attracts only the Gold and Copper, and leaves the Silver; so that neither of these hath (as we use to say) all the points in it, especially seeing such a kind of Water serves but once only; nor is there as yet any one found who knows how to separate the metals in the solution one from another, so as that the water may still remain good and fit for other the like uses. But as

concerning this Water of mine, thus stands the case, viz. One Metal may be precipitated after another out of the Water, and each distinctly, and yet for all this, the Water loseth not ought of its Virtue, but may be many times serviceable; certainly it is a most profitable invention, which (in the doing or perfecting some metals and minerals) is to be preferred many degrees before any melting by Fire. For if that there are several Metals of diverse kinds, in one Ore; as Gold, Silver, Iron, Lead (and this often happens so) and they should be forced out by Fire, they would yet remain mixt together; and there's a great deal of work to separate them. For first they are to be cupellated on Tests with a great deal of Lead, that so the imperfect Metals, as the Iron, Copper, Tin and Lead if therein, may go off; then the Gold is to be separated also apart, or by a particular operation, by the help of a separating Water, and this is not every bodies work, nor have all such as are skilled in the Art, in all places necessary provision at hand. But on the other hand, there needs not in that other kind of way, any thing save the Water and some Glasses, with these may you manage and compleat all the whole business, and get a great deal of gain without noise and trouble. For as to such a one as betakes himself to this kind of work, his Neighbours cannot accuse him, that he will (one time or other) ruine their Fortunes and Houses by Fire, for they hear no blowing of the bellows, nor see they any Coals carried into his House. Nor will the SMITHS say that 'tis his fault that Coals are so dear, as 'twas objected to him who called himself the little Country fellow. Besides too, he will shun the suspicion of the Magistrates, nor will he give them occasion to suspect him to be a rich blade, and so torment him with the more grievous exactions and with quartering of Soldiers.

And now yet more, This kind of extraction does not only appertain to the getting out the Gold and Silver out of the Ores or Minerals and such as are volatile and crude, and which are every where to be met withal, and may without detriment to any, and with a safe

conscience be fixed and separated by the help of this Water: But you may also by the mediation of this Water, profitably and with very small Labour separate all metallick mixtures, such as are mixt at their first forcing out of the Ores, or are melted into one Mass on any other account, and so obtain each Metal pure and free from all heterogeneities. As for example, put case I have in my hands a certain metallick Mass, which hath in it Gold, Silver, Lead, Tin, Iron, and Copper: Now I would willingly separate the Gold & Silver therefrom; hitherto there hath been no other way known of obtaining it but by cupellating such a Mass or mixture upon the Test with Lead, and so depurating it; in which cupellation, the Copper, Tin, and Iron, do pass together with the Lead into the Test, but the Gold and Silver remain behind, which are to be afterwards separated with AQUA-FORTIS, that you may have each by it self. But the Iron, Copper, Lead and Tin do remain intermixt with each other in the Test, and should you again melt them even by the strongest blast, yet will they be commixt, and can hardly be separated the one from the other. But by this way of ours if they be dissolved in the water together, you may continually precipitate thence one Metal from another, and take them each apart, and not only the Gold and the Silver by themselves, but the Copper, Tin, Iron, and Argent-vive (each apart).

But it is not so necessary (if in such a metalline Mass wherein are contained so many Metals, the Gold and Silver be but the smaller part) to dissolve all the other baser Metals together, to get out the Gold and Silver; this will not be advisedly done, but it would be better, first to purify that Mass upon a Test with Lead, and so to separate the Gold and Silver by the help of that water, or else that Mass may be burnt with Brimstone, and the Gold be thence precipitated and depured. But if the Mass hath less of Iron, Copper, and Tin, than of Gold, there will not be such need of purifying the Mass, by first burning it upon a Test, and then separating it by AQUA -FORTIS, as is commonly known and used to be done; but the

whole mixture must be dissolved, and the Gold and Silver, which you please, be separated, or apart precipitated into a clean Calx, then the Copper also apart, then the Tin; but as for the Iron, you may forbear to precipitate that, because there are no great matters to be performed with its Calx, and it will be better to draw off the AQUA-FORTIS thence, whereby it may again be had pure, and fit for use.

Then the Iron which abides behind, if it be made red hot, yields a most excellent Crocus Martis, and a most excellent Ingredient for Chirurgeons, for all their Wound-balsams and Exicatory Emplasters; it is stictick; it will also be serviceable to Painters to make exquisite colours therewithal, so that the Iron which is the basest Metal in the whole mixture, if it shall be thus wrought upon and brought into good Crocus Martis, yields the money that was laid out upon the water, and yet this very water, after its abstracting from the Iron is not less fit for use, but is better than it was before. For in its abstraction from the Iron, it brought over with it some Goldenness, which Golden property doth afterwards, in other metallick solutions, associate it self to the Metals, is imbodyed, and yields as much Gold as the price almost (of the water) afore (thus used) could be judged at.

So likewise there's no need of reducing the Calx of Venus into Copper, but it is twice more precious than other good common Copper, because it can in a few hours space be changed into excellent Verd-igrease, and so is 4 or 6 times the value of Copper it self. Further, it is not needful to melt down the precipitated Calx of Silver without any farther profit, but 'tis better to melt it by the means of the liquor of Sulphur or Antimony; for by this operation will it become auriferous, and be meliorated. Finally, you are not bound to melt even the Calx of Sol, without any profit in melting, but you may even thereoutof draw some profit; for if it be amal-gamated with the Mercury of SATURN or LUNA it becomes more augmented from the SATURN and LUNA; or else it may be used by the Gold-smiths

to Gild withal, and by Painters, if its brightness and splendour be first restored unto it, for so it may be used about Painting or writing. So then, from this operation doth result a manifold benefit, and both the Iron and Copper, as also the Gold and Silver are rendered better, and more precious than they would have otherwise been, if they had been separated each from the other after the common manner, by the fire.

Therefore, there is not only a great benefit gotten in that way of operating, in thus extracting Gold and Silver out of their Ores, and out of the Crude Minerals, and in this so compendious a separation of a Mass (or mixture) of Metals; but also, that separation brings more profit than the commonly used and perceived way of separating Gold and Silver by AQUA-FORTIS doth, in which way the Mass is to be first burnt to purity, and all the heterogeneities are to be taken away upon a Test; then the Silver is to be dissolved in AQUA-FORTIS, and to be separated from the Gold; this done, then the dissolved Silver is to be precipitated either by Copper, or by putting water thereunto, or else the water is to be thencefrom distilled; from whence, there is not only to be expected no greater profit than what is had (or gotton) out of the Gold separated from the Silver, but withal even half the water is lost. But now here (in my way)the greatest part of the AQUA-FORTIS is preserved, and is indeed meliorated (if there were Tin or Iron in the Mass) the very bare Crocus Martis only yields as much as the water cost, & the Flos Aeris is meer gains; the Calx of Silver is by a solution of Antimony enriched with Gold, the Golden Calx is augmented by Saturn, and Luna, so that the gain is fourfold, besides that Gold which is gotten by separation out of the Silver; and now may not I justly call this an Artificial extraction or separation of the Metals, by the moist way; but now, like as this is a very notably profitable way of extracting the Metals out of the Ores or Minerals, & of artificially separating them by the moist way; so likewise may the same be done in the dry way by

fusion; if (viz.) the Minera's are dissolved by Antimony or Lead, & one of the Metals after another shall be thencefrom precipitated; so that it is not so altogether necessary to cupellate such a Mass, and by the separatory water (or AQUA-FORTIS) to separate that, which (by that burning on the Test) shall have been throughly purged: But if all the Metals shall be molten together into one Mass, there may (first) be precipitated the Gold, then the Silver, then also the Copper, and by the help of Nitre be rendred pure and malleable; and this too may be done without much labour or costs; so that as well by the moist, as also by the dry way, all the Metals may be very commodiously and compendiously, and in short time separated the one from the other by the benefit of Salt-petre. Suppose I have a Mass that has Gold, Silver, or Copper and Iron in it, and I would have it suddenly depured; therefore I may only burn it with Sulphur, and by the help of Saturn precipitate one Metal from another, and purifie the Regulus, by Nitre, and such a Mass though it were 100 pound weight could I separated with the easy labour of one day, & for 3 or 4 DOLLARS costs; but as for such an one as hath no use for solution & precipitation, or hath not convenient melting Pots and Furnaces, he may granulate such a Mass, and thence precipitate the Gold, Silver, and Copper, each apart, and draw off the water from his Mars; then the Mars yields him the price of the water; the Calx of Venus yields the reward of his pains and labour, and the augmentation or melioration which happens to the Calx of Sol and Luna in the reduction is clear gain; so that the Gold and Silver are, as it were gratis, and without any expence separated from each other, and that both by the dry way and by the moist way; for the Silver is equally as well graduated and made auriferous in the dry way, by the fusion or melting in the operating, or by the transfusing (or through melting) with the Antimony; so then good Gold may by this way be precipitated out of any Silver which is not aureous, provided the business be but dexterously managed.

In the first part of this Book, (where I treated of the concentration of wood) I wrote, that a Juice might be pressed, by a peculiar Press, out of any wood, which afterwards might be turned into good Salt-petre by the benefit of the Air and time: I likewise there added some reasons, whereby it might be evinced, that it was possible for Art to perform such things, which are no other but the rewards Nature her self yields, and that the Salt-petre which is wont to be every where digged out of the Stalls, or Stables of Cattle, is nothing else but the essential salt of Vegetables, and Animals , which is in a long tract of time, and by the hidden virtue of the Air, turned into Salt-petre.

But now if any one should haply perswade himself, that if he exposeth that Juice of the Woods to the Air for some Days, or Weeks, that it will presently become Salt-petre, certainly he would be much besides his aim, neither indeed is it lawful to prescribe Nature the time of her Operation.

Does not a Husbandman deserve to be called Ass, or Blockhead, if some few days after he hath sown his Corn, he should go into his Field to see if his Corn were ripe or not? Just thus are you to conceive of this work, for in all things must you expect the due time, in the Generation both of Animals, Minerals, and Vegetables, so that there is not the least need of any farther proof of this matter: For every Generation requireth its own proper time.

But, that very many haply have wearied themselves with imagining about that kind of Press, which I have mentioned in the first part of the PROSPERITY OF GERMANY, and yet have not found it, is not to be much wondered at. However it is assuredly true, that such a Press may very easily be prepared, by which you may daily press a great quantity of Juice out of Wood, be it believed or not believed. But seeing that such a Press hath been seen with me, and hath been beheld prepared, and wood squeezed out therewithal, and set to ripen in the Air, sure it cannot be long ere the truth will manifest it self and publickly vindicate it self from all its slanderers.

I say again, that such a Press is found by me, and that it is an artifical one, and is of less costs than will be easily believed. Nay more, every day brings forth new and better Compendiums, so that there will not hereafter be any use or need for the Press, to squeeze the wood out by: but every Vegetable and Animal, may without labour and trouble be in a short time, and without the press, transmuted into good salt-petre, so that many hundred weight of Salt-petre may be generated, or produced (by the labour of only one person) out of the bare Wood, Leaves, and Grass, (where they may commodiously be had) and yet 'tis not the person aforesaid, but the air that causeth this Generation: for the person doth no more but expose to the air the subject matter, upon which it may operate, and out of which it may bring forth Salt-petre.

But there is nothing which I admire more at, than, that this present Age is so sluggish and averse from searching after the secrets of Nature. Whereas, were but the Properties only of that stupendious, or wonderful subject Salt-petre, well known, there might well be a forbearance of reading many Chimical Books seeing that by it alone may many wonderful things be performed. I have a little afore shown, how both a moist and dry extraction of Gold and Silver, & the other metals is to be done by Salt-petre; and if Nitre were of no other use but this only, yet were it well worthy to be beloved and esteemed by all, and they should as much as in them lies labour not only to produce it in plenty out of vile things, but withal to know how to make use of the same with profit.

But whereas I have not so very openly and clearly described, or published the precipitation which is done as well by the moist, as by the dry way of the extraction and separation of metals; I would not that any one should take it in evil part; for there are exceeding weighty reasons, that make me fear to prostitute such excellent Inventions, or to chew meat (as it were) and thrust it into every Asses mouth. Let it suffice, that I have shewed, that such things are possible. But yet the Art lies not so fixed in

my breast, nor is it my mind to suffer it to lie buried with me: No, God hath blessed me therewithal meerly for this end, that I might help and succour others, to the performance of which, I am most ready and willing; but yet not every one without any exception, but such as are ingenious Lovers of the Wonders of God, and know how decently to use all things, least I being too improvidently liberal, should put new Weapons into the hands of mine enemies.

I could have buried over these things in silence, and haply been at more quiet, but it was no ways possible for me to suppress the wonderful Works of God, so as to withhold them from coming abroad to light, and to the view of Men, to the Honour of God. And whensoever it so comes to pass, that the things delivered at present in this second part, and which shall be delivered in the following third and fourth parts, shall be believed, and be brought to effect and be done: then all the crew of Slanderers and Enemies of the truth shall be confounded with shame, before the whole World, and that Genuine Alchymy, shall again be embraced, and honourably flourish: For Salt-petre must be the Master, as PARACELSUS saith, in a certain Chapter where he treats of common salt, and mentions Salt-petre with a commendable Testimony. Nor hath BASIL VALENTINE done a less faithful Work as to his Nitre; but few there are that understand it.

I am of not of the mind to boast of the knowledge of many things, but yet thus much I find, that there is not in all nature any subject given that may in good deed be compared with Nitre, as to eminency or exlency; much less deserves to be preferred before it. Let not the Lover of this Art be disquieted in his mind, so long as there are two parts to follow, and come forth: For then men will see, and be even enforced to confess these things which afore they did not believe. And upon this score do I shorten this part, that I may the sooner come to the third and fourth parts: In which parts (God willing) there shall be disclosed many most highly profitable inventions for the benefit of mankind, but yet they

shall be veiled, after that same way and manner, as others afore me have used to do, that so Pearls may not be cast before Swine.

But that I may return to my purpose, and shew that what I have said is true, and that great things may be done (as to the melioration of Metals) by the help of Salt-petre, it will be necessary, that those things which we have already written in this second part be made a little more clear, and may be visibly demonstrated to the unskillful and incredulous, in what it is, that this profit we at present speak of, is seated.

And first, as concerning the Generation of Salt-petre, there hath been enough said already, viz. That it may be prepared by heaps out of otherwise unprofitable Wood, Shrubs, Briars, & etc. which rather endamage the Ground, than do any good, because they become a refuge for cruel Beasts, which sustain themselves upon the great ruining of the other Wild ones: Nor needs this work any greater costs than to cause a House to be built in the Woods, under which the wood, together with the circulatory Vessel, may stand dry; and besides too, one man is sufficiently able to manage the whole business, nor is there any thing else required but those unprofitable underwoods, or Briars, & etc. of if you have not such, then, the Leaves that the wind blows off from the Trees. And if also you add some Salt thereunto, even it will be likewise turned by the help of the wood into Salt-petre, and hereby will arise a greater profit: Neither is there any necessity of taking the Salt we use to season our meat withal. But yet if you can have it in plentiful quantity (as may be in many places of GERMANY, where it much abounds) it will be well, but if it be not to be so easily had, the wood it self will make Salt-petre enough; nor needs there any other thing, but to begin the work, and let Nature alone to perfect it, and to produce the Salt-petre. But farther, as GERMANY doth never want store of wood, so wants it not salt, for there are whole Mountains of salt, which to exhaust, is a thing impossible; especially in the Territories of the Arch bishop of SALTZBURG,

in the Elector of BAVARIA'S Country, the Diocess of BERCHTAGADEN as we call it; which places, besides their abounding with Salt, do also abound with store of Wood. Have I not reason to believe that great Treasures and Riches may be hence reaped. Salt they have at their Feet, and vast Deserts at hand, which are of no use: O improvident Mankind! What account shall we give that so behave ourselves in our Stewardship. Would it not be much more praiseworthy to have drawn forth those Treasures, to the Honour of God, and not to have suffered them to have remained without being used, and unmanaged; what is the greatness of the charge requisite to the carrying on this Work that deterr's them? What expence I pray is it, seeing that a little shead may easily be built in the Woods? And besides, where great Woods, and many Trees are, there are also found Minerals both ripe and unripe, and the ripe may be forced out by Wood, or Coals, the unripe may be fixed, or ripened by the help of Salt-petre, and the Gold and Silver also may be afterwards thence separated by the Salt-petre.

And now I pray, would not the Country be enriched hereby with vast Treasures, and store of Wealth? But put the worst, if every Country did not abound with store of Wood, yet hath it a great deal of superfluous Grass and stubble, and this yields as good Salt-petre as the Wood does. And if in case every Country, or Seignory had not Minerals of their own, which might be ripened by Salt-petre, and from whence Gold and Silver might be drawn, yet nevertheless may they be had out of the bordering Provinces. Nay more, if so be the already excocted Metals should be advanced to a maturity by the means of Salt-petre, yet would not even this kind of work be without an acceptable gain, and it would be better for us so to do, than to hang them up at the Walls in our Houses, for Ornament, and Pride's sake. If an Enemy comes, one Ounce of Gold, is better than a Thousand pounds of Tin, or Copper, which the owner thereof must necessarily be constrained to leave behind him, whereas as he could carry away the Gold with him; which kind of

concentration we shall treat of in the following third part: and in the fourth part shall be taught, by what means even Gold and Silver may be concentrated, that so it may lie hidden from the Enemy, and be transported (under another kind of form or shape) into such places, where it may be free from the Enemies Clutches.

And farther, that water which we speak of, serves not only to extract Gold and Silver out of the Ores, or Minera's, (which otherwise, could not be drawn forth by any excocting or forcing) but also for the taming, and bringing to use that which is in huge Stones, Flints, and the baser Fossiles (in which, Gold and Silver are only as it were, a little sticking, and will not be thence had by any art of Melting) and that with profit too well worth the Labour. So that there is scarce required 6 or 7 Loths of water to extract the Gold and Silver out of I00 l. of Ore; and if there were but 2, 3, or 4 Lots of Silver at the most, in I00 l. of such matter, yet would it be a gainful extraction, especially if the things, or subject, be Arsenical, or as yet Volatile, and cannot brook the intenseness of the fire, but are driven away by a strong blast. FOR IN THAT EXTRACTION BY THE WATER, THAT WHICH IS VOLATILE, IS FIXED, AND RETAINED TOGETHER, that it afterwards admits of being fused, or molten, and that this is so, will evidently appear to any, experimentally. Let him but take Arsenick, and dissolve it in Aqua-fortis, and again draw off the water, and he will be able presently to melt the Arsenick, and make it red hot. Quicksilver is well known to be a very Volatile matter, but yet even that, (if the water of Salt-petre be several times drawn off thencefrom) is made so fixt as to stand and abide wholly in a most intense fire. For, that which Wood and Coals do (in a long time) perform; the very same doth such a water effect in a few hours space.

But some or other may oppose or question thus; How can it possibly be, that if those matters be so very poor, 8 or I0 pound of water should be sufficient to extract the Gold & Silver which is contained

in them; for it seems as if 8 or I0 pounds of water were hardly enough to moisten I00 l. of Ore or Minera, but would be lost amongst such a deal of Stuff: Let such an one know, that what I have written is possible and true; I can prove it and demonstrate it even to the sight; but as concerning the administration of that Work, 'tis not fit it should be made too common.

And verily, in this sticks the main difficulty, here is the Art and Skill; 'tis not for every one to acquit himself here, and if that the gold and silver were extracted by means of this Water, yet even then the chiefest of the Art is to know how to precipitate the pure Gold and Silver thencefrom, and incorporate it, which knack I justly reserve for my Friends; for verily this is such an Art, as by the benefit of it alone I shall renew ancient friendship with many, and moreover purchase me more new friends: And therefore let no body be angry at me, or count it amiss, that I would not publickly disclose so excellent an Invention, and put new Weapons into mine Enemies hands to hurt me withal. (This is taught in the following parts) And if I should do so much as clearly to mention every thing, yet nevertheless should I incurr the enmity of many men, as much as if I never had done it; and besides too, it cannot possibly be, that all things should be so nakedly and plainly decyphered to the unskillfull, as that they should presently be able to do every thing. If they once make trial, and cannot do the business that they aimed at in their minds, then they curse him that writ, and bestow many a bitter wish on him, as if he had been too obscure in expressing himself, and so they despise that which is otherwise laudable.

But if so be that the possibility of a thing is only demonstrated, and no Receipt added, then they will not undertake any frustraneous Labour, nor will have cause of cursing any. But some or other may here enquire, Where shall I find such a sort of Minerals and Fossiles out of which I may extract Gold and Silver? If any such had been to have been found, they would not have lain idle & waited for my

coming; others would have taken them away long ago, and converted them to their own uses. I think it expedient to demand as well of such a one, who those others should be, that should have taken them away before thee? If their Experience be as little as thine, and thine no greater than is theirs, there's no danger of your fore-preventing or deceiving one another, seeing you are all alike ignorant of the thing.

Think'st thou that the number of those that are experienced in Metals is so large: 'Tis confest, there are enough Excocters or Metal-Separators, but yet they must Per force leave that untouched which they cannot find out, seeing they know no other way of ordering their Affairs, but the old Road. It oftentimes happens, that there is more Gold driven away into the air by these Excocters, than is left behind in the fire, and yet forsooth that Crew arrogate to themselves abundance of knowledge, and perswade themselves, that they stand not in any need of any ones advice. Nor indeed do I invite them to any new Studies and Operations; let all such as list, use the same way of excocting or separation that they have learned; but if there be among them those that are not ashamed to learn better, such may be counselled. My purpose at present is, to do some acceptable Service to those that have no Mine-pits, and who cannot separate Minerals or Ore in gross, as I may say, and yet would be very glad to enjoy in private some little small gleanings as 'twere of the bits or small pieces that the Excocters leave, whereby they may get sufficient gain for the commodious sustaining of Life. These are they whom I have a mind to assist; the Richer sort have enough already to fill or satiate themselves withal; nor need they any information of mine; as for the Poor, there's no regard had to them. The whole Artifice therefore consisteth in the extracting (when there's but a very little Water used) and then in the precipitation of the Metals, so that the Water may remain good, and fit for other uses. There's plenty enough of poor Minerals and Fossiles, even every where, and which no body regards

and knows. It would not be amiss to look upon or consider of all Flints, Rocks, and Stones you meet with, and consider what property they are of.

Concerning this I have written in the First Part of the MINERAL WORK, viz. How by the Spirit of Salt Gold may be extracted out of a Flint: But as hitherto, few there are that have set about that Work, partly because they could not prepare the spirit of Salt, and partly because they knew not how to precipitate from it the extracted Gold, nor knew how to melt the extracted Calx of SOL with Antimony; all which I must needs confess, is not for every one to perform. But now this Extraction which is made by the Water of Salt-petre, doth extract the Silver too, which being thence precipitated, the water remains as virtuous as afore; and indeed, if a comparision be made 'twixt this and that Extraction, there is as much difference as is between black and white, and between the day and night; therefore I say that this is a thing worth the learning, for it may be of exceeding much profit in times of affliction. Greatly is that pledge to be esteemed of, WHICH (as the old Proverb is) REDEEMS ITS LORD. Art is no burthen to a man to carry, but it rather carries or bears up a Man, easeth him, and makes him be of a cheerful mind, because it is a thing on which we may safely trust. It is more precious than Gold and Gems, which may be lost, but this abides firm and constant even to the Grave, and doth abundantly enrich its master.

This extraction doth likewise serve for the drawing forth Gold out of Silver, tho' it be not gilt, which to do is not in every ones power, tho' many know that Silver hath Gold in it, yet if it be not of so much value to as to quit the Costs that are necessarily to be expended upon it, it is left as it is; and now there is no where separated Gold out of Silver, unless it be gilt, and they see it sticking thereupon. Any other silver whatsoever, how much gold soever it possesseth, is not separated, when as though, sometimes there might be made more gain thencefrom. But I must needs

confess, that the separation of the Gold from the Silver, the usual and known way is conjoined with abundance of labour, and not worth the costs spent about making of the separation, unless, haply, the silver partakes much of the Gold: Whereas on the contrary, this my way of separating is done with light labour and small costs, and therefore may be used about all silver whatsoever, though it has in it never so little Gold.

But that the business may be yet more clear, and the better perceived, it will be useful to add this information. When you would separate the Gold from the Silver by Aqua-fortis, it must first be purified with Lead, by burning it upon a Test, now in this work there's the Test, Fire, the sufficient portion of Lead, the labour and time spent hereon to be considered, and when all this is done, then the Lead has entred, together with the Copper that was in the Silver, into the Test, may be esteemed of but as a thing just kept from being lost. Besides too, the Copper carries away with it , a good part of the silver into the Test. And although that by a most vehement blast of Bellows the test may be molten, and part of the Lead, Copper, and Silver recovered, yet the expences necessarily requisite to this operation, are more than the regained Metals are worth, so that these costs, charges, and troubles are too great. Then finally, when all this is done, and that the silver shall have been depured by burning, then it must after all this, be granulated, and this is some charge, and then when all this is done, it may be separated by Aqua-fortis, and being separated, be again molten into a Mass.

Now my way of working is freed from all these kind of linked labours, and so much trouble and loss of expences and time may be avoided; for when I take on me to separate any Silver, whether it has much or little Gold, I cut it into bits about the length and bredth of my Finger, so as that I but put it into my separatory Vessel; then I make it gently or by degrees red hot, to the end that the defilements may be the better washt off, and the separatory

water may the better work upon it. Then pour I in the water, and suffer the Gold, Silver and Copper to be dissolved; then (after this) do I precipitate the Gold, then the Silver, then the Copper; all which operations, from the beginning to the end, are done in three or four hours space, nor requires it any expence save only the water, and a little fire, to keep the water warm, that it may the more strongly work upon and dissolve the Silver; the Metals thus separated from each other and edulcorated, may be melted; and now from thence may any one see, how much difference there is betwixt ours and the common separation of metal, by the moist way; and if there be any one that would use this way of mine, of separating, he would doubtlessly get much gain and riches, neither could any one endammage him by way of prevention, and he would get himself an exceeding profit wheresoever he be, not only out of guilt Silver, but also out of any other; for there is not a City so small, but it hath a Silversmith, who buys up the old Silver, and separates it his own way, which is very laborious and costly, and therefore he would the willinglier give his Silver to another to separate, whereby himself might be spared the labour and cost, were there but any one that would offer him his help thereabouts.

And seeing that all Copper holds Gold hidden in it, and that that Copper is not any impediment in this my way of separation, but is resolved together with the Silver, therefore doth it always bring some increase to the Gold and consequently more gain; but the labour will be yet more gainful if it be prepared with a separatory water, which hath other Golden species or things added thereto in the making, and which render the water aureous, such as are Lapis Calaminaris, Zink, the Minerals (or Ores) of Iron and Copper; for hereby is made a water that is in it self auriferous, and which doth readily (in the separation) join its volatile Gold to the Silver, and suffer its self to be incorporated; in so much that even such Silver as hath already been separated and purged, will yield Gold enough in the separation, if it be dissolved with such

a separatory water, which hath been impregnated by graduating things.

And even as this same extraction which is done in the moist way, by the water of Salt-petre is exceedingly eminent and of much use, as being sufficient to supply many thousands of men with food and necessaries for life; so as that they need not at all to be compelled to deceive or damnify one another; so likewise, no less excellent is the extraction, which is done by the dry way; if, viz. the Volatile Antimonial Mineras, or Ores (whether they contain in them Gold, or Silver, or Copper, Iron, or Tin, and what metals soever they contain in them) be molten with twice, thrice, or four times as much Antimony in a Crucible, and be (by the means of Iron) precipitated into Regulus's; for by this work, what good soever there was in the Ores, and even the Metals themselves, may be obtained each apart: for when the Antimony hath extracted the Gold out of the Minerals, the Gold may them be first precipitated, then the Silver, lastly the Copper; and all of them with a very small cost and little labour, insomuch, that in one days time many pounds Gold & Silver may be drawn by this art out of the Minera's: and this too by a little fire. For the Antimony penetrates the mineral like water, and dissolves what is good in it; and as for that which is of an earthy nature it casts off from it self, and brings it into scoria. But it brings the Metal to a Metalline form in the precipitation, which must then be cupellated, or purified by the help of Salt-petre. And if haply you cannot get Antimony for this work, then common Brimstone may serve in its stead, and it will perform the same thing, if the Minera be ground and mixt therewith, and be molten in a covered Pot or Crucible, and be precipitated by Iron, for so the Metals falls down in a Regulus, and the Sulphur abides behind in the scoria. But this kind of work requires a skillful Artist or Melter, who hath already been long and much versed in precipitations; for else he will be intangled therein, and not find the wished for success.

N. B. This is to be understood of that kind of Minerals and Fossiles which partake of ANTIMONY, ARSENICK, COBOLT, MARCASITE or SULPHUR, being such as ANTIMONY and SULPHUR love to seize upon and dissolve in the melting; such Minerals or Ores as have sand and stones among them, they (viz. ANTIMONY or SULPHUR) will have nothing to do with them; of this kind are Granates, Talk, and such like; so neither, doth the water of Salt-petre in the moist way extend it virtue to all the Minerals, nor extracts its Gold and Silver out of all of them; but especially it acts not at all on them which are very sulphureous, unless they are first Torrified or Calcined as'twere, and so freed from the SULPHUR, then at length the water performs its office else not. Nor doth the water act upon Granates or other Minerals and Fossiles which are (as it were to the outward appearance) smooth and as it were glassy. And therefore all such must first of necessity be mastered by an incense fire, and subdued.

There are likewise to be found some Minerals and Fossiles which suffer not what they have in them to be introduced into either Lead or Antimony, or to bestow their Treasure upon them; nor will they be forced out nor cupellated, but both are and remain scoria, and do retain that form of glass which they afore had, unless perhaps, haply you make them stoop, and master them by a most strong blast; for by this means they suffer their Gold and Silver to be wrestled from them: But they may be mastered too, if you thereto add in the fusing some Potters-ashes, or salt of the Lees of Wine, or Ashes made of Wood, and melt them together, for so by this means also will they be obedient to thee, for salts dissolve in flux all stony Minerals, and such as resemble glass and scoria, which otherwise no other fire is able to do. But to make any more accurate description of that thing, appertains not to this place, but to the following Third Part of this Book; that which we have here minded, is only to make light touches as 'twere about shewing the variety of Fossiles and Minerals; and that, if haply any one should light

on such a Mineral, out of which he cannot extract the metal, neither by the help of Antimony, nor by the water of Salt-petre, he should not think it void of every thing or that he has not dexterously and conveniently enough handled the same, but may know, that the only cause is, the property of the Mineral it self.

And now, even as the Sulphureous minerals do chiefly admit of being separated by Antimony admixed in the melting, and those that are stony, not so; even so the water of Salt-petre doth more willingly extract the stony Minerals, than the sulphureous ones; but yet, if the sulphur be taken from them by Torrefaction, it is able to dissolve even these too.

But it chiefly loves those that have Stria, and are a spotted (Quartzsg) sandy, poor kind of Minera: which (otherwise) you cannot extract commodiously neither by Fusion or by Mercury: But that you may never be deceived here, it will be altogether expedient to be acquainted with both ways, both with this which is done by flux, & with that moist way which is done with Water; both ways are good, and exceedingly profitable in the separation of the Minera's or Ores; and that not only of such as may be every where had, but likewise of metalline mixtures; whether it be by melting them together, or else by some sad mischance of your Houses being burnt; or finally, if it proceed from thence, that Gold and Silver do lie hidden unknown in copper, Tin, Iron, or Lead; now they may with ease be separated from each other by both those aforesaid ways, and on such wise as that nothing may be lost.

The ancients knew not how to extract the Gold and Silver out of Copper as the modern Refiners are wont to do, but took them together as they lay and so applied them to any uses whether to make Bells or great Guns. Neither was the separation by AQUA-FORTIS so much in use in those days as in ours: Nay more, if in a Mark of Silver there was no less than the quantity of a Ducket of Gold, yet notwithstanding they did not separate it, but did make it up into money as it was, as the old Coins do sufficiently testify.

For it is evident that all Silver almost, partakes of Gold, and ancients being unexercised and not well versed in the Art of Separation, all the Silver though never so auriferous was Coined into Money, or put to other uses; but their successours smelt out what they had done, and therefore bought up all such Money, and separated it, & made thereof an exceeding gain; so that there is not in our age so much as a Dollar, Schrenckbergick, Gross, Crucifer, even to the smallest half Penny, of Gold Coin to be had throughout all GERMANY, all being changed and bought up and wiped off the Gold. But yet there is Silver enough left, both made into money, and wrought up by the GOLD-SMITHS, a Mark whereof contains, I/8 or $\frac{1}{4}$ of a Ducket of Gold; and therefore seeing the common way of separation by AQUA-FORTIS cannot be of use here, because the costs are too great, and the little portion of the Gold will not countervail the same; it may be done this way, and separated by either the moist, or by the dry way, and that with profit, though there should be less than I/8 part of a Ducket in a Mark of Silver. And besides, Bells ever have much Silver in them, neither was it separated therefrom by the ancients (as we have said afore): and likewise old Tin hath a great deal of Gold and Silver in it, which was of old wont to be molten and wrought up with the Copper into Bells or great Guns. Many there are that well know, that there is Gold and Silver in these things, but how to extract them thence, they know not: For Copper admits not of being cupellated (or purified) by Lead, much less of being separated, & yet more difficult is it to do it by AQUA-FORTIS. But yet, it may be effected and that with a great deal of profit by the way which we have shewn, both the moist and dry too. And therefore he that shall be well skilled in these operations, doing it either by melting with Antimony, or by the Water, will get abundance of profit out of your old and broken pieces of Bells; Nay should he buy them whole, yet would he get no small matter, for he may extract their Gold and Silver, and then melt them anew. For there is not barely in Bells

that portion of Gold & Silver which the Copper and Tin had naturally in them,and of which the Bells are made; but also, it was the custom of the ancients, (when a new Bell was molten or founded) to call some God-fathers or Witnesses (according to their ancient custom) who named the Bells afore they were baptized: And like as it is even at this day the usual custom every where throughout Christendom in the baptizing of Infants for the God-fathers to give their God-child some Money (or Plate) as a remembrance; so the ancients did do in the baptizing of their Bells, as they were flowing in the Furnace they cast thereinto Gold and Silver, to testify their affection to Holy Uses, and also that the Bells might fuse the better, and yield a clearer sound. Upon this account I say, that 'tis no small gain that may be gotten out of old Bells, seeing there never is a Bell which is destitute of Gold and Silver.

And now the well-minded Reader sees what use this extraction and precipitation of Gold & Silver which is done either in the moist or in the dry way, is of; and that not only in Minerals and Fossiles, but likewise in metalline mixtures too, out of which there can nothing be obtained by any other way.

Who I pray will not now magnifie or highly esteem of Salt-petre, and take care about having it prepared in great plenty, and so convert it to his profit, seeing it is clearly manifest that so much good may be done with it both in Metalline Affairs and Medicine? I do what I am able, I offer my self to all good Men: if they will not listen to me, I am not to be blamed but am void of fault. Man's Life is too short, than for one Man to be able to describe all the things that may be done by the help of Salt-petre; neither indeed is it to be wished that many should know it.

But seeing I but now treated of the precipitation of Metals and Minerals, I think it worth while, to shew the cause of that precipitation, that so the studious of Art may have a more certain foundation of this thing. That which is to be separated, must of necessity be a bound up or fast knit body, for else it would not

need any separation; therefore forasmcuh as one Metal knits up, or incloseth another, they cannot be separated from one another, but by the breaking or destruction of the bonds which they are tied withal, and knit each within another; this destruction now, is to be done by the Fire, both in the moist and likewise in the dry way. Copper, Tin, Iron, and Lead, may in the dry way be separated from Gold and Silver, if they are Cupellated together on a Test: For then the superfluous or burning SULPHUR, in the imperfect Metals, acts upon it self and reduceth its own proper Body or Metal into Scoria, and seeing that there is a great part of Lead therein, those Scoria are fluxile, and it doth by little & little (as much of it as goes into scoria) insinuate it self or slide into the porous Tests or Hearths. But the Gold and Silver which have no superfluous SULPHUR, do remain unhurt upon the Test, washt and clean, & do now shew themselves in their clarity & brightness; This is the separation of the good from the bad, or the combustible from the incombustible, which is done by the force of Fire only, and solely: by which, the imperfect Metals are by the help of Lead converted into brittle scoria, and so creep into the Tests, and separate themselves from the perfect Bodies; and this is a very easie work, and well enough known to every body, and is by the Refiners called Cupellation. But now in this separation, there's only a separation made of the imperfect Metals from the perfect, but the Gold and Silver remain mixt together, and if you would have each apart too, then 'tis necessary that the one be dissolved and separated from the other by a most strong AQUA-FORTIS. But if the portion of the Silver be more than the Gold, then the Silver is dissolved by a common AQUA-FORTIS made of Salt-petre and Vitriol, and so the Gold will fall to the bottom; and this way of separation is well enough known and used by all the Refiners and Goldsmiths; but if there be more Gold than there is Silver, then do they dissolve the Gold by AQUA-REGIA any thing else but a strong water of Salt-petre, in which some SAL-ARMONIACK is

dissolved; for the common or simple water of Salt-petre doth dissolve the Silver only and leaves the Gold; and contrariwise the AQUA-REGIA dissolves the Gold only, and meddles not with the Silver; but if they know not the right way of ordering the AQUA-REGIS, they are wont to add to the Gold in the melting so much Silver as may make up three times the weight that there is of the Gold, and so they separate it by AQUA-FORTIS, which (kind of operation) we call (but Quartz).

There is yet another way of separation, which is known unto them, and this is done by Cementation, if (viz.) divers Metals are commixt together, and they are mixt with Vitriol, Salt, and Tiles, STRATUM SUPER STRATUM, and so kept together a while for some due time in a continual fire, then the Salt and Vitriol do assume to themselves the imperfect Metals, and leave the most perfect, that is the Gold, alone. Cementing doth also attract Silver and Iron, Copper and Lead; but this kind of separation is only used to impure Gold, perfectly to purifie it.

There is yet another way of separation, which is done by Antimony, and is likewise only used to Gold, to cleanse it from its impurity and vitiosity. There is also another way of separating by fusion, in which, if you would have a metalline mixture which hath Gold, Silver, Copper, Iron, Tin, and Lead in it, to be separated into its several kinds, then the mixture must be granulated and burnt with Sulphur, and being burnt, it must be melted in a Pot, and so by precipitating it either with Lead or Iron, one Metal must be separated orderly from another; which way is wont to be used (as far as I know) but by few, because they are not so understanding in Nature, nor know any cause why one Metal separates it self from another, sooner and more readily out of the mass or metalline mixture, and settles to the bottom.

But the ingenious Lover of Art may have some directory, as 'twere and some occasion to consider with himself more deeply, and may have a willingness to understand and undertake so excellent and

profitable an Art, I have a mind to discover the cause of the precipitation. It is sufficiently evident, that LIKE REJOICETH WITH LIKE, and that there's a disagreement 'twixt unlike things. Oil loves to be mixt with Oil & Water is willingly united with Water, but not at all with Oil, lest by a MEDIUM intervening. Hence it is, that forasmuch as one Metal is of a different nature from another, that such as are alike, love each other, and such as be unlike do abhor and shun each other; and therefore when there are divers Metals in one mass, and that you would separate them, is is necessary that you do it by adding such a thing as is of affinity to the more imperfect part, and is at Enmity with the perfecter part. As for example: Sulphur is a friend to all the Metals, save Gold, and that it hates; but yet it loves (even in the imperfect Metals) one better than another: for by how much the more like they are thereunto, and the more imperfect, so mcuh the more readily is it a friend or enemy thereto. And therefore when the Sulphur shall have been put into the mass in the combustion, then the most noble parts flie off, and do their best to free themselves from the fellowship of the imperfect and unclean metals; but yet they cannot rid themselves without some assistance; and therefore if some sulphureous or imperfect Metal shall be put to the sulphureous mass, then the sulphur laies hold upon it, and lets go the more perfect part, tho' not so pure as yet, but it needs a greater purification; concerning which there may be read more at large in the Explication of my MIRACULUM MUNDI. This work is called PRECIPITATION, when the more perfect part is precipitated and separated from the more vile, and that out of one and the same mixture. The same reason is there in the precipitation made in the moist way, if (viz.) some Metals, or all together, be dissolved in the water, one is thence precipitated after another orderly. First, That which is the most noble and most perfect, then the 2 & 3, and so regularly, until they are all precipitated. This is that most excellent and hitherto wholly unknown, and most

gallant Invention wherewith I hope to become serviceable to my Friends.

He that well understands this precipitation, will gain much, but if he only meddles with this operation in a careless manner, and meerly customary as 'twere, and so not know the reason it self, why such, or such a thing is, he may worthily be compared to an Ass that carrys a sack, but knows not what is therein contained, nor whither he is to carry it. Therefore I will yet farther add a more clear information. Iron precipitates Copper out of both the dry and moist solution; Copper precipitates silver both in the dry and moist solution: MERCURY doth chiefly precipitate Gold, and although Copper, Iron, Tin, and Lead, do also precipitate Gold and Silver, yet each Metal hath its own peculiar precipitation, and farther note, that Precipitations done with Salts do exceed those done with the Metals, for by them may all the Metals be precipitated; and this hath even hitherto been kept secret.

And besides, one Metal does not only precipitate another, but doth likewise change or alter it. As for example, If I put the Plates of Copper in a solution of Silver, then (whether the solution or operation be done either in the moist way or in the dry way) the silver precipitates it self by means of the Copper. And if I but know how to manage that business knowingly and skillfully, the Silver will also graduate some of the Copper into Silver in the precipitation, and there will be gained more silver than was put in the solution. In like manner, if I precipitate Copper with Iron, out of a solution of Copper, then doth the Copper precipitate it self by reason of the Iron, but withal, some part of the Iron doth exalt it self in the precipitation into Copper; and seeing that this kind of operation is confirmed by often Experience, there there is none can safely question it. But I do not say, that in such a gradation all the Iron is turned into Copper, or all the Copper into Silver; nor did I ever try it; but yet I readily believe, that it is a thing possible to be done by reiterated workings.

Mercury precipitates Gold most willingly, but only in the moist way, for in the dry way it cannot subsist; but to precipitate it in that way, Iron serves excellently well; Copper also and Lead are profitably useful hereabout also, but yet Iron is better.

There is a singular precipitation of Silver with Mercury, which I will here mention. The Chymists some hundreds of years ago, made Silver out of Cinnabar, but without any benefit or profit; neither did their silver they got come from the Mercury, but from that silver which they added to the Cinnabar. They took common Cinnabar, made of Quick-silver and Brimstone, and brake it into small bits, about the bigness of the Nail of ones Finger, and made Layes, or STRATUM SUPER STRATUM, thereof, with filings of pure Silver, then they luted up all well, and kept it in a moderate heat for 20, 30, or 40 hours, and by this way, they found that their Cinnabar, which at first was red, was made black, this matter Cupellated with Lead upon a Test, and so got as much Silver as was the weight of the Mercury in the Cinnabar.

N. B. As much silver as they got, so much wanted there of the silver they put unto it, and so there was no Gain made from hence; and they supposed (but falsly) that the Quicksilver extracted the soul out of the silver put thereunto, and that therefore the said silver was rendered volatile. Nor indeed is it contrary to Reason, that ARGENT-VIVE should extract the soul from Silver, and thereby convert it self into silver; and that on the other hand, this exanimated silver be made wholly volatile, if it be not animated anew by other Metals; and this is what some have done and attained to, by the help of Lead.

But the operation which I treat of at present is rather an attraction or precipitation of silver by Mercury, and this precipitation is to be done in the moist way, and is most wondrous easie; nor is it without Encrease or Gain, provided you are willing to wait its Time, and 'tis thus.

If one part of purer silver be dissolved in AQUA-FORTIS and

in the solution two parts of Rain-water be added to one Part of AQUA-FORTIS, and there be likewise thrown in three or four parts of Quick-Mercury, and all this be left some days or weeks in a cold place, unmoved, then the silver precipitates it self out of the Water to the Mercury, and the Mercury dissolves it self into the Water, and both together yield a wonderful representation of growing things, like Mountains and Vallies, and certainly is of a most pleasant aspect. The result of which is this, viz. if they stand so a long time and shall be afterwards edulcorated and reduced by Lead, then the Silver gets no small encrease from the Mercury: But yet there's no gain to be thence had unless those out growings (or representations of fine things) be suffered to operate and germinate above a Year: And this, few operators will yield to do, and to be withheld so long a time from the fruits of their Labours. Now the reason of this operation is thus: The AQUA-FORTIS is a moist and cold Fire, and ripens as well as the dry and hot fire, but he need be a skillful Artist that sets upon this Work.

It is evident that some of the ancient Philosophers maturated their Universal Medicine by a moist fire, as you may see in ARTEPIUS and others. Other some Philosophers extracted a certain secret water, or universal Menstruum and dissolvent out of the Nitrous Sea, and did thereby perform most notable things, but they always kept it secret, and the description they have made thereof, hath been obscured, or painted over with Riddles, or dark expressions, when they say, that SATURN draws his secret water out of the Sea, of as clear brightness as the Moon: which way of drawing it belongs not to this place to shew; only thus much is hinted, that out of Nitre may be drawn an Universal Menstruum, which is more excellent than the Corrosive Spirit of Nitre, which said Spirit doth indeed dissolve all things, but after the manner of corrosives, whereas this which SATURN draws and is of the clear brightness of the Moon, hath nothing of Corrosivity in it, but is mild and sweet, and wets

not the hands, or tingeth them, as that Corrosive doth; and although such a water be Volatile, and not fixt, yet is it of such a nature as to constringe, and fix other fugitive, and unfixt things. 'Tis a thing most worthy of admiration to consider how those Natures have a mutual love each to the other, and embrace one another, and are converted the one into the other. And thus much may suffice to have been spoken concerning the precipitation of the Metals out of both the dry, and moist solutions.

Let no body seek to fish ought more out of me by their Letters; but as for such as formerly have been my friends, and even now are, or shall hereafter be, to these I will not deny any thing, always provided, that nothing be done against a DECORUM (as they usè to say) or a discreet behaviour.

But now if any one thinks that (if he comes flying from the East or West) I must presently lay aside all my business, and only attend upon doing and answering what he demands; no, that thing my affairs wont permit me to, for I have somewhat else to manage. And therefore would I forewarn such an one, that he enters not on such a Journey afore he be certain whether or no it stands with my convenience or not. For this hath many a time already happened unto me, viz. for some one to come with a desire of knowing this or that secret, who (when I would have told it him, but that I had no time then to accommodate him) hath gone away stomaching at me, and began to reproach me publickly afore all Men, as if I were some inhumane, or merciless fellow, and would not satisfy his request. Some also there have been, who out of the meer malice of their mind have divulged, that I my self have nothing, seeing they can get nothing from me; there are many such perverse kind of men to be found, who make no Conscience of enervating, or sucking out the very Marrow of the Bones of others, so as they may be but benefited thereby themselves; which verily is a great evil and inhumanity. How often have such kind of men come unto me, whom, (when they have spoken with their kind words unto me, and also carry the garb,

and outside show of very honest Men, and promised all decent thankfulness) I have satisfied, and yet have afterwards fled off from, and broken their Faith: Therefore it is the best way for him who has any singular thing, to bury it over in silence, and so he need not fear of being drained by others, that know how (by the perswaisive flattering Art) to get out his skill, and give no thanks afterwards for the same.

If I had not already began to describe the PROSPERITY OF GERMANY, certainly I would not now begin; but forasmuch as I have taken upon me to finish what I have begun, I will stand to my promise, and will in like manner shortly publish (if God shall see it good) the third and fourth part.

And seeing that in both the following parts, the melioration, or concentration of the Metals, is chiefly to be done by the help of Salt-petre, I was willing more amply to confirm in this second part, that which I wrote in the first part of the Generation of Salt-petre. And I do again and again averr with the greatest asseveration, that such a generation of Salt-petre out of wood is very true, and is founded on Nature her self.

Now must I proceed a little onwards, and withal demonstrate to the simple, that the putrefactory Stomack, in which the wood is digested and putrefied, and which transmuteth all wood, and resolves likewise all Leaves and Grass in a short time, transmutes and reduceth it into Dung, is as the stomack of Animals is, and this may be done in a most vast Quantity, as hath been proved in the first part of the PROSPERITY OF GERMANY; and this no Mortal Man can ever refute, viz. that the essential salt, or salt of Nature, is no other thing but Salt-petre, but is not as yet burning, or flaming up, until it be animated by the air, and conceives a Life thencefrom, the essential salt of Vegetables, barely such, is not so, viz. Salt-petre, as hath been sufficiently manifested.

Now whatsoever gives fertility and power of growth, is Nitrous; if therefore there lay hid no Nitre in Minerals, as in stones, why

would the Gardiners carry slackt Lime into their Fields, and use it instead of Dung to dung their Fields withal? Whence doth the Salt-petre come that grows on upon old Walls, if not from the Lime? What is the reason that the Salt-petre men do seek after old ruined walls, to make Salt-petre thereout of, were nothing in them? I verily believe that this is an indubitable Argument, that there is Salt-petre hidden in all things: For the salt of the World, or the Universal Essential salt, is nothing else but Salt-petre, when it hath after a due time attracted a life out of the air, to which end my secret circulatory instrument was invented, that such an animation might be the more conveniently brought to pass.

Nor do the other kinds of salts, viz. Sal-Gem, the salt made out of the natural salt fountains, or sea-salt, likewise all salts which are made out of the Lees of Wood ashes, or of Lime, also Alume and Vitriol, all these are not so widely different from salt-petre, but they may easily be transmuted and converted into salt-petre by the animation of the air, by the help of my circulatory vessel; but for the better perception of the operation, I will subjoin this Example.

Dissolve as much Sal-Gem, sea-salt, or salt made out of the salt fountains, or common salt which is frequently used in boiling of meats, or salt made of Wood ashes, or of the stones of Calx-vive, in Aqua-fortis, as much as the water will assume to its self, or be able to dissolve, and let it again cool; then the salt does not concrete or shoot granularly, any more but into longish Cones like salt-petre. Pour off the Aqua-fortis, or Salt-petre water, and dissolve it, viz. the salt, again in a Lixivium of Lime, and crystallize it, so shall you have thereform a Natural, or Genuine Salt-petre, and no less combustible than any other salt-petre that is digged out of the stables where Cattle have stood. Then again may there be, by the said Salt-petre water, more salt prepared, either common salt, or salt out of Herbs or Wood, and be dissolved

and crystallized, from whence results a new salt-petre, and this operation may be so long repeated, until all the salt-petre water be turned together with the salt, into salt-petre.

This transmutation of salt-petre is perfected in some hours, and from hence may a worthy reward for your pains be reaped, could it be otherwise performed than in Glasses; and indeed out of one pound of salt-petre, would there come an hundred pounds of petre, if a part of the transmuted salt be still distilled anew into water, and more new salt be by it again transmuted. But there is no such need of setting about a work so laborious, seeing there is at hand a far speedier, or more dexterous way of doing the same, if viz. those salts shall be animated by the air, by the circulation that I have contrived, and so be turned into salt-petre in great quantity: which animation, or hatching as 'twere, may be done in vast quantity by easie labour, and little costs, the air (as we use to say) turning or making both sides of the Leaf: For one portion continually kindles and animates another, no otherwise than as a little Leaven doth a great Mass of Dough, and as a little Foeces or Yeast, yea, as little as will lie in a Spoon, serves to ferment a whole vessel of Ale; the same is done here. And indeed, common salt-petre may be implanted into other salts, even as a Vegetable Seed is sown in the Earth, so as thence to get in a short space of time a great encrease, even an hundred, or a thousand-fold.

But the sluggish Companions who had rather fatten themselves with eating, drinking, and sleeping, and wholly give themselves to laziness, who is able to wait so long in the expectation of this thing? Alass for ye, ye sloathful, lazy, and devouring Gluttons, with what face dare ye so manifestly to betray your laziness? I pray, if you put out your Money to Use, and have 5 or 6 PER C, as we use to say, a Year, must you not expect the years revolution afore ye receive it? And besides, you run here a hazard too, least your Debtor breaks, and defraud you of the very Principal it self: If you lay out your Moneys on building Houses, so to make

a great gain thereby, may not your Tenant be reduced to such wants as not to have wherewithal to pay you, unless haply, out of the very Stubble, or Litter of his poverty? May not your Ships which float about in the Sea, be cast away by Storms and Tempests, or be taken by Pirates? Why are ye not as Patient in your expectation as the Husbandman is, who after he hath sown his Grain, must wait a whole year afore he reaps with advantage what he hath sown. Nay, yet more, if he be pretty fortunate, he scarce gains 6 in the I00, the costs and pains being reckoned; and in the mean time he is in fear, lest the Corn should be blited by the cold, or being near ripe, should by a bad season be spoiled and corrupted in the field. If there happens a year that is droughty, then the Corn cannot grow up high, or 'tis eaten by the Mice; but now in the preparation of Salt-petre all those Cares are saved, and I00 Dollars may yearly yield thee 2, 3, 4, or more gains, and that without any wronging thy Conscience, and without endamaging any other, and without Extortion; for if thou hast much Salt-petre, thou maist promise thy self much gold and silver also, for there will always be such as buy it up; and if thou attentively heedest, thou hast so much delivered thee in my Writings, as that thou thy self maist spend it all on the melioration and Separation of Metals: Nor needest thou, if thou thinkest it good, sell any of the same. Nor is there any reason that thou should be ashamed or repent of such a Work, because one may is sufficient, without any others help, to manage the greatest operation: nor need there great expence, save only a little to build a small Cottage, wherein the Salt-petre may be kept dry. If you have huge Woods at hand, you may make your Salt-petre out of wood; if you want wood, then out of the dung of Horses, Oxen, or other Beasts, and Sheep, or else out of even common Salt, which we use in seasoning our Meats, out of wood-ashes, and out of Lime: Whatever it be prepared from, it will not cost much, for Ilb. of Salt will yield thee I lb. of Salt-petre.

But haply some or other may be in the mind to think or demand, why GLAUBER himself sets not about this work, and reserve the whole Gain to himself? To these I answer, that I am not of such a greedy desire, as to wish for all to my self; nor will it at all be unaceptible to me, if another hath likewise somewhat; nor will it be at all less lawful for me to do for my self so much as seemeth me good, as for any other to take his liberty, and to do to himself as seemeth him good. Besides too, I am not of the mind to make the thing so very common, but will see whom I communicate ought unto, that so it may be applied to good uses, and not come into the hands of the Unworthy.

The first ten years however Salt-petre will not be of so vile a price, but that it may be made and sold to profit; Who knows whether or no he shall love so long? And if at the utmost it should after 20 or 30 years be of so mean a price, because of this Invention of mine, yet in the interim they may all that while enjoy the profit of the same; and it may be expected from the hands of God, that He will, for the time to come, provide for them some other ways: But never will it be so vile, as to be worth nothing; and if it were so, that you could not make any Money of it, (tho' it is impossible that it should ever be such a drug) yet (by that manuduction which I have afore given in the I, 2, and 4th. Parts of my FURNACES; as also in THE EXPLICATION OF MIRACULUM MUNDI; in the 2nd. & 3rd. Part of my PHARMAC. SPAGYR, and in this Second, and shall be in the following Third and Fourth Parts of the PROSPERITY OF GERMANY,) it may be improved about many eminent uses, and so Gain be thereof made; for Salt-petre is such a Subject, as you can never have too much of, and is therefore worth our labouring after, and our endeavouring how to prepare it in good quantity, and withal, of finding out what benefit it is naturally able to afford us; for it is even a wonder to consider how great things may be done by the help thereof: It is the greatest Poison and yet may a most excellent Medicine be thereoutof prepared; Colder it is than

Ice, and yet hotter than any fire. It is the Generator of all things, and also their Corrupter; it vivifies and kills all things; it is heavier than Gold, and yet lighter than the Wind; it is also Fire and Water, Air and Earth, Male and Female; it impregnateth and suffereth it self to be impregnated; it is light, and is also darkness; it is black and white: There are in it as many Colours as the world affords; it is fixt and volatile, corporeal and spiritual; it kindles and burns all things, and doth also quench all burnings; it is the Beginning of all things, and yet it causeth the End of all things; that which is soft, it makes to be congealed and become stiff; and again, that which is stiff or hard, it makes soft.

O Thou Creator of all things, How great a vastness is there of thy wonderful Works? And what a fewness is there of those who understand, or know, or labour to know it! O thou eternal Light! Illuminate the dark breasts of the lost Sons of the World; O thou vivifying fire, mollifie, enkindle, heat the stubborn hearts of sluggish Mankind, that are oppressed with sleep, and frozen with cold, that so they may seek thee, and know thee, and learn to fear thee in true Humility, and to honour & worship thee without Hypocrisie. AMEN.

An Admonition, and short Repetition of those things which are treated of in this Treatise.

That the Friendly Reader may make this Book yet of more use and benefit to himself, I thought it worth while by way of an Overplus, again to set here afore his eyes those Secrets which have been herein mentioned, what 'tis that the use of them doth consist properly in.

First of all, it hath been shown, how by the means of Salt-petre,

all Volatile, and immature Minerals are to be brought to a ripeness both in the moist way and in the dry way, that so they may yield forth out of themselves in the melting, good durable Gold and Silver. Then I taught by what way the Volatile, Arsenical, Coboltick, and Antimonial, Auriferous and Argentiferous Minerals, may by an easy labour, be by an artifical fusion, and extraction, and also by a precipitation into Regulus's, and by the purification or cupellation of the said Regulus's, by the help of Saltpetre, converted or brought into use in the dry way, and the Gold and Silver hidden in them be drawn forth. Thirdly, I have shown the extraction of Gold and Silver out of all the barren, or poorer sort of Minera's or Ores, which are not worth the charges of excocting, or the usual way of proceeding, and of the drawing them out by a singular Art, with the water of Salt-petre, and of rightly working them; which way is to be preferred far afore any usual excoction of those poorer kinds of Minera's, not only because such an extraction is performed without a melting fire, and a Furnace; but also, because in this extraction there is more obtained than is by excoction or forcing out: And yet farther, that which was Volatile in them is fixed together, and retained, by that Water of Salt-petre which would otherwise in a melting Fire fly away in fume. And more than this too, Gold and Silver may by this moist way and that with very easie Labour be extracted and in a due manner perfected, and that commodiously and with no small profit, out of any, the vilest Fossiles (or things digged out of the Earth) as out of disesteemed Earths, Dusts, Sands, and Flints, from whence, otherwise you cannot extract any thing neither by Excoction nor by Mercury: So that in all places of the World what coast soever, so it be somewhat a dryish soil, is to be found such kind of Earth, Clay (or Marle, Sand, Flints, and such like which contain in them a thin or sparing kind of Gold and Silver, and from which they may profitable be extracted. Verily it is a dainty Art which may be used in all parts of the World, nor is it at all burdensom to

carry, but may be excellently (well, or safely) preserved till need requires. But this is to be noted that the fatter Earth or Clay must first be made red hot and burnt afore it be moistened with the Water of Salt-petre. For without so doing, the Earth would always remain thick (or clammy, would drink up much water, and it would not easily be separated, but being burned, it suffers it self to be extracted no other than as if it were Sand. So neither do the Ore or Fossiles of Iron which are auriferous and abound with Iron, suffer the Gold to be extracted and precipitated out of them as readily as other Minera's or Ores do. But the Iron, (if there be overmuch of it) makes the Water thick and pappy like Mud. And therefore you must put into this solution a part of common water, to make it the thinner, that so the Gold and Silver may be the easier precipitated thencefrom. The auriferous Coppery Ores are to be burnt first, if they are sulphureous, if not, they may then be extracted, though not burnt. The Sandy, stony, brittle, and pebblish, Fossiles need no other preparation but to be burnt and ground.

Likewise all auriferous Irony, or Coppery Ores, may be separated by common Salt, without a Furnace, or melting fire, and that in the open air (as we said afore where we treated of the poorer Coppery Minera's, or Ores:) and many hundreds of pounds may be done at one time, and with one labour, and the Gold which is extracted mixtly with the Iron and Copper, may be separated out of the solution, by the moist precipitating way there delivered, and that with a mighty profit and gain, because that same precipitation hurts not in the least either the Copper, or the Iron, as to their malleability.

In like manner may you precipitate the Gold out of any Vitriol water, and that in quantity (when it has any in it): and on such wise too, that the precipitation of the Vitriol shall not at all change ought of its nature; and this is so compendious a way, as that if there were contained no more than one quarter of a Drachm

of Gold in I00 l. of Vitriol, yet would not that precipitation be of no use or profit. And on this wise and manner may all other Mineral waters be precipitated.

Moreover, as concerning the means of easily preparing the salt so as to serve for the extracting the Copper, in all Countries, but especially on the Sea Coasts, the Concentration of Salt out of the Waters, or the Sea will afford you no mean, or obscure Documents touching that thing; which concentration is treated of in the Book Intituled THE CONSOLATION OF NAVIGATORS.

But forasmuch as there is mention made in this Treatise of a yet other certain Artificial separation of Gold and Silver out of the imperfect Metals, in which, Antimonial scoria have place, in a forenamed extraction, which I would willingly (but as yet have not) delivered; let no body so construe it, as if either purposely, or carelessly omitted the same: No! The Case is far otherwise, and this is the true reason; seeing this Book now in hand is become more prolix than I intended. I determined with my self to reserve that most profitable process for the following third part, which God willing, I will very shortly publish, till then. I entreat the Friendly Reader to expect or wait for it with a good and patient mind.

Mean while he may acquiesce with these two ways, viz. the dry and the moist, and delight himself herein, and withal take care (as far as in him lies) to have ready by him, some quantity of Salt-petre; for the following third part shall treat of nothing else but the performing and doing of processes by the help of Salt-petre. He therefore that knows how to make it in plenty at a small rate, may hope for so much the greater benefits; and this I judged expedient, to add here for admonitions sake. More shall be discovered (God Willing) in the third and fourth following Parts.

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 Institute or Plant his political or evil 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 disswade me from

Publishing this Third and the Fourth following Part of the PROSPERITY OF GERMANY in Print, (because of the inconveniencies and hurt done me by the perfidious FARNNER, against whom no body hath hitherto opposed himself; but all have connived and winked thereat; and consequently have every one left such a perfidious Treachery unpunished) and incourage 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 compelled me. To such therefore as those are, would I willingly give (or hand forth) a Torch (so to direct 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 to the Work, for the Gods sell not ought to those that Labour not, but all good things are sought, and found out by daily Labour and diligent search.

Now albeit, that all those things which are throughly handled in this book are true, and so confirmed by experience as that any one 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 discourse 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 other talk of the profitableness of them, (they) are presently inflamed with such a love, that they will even wholly devote themselves to Chymistry on the hopes of growing rich. And

now when they have proposed 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 immediately fadge to their minds, they throw away the Tongs; 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 perswade themselves that they can receive any instruction from these my Writings; for my Writings require Men that are diligent, whose minds are never weiried with labour, and who are not slothful, and impatient of Labour. Now to the studious (Searchers) and especially to such Children (or Disciples) adopted 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 benefits 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 the Honour of his most Holy Name, and to the Safety and Preservation of us all. AMEN.

Of the Preparation of S A L T P E T R E .

I 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 MIRACULUM MUNDI. 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 throughly 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 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 on 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 Crystallization, set it in a cold place to shoot, dry the salt you find, 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.

N. B. There are yet, besides the other aforenamed 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 & plentifullier; 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 Calx 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 of page I.)

Here the Cock sits that hatches the Basilisk, by the top of the Chest.

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

Another way of making Excellent Salt-petre in great Qauntity 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 beasts Piss, and make it of the thickness as 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 conveniency 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 mass or second arching will be in a short time attracted by the first arch, and that this second par getting will soon be dried: When this is done, there must be again the third time made another dawbing on, after the afore-prescribed 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 this have you a vault or arch prepared, which is a most commodious instrument to make a quantity of Saltpetre 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 capaciousness; 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 moistened with Mans or Beasts 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 bugness and thickness of the vault or arch.

N. B. You must take good heed, that the Fire you 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 moistened 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 Salt 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 Chrystallized 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 Chrystallize; this artifice of Boiling and Chrystallising 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 administred (or put under) and the arched matter to be continually moistened with Rain water; and the 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 Beasts Piss. If you proceed rightly on, you may get great quantity of Salt-petre in a most short space of time, and that for small costs, & 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 in like manner as we taught afore, 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 imploy 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 so throughly 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 sprak of the Northern Monarche.

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 Manuduction, as for any wise Men easily to understnad the sam 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 clearl; shown the way of effecting the same, least I should take away the occasion of other Mens exercising their ingenuity in bethinking 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 forasmuch as the way of extracting Salt-petre out of Stones, is liiked on as a most impossible thing by such as are not skilled 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 thing LAZARUS ERKER 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 ℥ ſs. or ℥ j 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 filtred, or be strained through some thin Linen cloth, that so the part of the stone undissolved, and the faeces may abide behind in the Filter or Linen cloth: The filtred 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 ℥ ſs. of the stone, you must proceed on farther thus:

Take the same quantity of AQUA-FORTIS as you used but now, about the solution of the Lime-stone, and pour thereon likewise the same quantity of Lixivium, that you used about the precipitation of the dissolved stone, and let there be máde a precipitation, let the precipitated matter be coagulated intǫ 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.

N. B. 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 aforehand such kind of stones: Forasmuch as no body would easily perswade 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, forasmuch 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 m there is such a plentiful store of them in most places, th even make whole Mountains; they are in substance like a so tender stone, whitish in colour, (or of a shining colour) a coloured or reddish, and are easily broken, and may be fash into all kind of shapes, or figures; and therefore they are uently used about building Houses, for the making various Or about the House, as for the corners of the Houses, the Doors Windows, Steps or Stairs, or other External Ornaments. As lo as they are yet in the Mountain, and not exposed to the air, 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 beco soft, and there scales off from them yearly, a little portion o the back of Knifes thickness, like Meal, so that they are yearly lessened; and are not at all fit to build stable, or durable Hou 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 abou half a years space, whereby they may of themselves fall in pieces; for being so ordered, they easily yield forth their saltness to th water that is poured on them, and consequently yield plenty of Salt-petre. Of which thing, this is a most certain Testimony, if

(the right edge truncation is from the original RAMS copy)

(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 wisht 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 digged 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; insomuch, that I esteem him to have rendered the hardest, or most difficult part, very clear, and therefore I will refer the well minded Reader thither.

But forasmuch 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 cast 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 perswade 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 subtile powder, and should labour to 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 Corporeal 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 Corporiety 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 Corporeal 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 extraction, 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 Magnetical manner.

But for all this, we know that this our reason so exceedingly well founded, will not yet satisfie 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 shown 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 untō it self from the air, or earth, whatsoever is profitable for it; and especially, because we have largely treated thereof in our Works; insomuch 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 digged 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 torrified 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 (Herckeroda in Hassia) 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, not 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 a most 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, bestowed 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 Grain 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 thereoutof 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 publickly confessed, that what they afore gainsayed, or opposed, 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 time, months, into 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 2 or 3 pound of salt out of a centenary, or hundred weight; now by how much 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 Idiots 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 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 commonwealth 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 meerly 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 shew some places in which Salt-petre lies in the stones in a most plenteous 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 lived, seen and come to, we have left but few things in them untouched, whose nature we have not throughly 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-wise to but very few. In FRANCIA, (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 provenus of Wine and Corn; nor do they labour about finding out any other Treasures (for there in not any Country in all GERMANY in which is gathered more abundant Wine, and of a better sort, than in FRANCONIA aforesaid; which gathering of Wine is to be accompted to the FRANKS or FRANCONIANS instead of Mine-pits, and yield them imployment 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 ASCHAFFENLERG, and will very briefly (for my part and purpose is not to write a Chronicle) shew what treasures the most Great and blessed God 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 WURTSBURG, 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 COSSEL Castle, which is the House belonging by succession to the Lords of the County DE COSSEL: 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, insomuch 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 aforesaid Earls have known that the chief part (or most part) of the said Fountains are wholesome by 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 rendred commodious for those that by reason of some disease should come unto this place for the sake of washing 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 aforesaid; 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 to 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 digged out in those places, and I knew that there was a great quantity of Salt-petre contained in them, insomuch, 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 COSSEL are built, you shall find every where in them abundance of Salt-petre. I went to visit the place it self where those Stones

with which the Houses of the Village of COSSEL 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 displayed 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 COSSEL 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 still 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 and 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, insomuch 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 one Fist, yea and as big sometimes as one 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 JPHOVIA, and the jurisidction 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 skilled 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 digged 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 hereto-fore 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 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 shew 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 digged up nothing else but such nitrous stones, for some fathoms depth. I once viewed this place, and found that the stones extracted some years afore out of this Mountain were altogether brittle, and is a manifest token that the whole Mountain is filled 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 ashy colour.

There are likewise such kind of stones also that they cut or dig forth at the MHENE near the City KOTENFELDT, but they have not in them so much Salt-petre as those have that are found in the COSSEL 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 MHENE.

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 herbs, grass, flies or other insects, but on those aforesaid stones. They are not all venemous 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 sandish 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 case that 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 faeces of TARTAR which are yearly gathered up and thrown wawy in vast quantities, in all that tract which lies on the River MHENE, between BAMBERG and FRANCKFORT, whereas notwithstanding some humdreds 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 Chrystallize. 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 three days 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 TRIEFELSTEIN, which is a Monastery situate on the MHENE, 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 conserved in the Mountains situate between KITZING and FRANCKFORT, and especially in the SPESHARDENSINE (Mountain) the disclosing of which, some other more commodious place will admit of.

Now follows what we mentioned of the aforesaid

L A Z A R U S E R C K E R .

Of the manner of Boiling SALT-PETRE.

A N D F I R S T

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-barrows full of the Earth, and whereby you may be able to prepare Lixivium enough, answerable to the work you have proposed 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 Collateral 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 completly 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 Curriers, or Soap-boilers, as much of it as two or three Wheel-barrows 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, least 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 contains oftentimes even yet a great deal of Nitre, insomuch, that you may sometimes extract out of an hundred weight thereof, three or four pounds 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 Licivium into the Copper as is wasted 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 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 top-most bottom of Reeds, upon which there must be first cast in some chopped Straw, and then some Ashes of Firr, Beach, or any other Tree, so much in quantity as may overtop the Straw an Ell or Cubit, (ULNA) 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 moistened 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 boiled 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.

After all that the Lee 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 Lee 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, hot Lixivium, and when 'tis drawn off, it is called the second weaker Lixivium: Lastly, the common Lee, 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 (Number 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. Channels, 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 itself, and which is the chiefest of all, until the Copper be almost filled, and the Lixivium be boiled enough to shoot.

And now when you perceive that your Liquor is made strong enough by boiling, put in a Brass Ladle 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 readiness of your Lixiviums Crystallization, on this wise: Put either two or three drops on a cold Iron, or on a Polished 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 Crystallization. Or else, you may put some of the Lixivium in a Brass Vessel, and set it in cold water, and so you shall see whether the Liquor be fitted enough to Crystallize; for as soon as ever the Lixivium shall be cold, there will be plenty of Salt-petre generated: Nay, even the very Brass Spoon it self denotes the goodness of the Liquor, it 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 aforesaid 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 Grains 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 spans height from the bottom, was shut, or stopt, 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 Crystallized) 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.

After that this boiled Liquor hath stood for two days, and so many nights in the Vessel, the Lixivium of the Salt-petre which swims at the 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-petre 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 hindred, it must be taken away, and let the Washer-Woman or Lawndresses have it, and other must be substituted in its room, and be farther purified by the help of Ashes.

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

A. Long and 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 extracts, or draws out the salt with a Ladle, the which he lays in a Witby 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 Brass Pans put in the Earth, hollowed for the purpose, in which likewise the SALT-PETRE is generated (or shoots.).
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 Brass 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 put of the Coppers (or Brass Pans) with an Iron Spatula, or rather with such an Instrument as your Plasterers use (a Trowl) 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, (or indeed, the Salt-petre itself 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 Brass Vessel that will hold about 3 ounces of Liquor, fill it half full with the Lixivium, set the Vessel in cold water to cool, and you shall find your Nitre presently to Crystallize, or shoot therein.

Hereby you may 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 itself 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 aforesaid manner; and if you shall find a Crystallization therein, and no Concretion, or heaping together, leaving a gaping, or chap in the midst, 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 aforesaid.

Then after 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 Crystals.

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 Crystallization 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 Crystals shoot not into that length, as when the Crystallization begins from the bottom.

Let them stand thus for two or three days, until you see no more Crystals 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 Crystals generated, you may take out the rest of the Lixivium: Then take out the Petre with an Iron Spatula (or Trowl) 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 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 again boiled up, for the production of the Crude Salt-petre is usually holpen forward therewithal.

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 past 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 fitting 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 itself: 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 perswade that Salt-petre is also generated and multiplied from that fatness which is mixed with the Saw-dust, 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 Lee, which being used by itself 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 6th. and 8th. Figure(in LAZARUS ERCKERS Book I think he means).

The manner of purifying the gross and blackish SALT that comes out of the SALT-PETRE.

The black or rather ashy coloured 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 duely 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, and 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 Lee 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 perswade 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-peter, and therefore may it be separated from that Salt by the aforesaid 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 itself 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 purifyed, whereby it may become altogether white.

However, such a black and impure Salt, may be purified even by this way (following). Pour the solution itself, 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 here also, 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 may well be dissolved 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 done, 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.

The 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 is here tried by. Its augmentation is done on this wise.

Take of a Lixivium, a Centenary of which contains 2 lbs. 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 6 lb. of Nitre. Pour this Lixivium that contains in it 6 lb. of Nitre upon other new earth, and proceed on the manner aforesaid, and you shall have your Lixivium to contain 9 lb. of Nitre. You may pour this a third time upon other new earth and proceed on with it after the aforesaid 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, meerly 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 & etc.) recompenced, 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 itself (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 aforesaid 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 itself, 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 augmentation of it, and so you will have a continual labour.

This likewise is to be observed in an especial manner, let the

Work-house 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 (aforespoken of) only there is this difference, that this last way of my contrivance (with stones, & etc) is easier, and yields more Nitre. Such as are pleased with this kind of work may set about it, nor will they bestow their Labour in vain; there may be abundance of things, and those wonderful ones too, effected with Salt-petre, as I have abundantly demonstrated in my fore-going Writings, and shall in my following ones too more clearly demonstrate if God vouchsafe strength and abilities.

But before I come to the practice itself, 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 PHARMACOPAEIA SPAGYRICIA, 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 vendication upon the occasion of certain Letters sent him by one J. H. S. who stiled himself the Son of SENDIVOGIUS; in which Letters he highly extols the Hermetic learning of the Author, but shames him for Writing so plainly of great secrets, and exhorts him to be more sparing and obscure for the future. Withal offering his services (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 defamer) this J. 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 Sophistical. In this Treatise he mentions a Prediction of Prophecy of three Monarchs that were to appear in the World: The first of PARACELSUS, concerning ELIAS the Artist. 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 anew. After the Author hath showed the ill dealing of this J. 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 judgement is to be had of this Monarch of Arts. J. 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 SAY THAT THE MOST EMINENT SECRETS WILL NOT BE KNOWN AFORE ELIAS THE ARTIST 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 which if it be read backwards, and E changed into A: For then 'tis the same with SALIA (that is, Salts) such as these (viz. Salts) are known unto, to them is ELIAS a master of teacher. And where the said PARACELSUS speaketh of Salts he adds ALCHEMY

FINDS IT (TO BE) IN NITRE: Hereby shewing and pointing at SALIA, Salts, which word being read backward is ELIAS? And this is my opinion as touching the coming of ELIAS the Artist, 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 J. H. S. and what is to be judged thereof.

Now follows the Second MONARCHY.

As for the second Monarchy, he alledgeth 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 guess business, and by that Lion he meant Salt-nitre, which is won't 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 Philosophers, and some of them the latter Philosophers, have filled 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, BASILIUS, 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, and the Treasure therein hidden; concerning which, the Philosophers have written many things enigmatically, and kept up all things most secretly. Verily he to whom the inside of Saltpetre 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 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 perswade 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 Userers to be beneficial to the poor, and to put an end to their immoderate usury; he will shew to the Divines, that all their contentions are vain, and that they cause nothing but inquietude, 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 of 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 I have 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 Monarchial PROPHECY.

As for what concerns the third Prophecy which J.H.S. doth also make mention of, (and will have it) to concern a certain Writer, whose name is JACOB BEHMEN, who exercised the SHOE-MAKERS 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 Alchemy; 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 J.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 opposing 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 and 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 looked into his Treatise, and perceived that he had ranked me amongst the Sophisters, I showed to some of my faithful Friends, the Letters which he had written unto me, that so I might hear their Judgement 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 imform 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 shewed me, wherein (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 GEBER was accounted for a Sophister; and yet was he a 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 FARNNER, whose Exhortation I yielded too, 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 Perversiveness.

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 Prophesie, as I met with it, whereby any one that is skilled in nature, may sufficiently see, that PARACELSUS did not mean a King, but the great Philosophical Mystery, and would point that out unto us: His Words therefore are as follows:

The Prophesie 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 at, because of avoiding the being the original of many evils, and because of the shedding of blood.
3. The Third is between SPAIN and FRANCE.

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 50 years old.
The Third 28 years old.

And these shall be found not long after the ends (or ruine) of the AUSTRIAN 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 extremly 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 terrour 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 Devastations, insomuch that there will seem to be an end of our Actions.

Now whilst the Enemy is placed in the very topmost pitch 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 be powerfull in Deeds and Councels, and the Subjects that now refuse him, shall receive him with the greatest joy, and acknowledge him their Superior.

Now must the aforesaid Treasure 'twixt SUEVIA and BAVARIA be found, which is equivalent to the Rubies of twelve Kingdoms, where also lies hid a Carbuncle, as big as an Egg, richer than any price.

The other Treasure that lies between SPAIN and France, is indeed great and potent, 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 take 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 vehemently fly thereunto, but yet he will send afore, some signs and tokens by which it shall appear unto us, that the Messengers sent 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 up to you. This Treasure far exceeds other Treasures; my Arts are hidden in that place betwixt SUEVIA and BAVARIA, and they are those, viz. THE TRUE TRANSMUTATION OF METALS OF A SHORT WAY: THE UNIVERSAL, MORE THAN PERFECT: THE so much talked 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 oppress 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 a 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 Prophesie, 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 digged 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 his Tomb-stone for a Testimonial of his Deeds, 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. SEBASTIAN, 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 Zoilists (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 digged; 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 doubtlesly be magnified, especially if he will disclose them unto others.

Now I believe that if these Treasures should be digged out by some godly, honest, and wise Man, (for the finding them is denied unto reprobates) 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 and 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, in so much that it hath left some fixed 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 fixed 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 Glass-men use, when they make Glass, that it may become pellucid and transparent. The Glass doth at first become of a purple or Amethist colour, but this colour abides not one hours space in the subject, but it evaporates, because it is not fixed enough as yet, and then the Glass becomes wholly transparent and bright, but if they would have the Glass 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 coloured Glasses, I found that this purple colour was

not fixed 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 faeces, and to this end used Various Menstruums, but yet effected nothing; until at length I saw that by mixing that magnesia with fixed 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 passed the Liquor through a Filter, and then had I a most dainty purple fiery liquor, 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 liquor I did anew 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, and 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 ignorant MOMUS, 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 and 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 perswaded that the universal Medicine may be thence prepared, especially out of that which very much abounds shining 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 one 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 affluence of all things, insomuch 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 evil.

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, insomuch 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 annihalate 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 SOL and LUNA 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 withal, is taken away: So that he that is skilled 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 Coction 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 an 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 alleaged Words: No certainly unless he be deprived of the light of Nature. It was never heard of, 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 meerly 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, forasmuch 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 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, whose words which they wrote of the prepared Tincture, the after Writers did falsly 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 ourselves 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 itself 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 him, and would say, That he propoundeth meer Lyes; and therefore no body ever dared (though he were never so 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 Caol 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 Charcoal (though there's much difference amongst them) should it lie shut up firmly and 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 yourself 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 Glass, 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 Glass 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 Glass 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 that 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 redound unto thee 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 Silvery one in a Tin one; which sayings verily are to be taken or understood in a far other sence 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 VEXATIONS, when he saith, that JUPITER has much Gold in it, and not a little Silver) a spiritual Gold and Silver hidden, and that LUNA contains SOL, and SOL contains Tincture, we are to understand these things of them, they being as so 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 dash seek such a stone in SOL, and leave Tin and LUNA untoucht? I could most easily satisfie 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 JUPITER 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 LUNA, and makes it fit, so as to be extracted (or made into the best SOL, out of which the Carbuncle is to be afterwards made, for every (kind of) SOL 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 itself.

I have in other places shown how properly the metalline stock or nature may be compared to a Vegetable Apple: SATURN 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; SOL 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 itself 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 SOL is not at all to be accompted 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 thereout 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 wished 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 disclose (on the other hand) whatsoever is any ways profitable for mankind, and necessary, and this to the very utmost of his power. For the Philosophers say; OUR ART DOTH 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 ungodly , 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 wise 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 adversaries. 'Tis impossible for the Eagle to get such a Treasure, but a thing most easie to the Lion; For there is not a subject in all nature that can make the Lion so fiery and powerful as the MAGNESIA SATURNIA can, 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 sufficiently is 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, AFRICIA, & etc.. 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 acknowledge the Lion and Eagle for King, 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, and 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 Arcanas. 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 like wise feign the Griffin to be of such power as to be able to carry away through the air an armed Soldier 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 myriades 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 fluxil 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 Carkass. 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 fatted 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 SYBILL, 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 and the King of all Kings, and let us apparel or adorn him with due gifts or presents, that his age and strength may grow up and be augmented, and 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 Franckincense for his sustenation, but we will bestow upon him instead of Gold , Myrrh, and Franckincense, 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 Franckincense; 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 Monarch, and then will he gainfully reward his Tutor (or Guardian) JOSEPH, for his labourous Wardship.

The Magi and Philosophers observed the Star of our Infant, which shineth so brightly as that it dazles 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 SOL: 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 easie to be understood. It is generated or born in the Stables, The SOL is its Father, the LUNA 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 conserves Herbs, Grass, and Metals is called the Mother; and that Earth which doth not produce (as in Stables, & etc.) is as yet to be accompted as a Virgin, which doth afterwards yield so 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 conveives neither the SOLAR nor LUNAR beams, nor is moistened with either Rain or Dew, cannot produce any thing, unless the beams are conveyed thereinto from the Sun by the Air, then the impregnated Virgin in the Stables, brings forth an off-spring, 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 Franckincense. 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 over-seer, 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 sound and rich: For the Vegetables do only desire profitable and convenient food, or some fat earth, whereby they (being well and sound) 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, Animals and Minerals, but the soul of Man doth not at all belong thereunto, for it is the propertie of Jesus Christ; but as for the bodies, Salt-petre is the most profitable medicament. Whatsoever I have here produced in this place, I have already Written the same in other places of my Treatises, in another 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 putrify by the Salt-petre in the Dung, and are reduced into 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 defile 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 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 Artist must go no other way, but must imitate nature if he would do any good on it.

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 accompted 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 wished 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, putrefieth 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 and 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 Artist 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 Bridegroom and the Bride, are led into the bathes two or three days afore the Wedding is Celebrated, and they are there washed, 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 sound and of a good constitution (though the outward raiment be vile) yet are loaden with Gold, Silver, precious Stones, and Pearls,) can. Hence it is apparent, that the Garments contribute nothing to the business, but that the multiplication doth solely depend upon the soundness and good constitution of the bodies; and this PYTHAGORAS well knew, and willingly left it to posterity, for he observed that the soul of the Metals being by Art forced out of the body did presently pass into the nighest bodies and after their death, again into the next: Hence it was, that he fell into a great errour, when he concluded, that the same was also true as to the transmigration of the soul of man, and the order therein the same; to wit, that the soul of one man did not presently pass into another man, but as well into Sheep, Birds, Fishes, & etc. And for that reason, his successours, (a great part of whom inhabit AFRICK) will not to this day kill so much as a little Worm, fearing least that they should kill such an Animal, as contains in it the soul of their Father or Mother. Besides too, he signified that the soul of a man was better and more pleasant in Frogs than in the most Potent King. Without doubt this errour arose from hence, viz. his seeing the souls of Metals that are forced out of their bodies to occupy or possess the nearest and more commodious subjects. By how much the purer the Subject is that the soul of Metals finds or lights on in its departure (or going off from the Metals) the willinglier doth it possess it. We Christians have a more perfect knowledge of the soul given us than was given PYTHAGORAS, but if we speak of Metals, then this saying of PYTHAGORAS hath good foundation, which thing, no experienced Philosopher will ever be able to gain-say or confute with truth. This we know most certainly, that God doth esteem the soul of a begger as much as of a King; the bodies do indeed make the difference, for some bodies are better adorned than other some. Likewise, the noble and not adulterated Alchemy teacheth us that the soul of MARS or VENUS is as good as

the soul of SOL is; herein is the difference between them, that their bodies are bigger and stronger, and so their noble soul is contemned and rejected by the ignorant, because of the rude grossness of their bodies. Hereupon, the curious searchers of nature have laboured to destroy those gross bodies, and to draw out their pure soul, that they might translate it into better and purer bodies, (the which thing also succeeded according to their course and desire) and by the extracted souls they transmuted the imperfect and impure bodies of the Metals into most pure Gold: Nor were they ignorant of the Artifice of particularly purifying the gross and impure bodies of the Metals, like as the sick bodies of men being purified by the virtue and help of medicaments are restored to their former health and vigour. For when an impure Patient meets with an expert Physican whom he (viz. the Physican) undertakes to cure, he doth first of all (if his Patient haps to have the ITCH, SCABS, THE SCURVY, LUCS VENEREA, PUSTULES and other stinking sores) prescribe him a purge whereby all the impurities may be first expelled. Then he permits the sick person to use a sweating-house, or stove, in which he may sweat so much as to be very much debilitated by the heat. Lastly, he brings him into a Parlour or Chamber that has a pure air in it, to refresh him, and therein he manageth the cure of him, until he hath recovered his former health and purity; and if the sick be not made clean or pure by the first purgation and sweating, he reiterates the same remedies as often as need shall require, and till the sick be perfectly freed from impurities.

Just so, doth the skillfull Chymist proceed in the purification of the imperfect Metals, for he expells all the excrements which they are in an especial manner endued (or soiled) withal, viz. the impure and stinking Sulphur by the help of the fire, and by the help of little appropriated stoves (or pots) even until they get their due purity: Art therefore imitates Art. But if so be that all Physicans were skilled in Alchemy and Astronomy we should

not need such plenty of Coffins, for in them (viz. Alchemy and Astronomy) one true Art doth continually produce out of it self another.

The Astronomer when he would give a man his judgement as to the manner and term of his life, doth first of all look to the hour of the nativity, and fisheth out what condition that aspect is of, that doth at that time bear chief rule in the Firmament, which when he hath found out he doth by the means of calculation, predict what good or what evil things will befal the Child (or party) whilest he lives.

Although these prognostications are not at all Infallible, yet are they not therefore by any means to be totally rejected. For we oftentimes find many things true by experience which otherwise we would not credit: Nor is it so much without reason that we so esteem them, but this ought not to be done compulsively (or as if they forced us) for 'tis the usual Proverb, THE STARS INCLINE, BUT DO NOT NECESSITATE. For like as a man that is born under an evil aspect may by doctrine and information be made good, so that here the aspects may be of no moment; so on the other hand, we often find that such an one as is born under a most excellent aspect is corrupted and depraved by his conversation with evil men. And these very things doth even Alchemy demonstrate the truth of : For even as soon as ever the Infant is born and begins to suck in the air, he doth even then attract such influences (according to the opinion of Astronomers) as the Stars do that very hour emit from themselves upon the inferiour bodies (or things here below,) and so consequently he imitates the nature of these: Even so the new born Metallick Infant, doth in the moment of his birth attract a metallick Astrum or Constellation, like to that which did at that time bear the chief sway, and so consequently receiveth qualities like the qualities of this Star or Astrum. And although that the metallick Infant were made a partaker of a good Star (or aspect) the fitst time of its nativity, yet notwithstanding

it may be accidentally infected afterwards, so as thence to become an evil Metal: And on the other hand, that which was bad at the first may be reduced to that pass by Art and a convenient discipline of the fire, as that the best Metal may thencefrom proceed, and this, experience witnesseth every day, nor can it be denied by any such from whom the light of nature lies hidden.

If now the superiour Stars can exercise such great virtues, what hinders but that the inferiour ones may exercise the same if not greater, provided we but rightly govern and tame them. The superiour Stars are not at all subject unto our power, they are submitted or put under God's guidance only. But the inferiour ones may be handled by us according to our pleasure. The physican may apply them to Medicine, the Chymist may apply them to Alchemy. He than to whom the knowledge of using the inferiour Astrums aright, is granted, may use them with most great honour, and eminent benefit, whether he be a Physican or a Chymist, which (said Astrums) others are constrained to leave untouched to their great disgrace and loss. But men now adays are too much given to laziness and sloath, so that there are but few to be found that will search after nature's Secrets. A many there are that challenge to themselves the title of learned Philosophers and yet are altogether ignorant of the foundations of true Philosophy. There is not in this age scarce any esteem at all, of true Philosophers, though notwithstanding they deal with us so sincerely and do clearly set afore our Eyes, the interiours of nature, and leave us excellent Writings. So PYTHAGORAS whom we mentioned afore did upon this accompt suppose, that, (because he saw the souls of Metals to be carried out on one body into another, and to Operate as well in this body as in the other former, and consequently to animate this, and make it more perfect) the case was the very same with the human soul, and by this means he directed as it were his successours to the universal and particular work of Metals.

And even just after the same manner hath VIRGIL done, when he

would that his Carcass should be cut into pieces, and be reduced unto a Life by a continual instillation (or dropping in) of burning Oil. Perhaps the occasion of his falling into those cogitations was this, either because he observed that the dead metallick bodies were by the operation of the Fire, and addition again animated, and so he perswaded himself that the like might possibly be done in man; or that well knowing the impossibility of doing this thing he would give an occasion to such as came after, more curiously to search, and so was willing to point out with his Fingers as it were at the multiplication and propagation of the metallick bodies (as PYTHAGORAS, of the souls).

Most certain it is, that it will not be any difficulty to him that knows Nitre aright, and con so order it as to operate in metalline bodies in the form of fire, to multiply SOL (in a universal way) and to make the viler Metals more perfect (in a particular way). And this I was willing here to add. 'Tis well for him that useth the gifts granted him by God, to his glory and the benefit of his neighbour.

And thus much may suffice to have been spoken in this place concerning the nativity and multiplication of Salt-petre, and the Potent Monarchy; more shall be spoken upon some other occasion if God please.

Now follows the Use and benefit of SALT-PETRE.

Having thus shown the Generation of Salt-petre out of every Kingdom, viz. of the Vegetable, Animal, and Mineral Kingdom; it now remains yet, briefly to shew what wonderful things the same doth effect in Medicine and Alchemy, which thing we do not find that ever any one of the Philosophers did perform, but kept all to themselves for secrets.

Forasmuch therefore as I have made a beginning of the thing already in the second part of this Book, where I spake of a certain moist separation; that is, I there delivered that it is possible

to extract Gold and Silver out of all (yea even the most vile) Metals, by the benefit of a nitrous Water, so as that any one that will but set his hand to the work may thence get his sustenance most plentifully; it seems a thing necessary to finish what hath been already well begun.

Now forasmuch as I did in that place let pass the describing the manner it self of Extraction, a many Friends have much desired an illustration of the things there spoken, but I could not hitherto by any means satisfie their petition, because that the abundance of my imployments denied me the time of Writing.

Now therefore I have determined both to gratifie these and others by opening this most noble artifice, but yet so, as that I will reserve some things unto my self, that so all things may not be made so common to my Enemies. And if so be that any of my Friends desire a more plain explication, and desire an addition of the things I have omitted here, it will be an easie matter unto me to satisfie their requests.

This Art therefore doth not only conduce to this, viz. to extract fixt Gold and Silver out of all sand, earth, stones, yea and out of the more vile Metals (or Ores of Gold and Silver); but also to extract the volatile and immature Gold, and Silver, and to make it fixt, and that in such a compendious manner as that it will be a matter of (in a manner) no costs or labour: Nay more, if so be there cannot be had any poor Metals, Stones, or such like subjects that contain in them Gold and Silver (though these are even plentifully enough to be had in every part of the World): Yet nevertheless may that Art be exercised with profit, about even the imperfect Metals such as MARS, VENUS, JUPITER, SATURN, MERCURY, CALIMES, ZINK, BISMUTH, CADMIA, ARSENICK, AURIPIGMENT, GRANATES, TALK, SMIRIS, HEMATITES, and such kind of Fossiles are; and which contain SOL and LUNA, partly fixed, and partly volatile, and may be commodiously extracted by the help of a nitrous Water.

Besides too, most excellent Gold may be in like manner profitably separated out of all such things as are made by Art of Silver,

whether they be gilded with Gold, or not, insomuch, that if there be but a few grains contained in a large portion of Silver, they may be separated with gain. And if so be any be minded to impregnate the separated LUNA again with Gold, that so it may again yield Gold by a following separation, he may most easily do so; yea, this operation may be so often repeated after this wise until all the LUNA pass (by Graduation) into SOL, which thing may be compared to a perpetual durable Mine-pit of Gold, and is perfected by the benefit of Salt-petre only, and therefore it both may and ought to be called and that deservedly a Store-house and comfort for mankind. For when we prepare that Salt-petre of medicinal Subjects, all the Salt-petre doth not put on the form of cristals, but much of it abides permixt with the water, which water doth abound with a most notable nitrous virtue of throughly promoting Christallization, insomuch that the seeds of Rye, Wheat, Millet, Oats, Beech-wheat, and such like, when they are macerated or steeped therein some due time, afore they are sown in the Earth, do multiply themselves extraordinarily, so that we see 3, 4, 6, yea and sometimes 20 plants spring forth out of one single Grain.

With the same nitrous Liquor too, (so it be prepared of true medicinal things, may be made a most excellent Medicine (which may be in a manner compared with potable Gold, and by the help of which, great diseases and as it were incurable, are happily healed) and that in a few hours space.

Forasmuch therefore, as such a Kingly medicament (of which I have made some mention in the Second Part of my PHARMACOEPAEA SPAGYRICIA, where I treated of nitre) and such a most excellent and incomparable dunging of the Ground, may together with the Salt-petre, be prepared and instituted, so most easily and almost without cost, (on which depends the health of the body, and fertility of the Ground, whether you respect Corn, or Wine, or Hops, or any other things, that man useth instead of Meat and Drink for the sustaining of Life; or else the extraction of SOL and

LUNA out of all the most abject Subjects every where found) may we not justly pronounce thus much of SALT-PETRE, that it is altogether profitable and commodious to all men; and therefore well worth the searching after, and the application to the use of Men.

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 SOL and LUNA 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 LUNA out of the Metal (or Mineral) of Silver, Litharge, stones, and the like fossiles, which have LUNA 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 Cucurbite, pour thereupon as much AQUA-FORTIS as is sufficient, put this Cucurbite 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 LUNA out of the powder, and pour it upon the other like conditioned powder, that it may also extract the LUNA 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 Cucurbite, 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 itself the AQUA-FORTIS out of the Metal, which said water contains LUNA in it. Then when this water is abstracted by inclination or pouring off, put on some Rain-water a second time upon the powdered Metal remaining in the Cucurbite, and this will extract that which the former water left of the AQUA-FORTIS partaking of LUNA (unwashed off) and so let nothing of the LUNA remain in that metallick powder; when its 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 LUNA and that which extracted the SOL, mix them diligently, and there will thence arise a certain white Water, and the solution will be like Milk; For the LUNA cannot abide the AQUA-REGIA, but there will precipitate a white powder which snatcheth (or precipitateth) down with it self out of the Waters the Gold too. We may make use of the decanted Water to extract SOL out of the other Metals; for the pouring on of the AQUA-FORTIS with the LUNA in it, to the AQUA-REGIA, doth not at all take away ought of the virtues.

Upon the precipitated powder of SOL and LUNA 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 LUNA is to be put upon some Cap-paper and dried. And as for the way of separation of the LUNA from the SOL we will presently teach in what follows.

When you have rightly edulcorated and dried the precipitates of SOL and LUNA, 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 LUNA is poured forth, you will find the SOL sticking to the sides and bottom of the Crucible like pale Gold, altogether Crude and not at all fluxile. The LUNA turned out is brittle, fusile, and volatile, and is by the Chymists called Horney-Luna, but I call it the MERCURY of LUNA, it being of excellent use in Alchemy, as shall be shown in what follows.

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

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

N. B. 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 permixt with it afore melting, then the SOL and LUNA 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 distilling) and keep it for 6 or 8 hours in a continual Cementation; and so the volatile MERCURY of LUNA 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 Cementation, the LUNA 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 SOL and LUNA augmented. The melting is thus; Take of the best Salt-petre, and (A.) each alike; mix them, and separate the Spirit of Nitre by 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 MERCURY of LUNA: and to make it aureous or Golden, yea, and to reduce the Cemented MERCURY of LUNA too.

N.B. It is better to mix the fixt-Salt-Petre, or the Green Lyon simply with the horny LUNA, 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 SOL.

N.B. 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 those 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) LUNA: This Lead is to be blown off on the Test, and you shall find an aureous LUNA: 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 depurated, and so is easily separated on the Test.

But if so be, that (for this work) the Metals (or Minerals) of SOL and LUNA cannot be had to precipitate the MERCURY of LUNA out of them, (then) the artifically made (vessels or plate) whether simply Silver, or else gilt with SOL, may be made use of; let these be dissolved with the AQUA FORTIS left after the precipitation, and 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 LUNA 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 easilyer 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 purifie this Cement sooner (or more speedily) it may be molten with an equal weight of Antimony, and there will arise from your golden LUNA 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 MERCURY of LUNA may be rendred aureous, and that as oft as one will, yea, even until all the LUNA be changed into Gold by Cementation and Gradation. Now if you would otherwise separate ought of the aureous of golden LUNA, or extract the Metals (where nevertheless you would reduce the separated SOL and LUNA) it may be effected by this means most commodiously and most gainfully of all, because the Calx of LUNA is made aureous by Cementation. This labour yields a continual augmentation of SOL, by which we may live very well and plentifully.

Another Augment or Encrease of SOL.

Dissolve LUNA or SATURN in AQUA FORTIS, also JUPITER in AQUA REGIA: (N.B. 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 JUPITER in. N.B. 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 LUNA or SATURN may be precipitated to the bottom of the Vessel, in which (Vessel) the white ashes of the Tin lie. This matter lying in the bottom, is to be edulcorated, dryed, and reduced by a strong fire, by which operation you have not only an augmentation of your LUNA, but it is likewise made golden.

N.B. This business may also be thus managed, First, dissolve SATURN or LUNA in AQUA FORTIS; to the solution add an equal quantity of Rain-water, pour this mixture upon JUPITER, 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 ANTIMONY & MARS) reduced into Reguluses, 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 LUNA may be afterwards separated without Loss, which is not so easy 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 SOL than by any other way.

Another way of Augmenting SOL.

Take the golden Talck, Granates, Smiris, Hematitis, the aureous Scoria's of Copper, the greenish, reddish, golden Flints, 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 SATURN with water, and dry it, and so have we gotten the volatile Gold extracted out of the AQUA REGIA by the SATURN. This volatile Gold is made fixt on this wise. Take the most subtle Powder of SOL, or its most thin Leaves, add thereto thrice as much of this MERCURY of SATURN; or four times as much, or six times, according to the quantity of it, by which we formerly got (or fished out) the volatile Gold: Set it in such a place where it may have a gentler heat, so as that the MERCURY of SATURN may just flow, and not fume; the manner is to be thus kept in this heat for some hours, or rather days, that so the filings of SOL or its thin Leaves may by little and little attract the volatile Gold out of the MERCURY of SATURN, and consequently be therewithal augmented.

N.B. But seeing it is a most difficult thing to keep such a very temperate heat as that nothing at all of the MERCURY shall fly away, and the SOL shall not melt in the Crucible: It is better to put the SOL mixt with the MERCURY of SATURN in a coated Retort, and set it at a strong Fire for a season for so nothing of the MERCURY of SATURN flies away, or penetrates the Crucible. That

which ascends up to the Neck of the Retort may be separated, and be kept for common MERCURY of SATURN, 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 MERCURY of SATURN three parts, and some thin Plates of Gold; let them stand in a Glass Retort in a pretty hot place, and so the SOL will attract the volatile Gold out of the added Minerals, and will thereby augment itself. 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 SOL, and a matter whereout of a Tincture may be prepared.

N.B. The vessel that is most fit for the fixation of the Tincture is such an one as is made of fixt SATURN.

N.B. The MERCURY of SATURN or LUNA may be reduced by a secret fusion (or fusile matter) whereby it presently yields an aureous LUNA or SATURN; but especially this MERCURY of LUNA or SATURN, by the help of which, there hath been 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 MERCURY of LUNA or SATURN may be artificially distilled, purified, and prepared for a singular Medicament; But yet let no body perswade himself that such a distillation is to be perfected after the common way with retorts or cucurbites, for it is a meerly vain thing to hope for the separation of the pure from impurity by 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 Cementatory Copple) to contain both SOL and LUNA; as well the purer part of that which is prepared by it self of this (bare) MERCURY of LUNA and SATURN: As that which is prepared of such (a MERCURY) 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 MERCURY of LUNA or SATURN by the help of fusing things, some part of the SOL may easily perish and evaporate: But now here, nothing at all perisheth: 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 SOL it self, which you are well to observe.

Besides too, it is a thing most easie to be done to fix the soul of LUNA or SATURN (that is carried or forced up, together with the volatile Spirit) in the said instrument with SOL; 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, SOL 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 SOL and LUNA: For when we have a purpose of augmenting any thing, there must in the first place of

necessity be the seed of the thing that is to be augmented, and according to the quality of the seed 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 seed, we prepare a convenient Earth for the same, to which Earth we commit that seed, 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 seed, and that it be well conserved least it die. So likewise out of one Fire may be made many yea infinite other Fires, for one is always kindled by another. But when all the seed is dead, 'tis an impossible thing to produce a new seed.

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 seed of the Animals abounds with a volatile, invisible 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 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, insomuch 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 seed; for as the condition or quality of the seed sown is, like fruits will follow, such nature as the seed you sow is of, such fruits will you reap, and no other. For example, I seek after SOL: Therefore I must first of all, of necessity have the seed of SOL, at hand, afore I can sow it, or multiply it. Now to have this seed, 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 SOL and LUNA 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 thousandeth part of the seed 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 threefold Kingdom of either Vegetables, Animals, or Minerals, but is procreated and multiplied meerly 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 SOL, nor Matrix nobler than LUNA, there is no more required, but that we make common SOL Astral by Art, and that we prepare LUNA on such wise, as that it may be instead of a Matrix, wherein the Astrums of SOL 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 SOL and LUNA, 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 inpregnated it; and even as we daily see that the Stars do impart to the inferiour things their virtues, and they are thereby multiplied; even so may we do the same by art in these inferiour things; for such as are above, are also beneath. Those above are beyond our reach; but the inferiour ones, not so: For art can do the same with or upon the inferiour things, as the Stars upon the superiour ones. As HERMES doth clearly demonstrate in the SMARAGDINE Table. He that understands these my sayings, will also understand those things, which PARACELSUS delivers in his Book of the VEXATION OF ALCHYMISTS, in the 5th. Rule especially of LUNA; 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 Saltpetre aright and can handle the same, will by the help thereof perform a many profitable things; for as it is altogether impossible to get SOL out of the viler Metals, without it: So on the contrary it is most easie so 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 SOL and LUNA 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 Saltpetre, which being a thing that but few know of, so seems it impossible, and yet the things I propound are most true. It makes

bodies volatile and spiritual, and by and by again makes them fixt and compact: So that unto 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 hope 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 SOL nor LUNA: 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 insinuate 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): Venus is my chearful 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 subtile (part) in us, expelleth all defilements, 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 SOL, consumes both the Nest and the Bird too, from the ashes moistened with rain Water, they say there arise Worms which will be again changed into other Phoenixes.

These 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-nitre 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 wise 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 well compare this work to a fishing Trade, concerning which the Philosophers have written many things, but very obscure; SENDIVOG, 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 presser of Cheese, and for this very reason he assumed to himself such a name. For ISACUS by transposition of Letters is the same with CASIUS, (or Cheese). So that it may be said to be HOLLAND Cheese; not that HOLLANDUS was in very deed a maker of the usual Cheese 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 Cheese-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 skillful 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 process in making their Sheep-milk Cheese, 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 SATURN or LUNA in AQUA-FORTIS, and a Golden matter, though it be but VENUS or JUPITER (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. (N.B. 'Tis better to add Salt-water, or Spirit of Salt) and you shall presently 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 cheesy substance wrapt up in a Linin cloth, that so a Cheese may thence be made.

Just so do we proceed in the making of our metallick Cheese; for when we pour Salt-water or Spirit of Salt upon the solution of LUNA or JUPITER mixt with that (solution) which is of a goldish Nature, viz. of VENUS or JUPITER; 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 Cheese or white Coagulum abiding in the bottom of the Vessel, into a Linen 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 savour, 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 Caol. 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 MARS, and thereupon it makes the skin smooth and hard: and seeing that the Country Fellows, and Laborours 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 thereinto while it is yet warm 1 ounce or 2 ounces 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 expression, 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 gratefull savour, and by reason of the admixtion of the Spirit of Salt, is somewhat acidish, and a most certain and most safe loosner or absterger, being administred 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 meerly because we will not perswade our selves that they have the worms, and so forbear the using any remedyies to purge them of? Now in such a case this whey is exceedingly excellent, being used after this manner.

Take of the most subtile 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 to 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: 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 Cheese, 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 Anise-seed or Fennel-seed to the milk as it boils, thereby to correct its Flatulency or Windiness.

And I do most curteously 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 forbad 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 Cheese, 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 VENUS 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 Cheese it self abound withal? And like as our Cheeses are diversly impregnated with spices, so are they of different savour, and price, and more or less wholsome. But now if that virtue which is in JUPITER 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 extream) 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 sound in the GERMAN tongue the same with ZIENESCH, (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 SOL, LUNA, JUPITER, and MARS pursue (or hunt) the wild beasts, SATURN 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 Cheese only, as we said but now, but withal, he was a singular fisher of Pearls; for with the net of SATURN (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 hindred 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 inside 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 SOL, in another pure LUNA, 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 divulging secresies; (no) for there are yet many necessary things hereto requisite to make the Pearls come in sight; 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 SATURN and LUNA, 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 my self 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 THENCEFROM BE MADE. Concerning which, I have spoken in the second and third Part of my PHARMACOPAEIA 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 linen, first mundifyed, and washed 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 with the Net, and cannot possibly be (as Yet) seen; yet nevertheless it is brought to a further 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 beauteous 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 CUPID. 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 Touchwood, which being handled with dirty fingers, refuseth 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 out 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 Chiromancy, 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 duely and speedily enough washed away with the rain, but is evaporated by the heat of the SOL; 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 this 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 savour, 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 COELUM 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 necessary a thing here for the Chymist to know, how the case stands, as concerning the metalline tree, and what is to be accompted its Root, Trunk, Blossoms, and Fruits; SATURN is the Root; MARS the Trunk or Body, JUPITER the Bark about the Trunk; MERCURY the nutritive Juice between the Bark and the Trunk; VENUS the green Boughs and Leaves; LUNA the pleasant Flower, or Blossom; and SOL the ripe Apple containing in it self the seed of the Tree.

The 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 rottenness, 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, and innumerable company of great trees, and those of such a nature and kind, and grateful a savour 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 Artist, no less diligent than ingenious. And of how much the better quality the dung is, 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 wise 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 proposed craftily and cautiously.

But that such a noble art may be freed from any further 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 entrance by any means to the faithless brethren of FARNNERUS, yet notwithstanding, I know I cannot so prevent and forsee, but that one or other may adjoin himself to the number of the true lovers of Chymistry, and 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 reasonable 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 that therefore has abundance of Salt-petre, can perform egregious things in Alchemy. Had not the AEGYPTIONS been possessors of great plenty of Salt-petre, verily they would never have been so skillful 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 Emperior, 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 duely managing Salt-petre and JUPITER 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 thinging 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 JUPITER) produce such Thunders, and can give to the Thunder fire and 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 JUPITER

shall be, and the more clear the Air, so much the purer will the Rain be, and the Air is more impregnated and filled 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 AURUM POTABILE, 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 proposed, 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 willing, 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 MERCURY) of the first ENS, (therefore) chiefest of all: The Astrum of SATURN (tingeth) LUNA; the Astrum of JUPITER, common VENUS; the Astrum of MARS, VENUS; for those three superiours do always operate upon these three inferiour (Planets); so that they are, as it were, upper men, and lower women: SOL he is left in the midst, which whosoever adds unto the others for the compleating of the operations, will perform excellent things.

But he that knows how to make that Astrum of SOL corporeal and fixt, he may translate the Astrum of SOL on this wise prepared out of one place into another, and conserve it like a Vegetable seed, 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 Saltpetre 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, SOL and Gems are taken

with the Net, may be prepared for farther uses, so that such a fishing 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 direction, how we may by the help of AQUA-FORTIS or AQUA- REGIS most easily extract both the fixt and volatile SOL and LUNA 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, rendred too weak for operating withal, and therefore must it 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 Cucurbite, 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 SOL and LUNA, 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 SOL and LUNA, 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 SOL

and LUNA, when they are mixt together, the LUNA and SOL precipitates to the bottom of the Glass 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 LUNA was dissolved, and of the AQUA-REGIA wherein the SOL was dissolved, at all the weaker, but it retains the virtues of extracting SOL but not of LUNA, 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 SOL and LUNA 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 Glass with a wide mouth, and the greatest part of the AQUA-REGIA will strain through into the Glass set 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 SOL and LUNA are not edulcorated, hence it comes to pass that the Cheese thence prepared, after the manner now spoken of, is as yet corrosive, nor is it easily dried. Both of them (SOL and LUNA) 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, and reduction thereof is promoted. The reduction being made of SOL and LUNA 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, SOL 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 finsihed) 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 Copperas, and so distilling 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 Glass or of glazing Earth well glazed.

But for as much as the Vessels of Glass are very subject to be broken, and earthen Vessels, unless they have the solidity of Glass, waste abundance of water, and so moulder away; it would seem more convenient in my judgement 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 LUNA: Yea and if the Tunnels requisite to this work were made of LUNA, it would not be amiss, nor would there be any fear of their breaking.

N.B. The Extraction also of SOL made with AQUA-REGIA may likewise be put into a Silver Cucurbite, 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 Cucurbite, 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 safer, 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 Glass ones so long till he can get Silver ones; but it is necessary that the Silver of which these Vessels are made by 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 SOL, rectified Spirit of Salt accuated with AQUA-FORTIS, than AQUA-REGIA, because that by thus doing there will be more plenty of SOL 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 shown which is good, which is 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, FARNNERUS, 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 wisht, 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 Glass

cucurbite 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 Charcoal, scarce exceeding three pound weight. Verily if there be any artificial distillation this is 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 distillation 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 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 SOL, 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 vanisheth into the air, and so consequently not at all to be accounted for true SOL, 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 extraction, LUNA or SATURN makes them such, with which we have taken or fished 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 LUNA or SATURN 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 of the extract. Heed these things and proceed on in a legitimate course, and you shall find such things as you cannot as yet conceive of. The Fishing is clearly enough described in this place, and so is the Cementation and Reduction of the Cheese clearly proposed, 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 sollicitous 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 is 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.

N.B. The SOL and LUNA that is in the Extractions may be precipitated by the help of MERCURY, but much more chargably and more difficultly than by LUNA or SATURN, because the MERCURY used in this operation cannot be used a second time.

N.B. The SOL and LUNA may be also extracted from the water without precipitation; by abstracting the AQUA-REGIA from the SOL and the AQUA-FORTIS from the LUNA; 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 LUNA and SOL do retain with them some part of the AQUA-FORTIS and AQUA-REGIA, and thereby become sharp or sour 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 Fishing trade that I have described, being caught it is either edulcorated, or the corrosive power is extinguished by the addition of a fixt Salt; so that hereby the LUNA or SATURN holds with it self as well the volatile as fixt Gold and LUNA.

N.B. He that shall institute this operation aright, will find that the volatile Gold will(in the secret Reduction) yet farther

transmute part of the LUNA and SATURN into SOL by Graduation, and so will reap a double (portion of) SOL for which God is deserved 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. Wise 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 the edulcoratory Water, and not be forced to throw it away.

We have taught in the precedent discourse, how those waters which SOL is extracted and precipitated with, may be used for a farther extraction of SOL: For when the AQUA-FORTIS in which LUNA or SATURN is dissolved is mixt with the AQUA-REGIA wherein SOL is dissolved, there ariseth not any mutation or changing, but that LUNA or SATURN 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 SOL be extracted out of the Metals.

But seeing that the precipitated LUNA or SATURN must be excellently well edulcorated by often pourings on of water, afore it be dried, hence it comes to pass that there is gathered a vast deal of such edulcoratory 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 cannot 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, & etc. The Arch being dryed 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 throughly moist; the Arch being on this wise moistened, dry it again; and being dryed moisten it again as afore, and so repeat this work of moistening 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, viz. 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 extinguished (or mortified) by the fixt Salt inherent in the ashes and lime, and the corrosivity be taken away, and most excellent Nitre may arise thencefrom; 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.

N.B. 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 itself, by the goodness of the Lime and the said ashes, by which that sharpness may be extinguished.

It is, I confess, all a case whither that sharpness be extinguished 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 mortifyed.

And so, by this means, that edulcoratoty 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 LUNA and SOL out of the Metals, Stones, Clay, and Minerals requires.

N.B. 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 mixtion 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 salt 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 by Nitre, shews it self to sight, 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 rendred impure. But if now the operation be instituted aright, we shall get more Niter than indeed is requisite for the extracting SOL and LUNA out of the Metals; so that we may get us SOL and LUNA 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 unprofitable, as it usually happens in the Mint houses, where abundance of LUNA and SOL is separated in great quantity, and consequently abundance of AQUA-FORTIS is consumed, and is presently after the first using thereof thrown away as unprofitable; 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 SOL and LUNA, 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 LUNA that resides in the Metals (or the Ores) which is not at all so here, for all (of it) is made fixt 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 LUNA, either fixt or Volatile, and which may be extracted thencefrom most easily, and with exceeding profit according to the way aforespoken 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 perswaded themselves that SOL and LUNA cannot 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 SOL and LUNA, 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 SOL and LUNA 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 SOL and LUNA requires but very little costs.

If any one desires an easier way of extracting SOL 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 finished) may be reduced

into Salt-petre, like as we have said of AQUA-FORTIS that hath been already used.

N.B. 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 water, for the Salt which hath attracted the SOL in the Cementation, mixeth it self with the Water: Out of this Salt-water mayest thou afterwards catch the SOL by the help of a solution of SATURN, added for the precipitation; now out of the Salt it self mayest thou make excellent Salt-petre. So that yoy may most easily extract out of the Earth both fixt and volatile SOL and LUNA without any melting it. Nay not only LUNA and SOL 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.

N.B. The reason is this, because the Iron being purged in a strong Fire is heapt up as it were into goldenish Scoria which but 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 glassy Scoria, it hath gotten to it self a more noble nature, and thence-forth is able to exhibit or yield good SOL; Yea though they be the Scoria of VENUS or MARS, which thing that excellent METALLURGIST ISAAC HOLLANDUS did also know, when he said, IF ANY ONE MAKES LUNA, ANTIMONY OR MARS INTO GLASS, AND REDUCETH IT, IT WILL NOT BE LUNA, VENUS OR MARS, BUT SOL: AND IF ANY ONE SHALL TURN SOL INTO GLASS, AND THEN REDUCE IT, IT WILL NOT BE SOL, BUT TINCTURE.

Nor was this knack unknown to BRACESEUS, who taught the making of the philosophers stone out of the scoria of Iron, but he is laught 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 MARS it self out of which the SCORIA came was destitute of Gold; the cause whereof we showed 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 beheld the possibility of the thing without profit.

For if this Labour be instituted according to my invention aforewritten, we may extract the VENUS which commonly 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 LUNA or SATURN, get out the SOL thence whilest it is yet mixt with the water, yea and afterwards by the benefit of MARS the Copper it self. He now that well understands the reason of this Fishing 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 falsities, 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 MHENE, 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 MHENE is a River most abounding 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 ¼ quarters of Heaven, as EAST, SOUTH, and NORTH. (THE PINEFEROUS 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 GOLTGANGH 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 unskillfullness 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 MHENE flows forth 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 skilled 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 MATHESINS in SAREPTA testifies that he saw an Iron Stone or Ore endued with Veins of fixt and malleable Gold.

The afore-praised GASPER BRUSCHIUS in the description of this Mountain, mentioneth amongst other things, that in a little Town called TINSTEDEL, 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 SIGISMUND WONS 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 egregeous hospital 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 accompted as a meer fable, but the very pure truth: For in that edifice, the Effigies of the Founder SIGISMUND WONS, and the Foundress BARBARY, 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-man doth in this Pine-bearing Mountain oftentimes throw a stone at an Ox (or Cow) that is more worth than the Ox itself. Strangers give credit hereunto, 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 they that 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 SOL 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 richest 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 taken for granted that this Mountain doth abound with egregious Metals (or Ores) and especially with Golden ones. Upon this accompt therefore the most Noble Marquess of ARSPACH 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 MHENE downwards, to such places as are more plain (or even ground) where Wine and Corn grows, there's no body seeks after SOL and LUNA there, but each man professeth himself well enough content with the Wine and 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 MHENE, 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 MHENE throughout all the East of FRANCONIA even to MAGUNTIA where the MHENE runs 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 MHENE are rarely without Metal: But no body proves or tries them, or put them to use.

At BAMBERG (which is an Episcopal Metropolis) men are become more diligent, insomuch 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 Millet 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 MHENE, which much hinders the Vessels, and especially those Boats which are wont to bring vast quantities of Boards, Beams

and etc. yearly; insomuch 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 MHENE near BAMBERG is occupied with Vessels or Ships, and I my self have sailed along the MHENE, and on both sides of the MHENE from BAMBERG even to WERTZBERG, did light upon various kinds of Metals (or Ores) which were not void of SOL and LUNA, out of which much SOL and LUNA 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 SOL and LUNA untoucht.

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 MHENE, towards the Town which the GERMANS call RONINGSHORSEN, in the Mountain they call HASBERGH, there was heretofore, Copper digged, which now is left of, because the Copper is not fusile enough, nor hath it any sulphureous flint joined with it, by the help of which it is made fluxile (but is) inclosed in a Sandish Stone. Now out of 100 weight of this, there can hardly be extracted, by the help of a strong melting fire 4 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 12 or 16 lbs. of Copper, and this I have tryed more than once. But whether or no that Metal (or Ore) of Copper, contains in it any Volatile Gold, I never tryed, but that there is some LUNA, 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 MOGURTINE Elector, he being at this time Bishop of WERTZBERG; but by the Tryers (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 MHENE doth every where yield such kind of Flints as are endued with Gold. Near CARLSTADT there offers itself in a Wood a certain

white and fat Earth, and after some sort 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 MHENE, where most excellent Wine grows, which the GLASS-MAKERS of SPECHART 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 Country of WERTHEIMEM where great plenty of RUSSELLEIN Wine is gathered; yet nevertheless I have proved several Earths, which I found about BREIBURG, which is the inexpugnable Castle of the Lord CHARLES FERDINAND the Count of WERTHEIMEN, in which I found there was contained much Gold.

Besides these, I found opposite to WERTHEIMEN where there are Vineyards, an Iron stone (white like snow, covered over with other stones) which is endued with LUNA and SOL; as to the external shape it resembles a white flint, very weighty, so as that it scarce yields to the weight of a piece of Iron of like bigness: But it is nothing regarded, and is accompted 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 SOL and LUNA; because that there is sand 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 Salt Petre.

Likewise Talk of sundry kinds is found in the said places, which is endued with SOL and LUNA; 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 WERTHEIMDN do abound with Iron Metal (or Ore) and all kinds of Minerals, which contain in them SOL and LUNA.

Nor are the Metals (or Ores) of less goodness 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 ASCHEBURG, and which contains both LUNA and SOL; 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 SCHILEKROP there offers it self a stony Talk, somewhat ruddish, which besides Copper contains also volatile SOL, and of no use at all because there's but little VENUS therein contained and that the SOL 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 beauteous 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.

N.B. But if we make a Spirit of Salt, and with it being fortified with a fourth part of Nitre, extract the Copper and the SOL out of the said Talk, and then first catch the SOL by SATURN, and then precipitate the VENUS by MARS, we shall not only have very malleable Copper, but shall likewise receive even pure SOL; 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 notifie for the Countries sake.

O thou Zoilist or Carper that understandest not this knack, pass not thou thy judgement hereupon, but rather examine thy Wines, and tell us which is best, either the HENBACHEN, KLINGENBERGICK, or WERTHEIMEN sort: 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. Insomuch 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 shown that it is a 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 MHENE. 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 GLAUBER'S prescription.

If now such may be found in those places that are adjacent to the MHENE, 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 BRUNSWICK, SAXONY, THURINGIA, MORAVIA, BOHEMIA, HUNGARY, and that such like parts of the Earth abound with Metals. Therefore, Friendly Reader, do not thou perswade thy self 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 LUNA and SOL.

Neither doth that, place afford only such Sand Stones, and Earth, out of which volatile SOL and LUNA may be extracted, but withal there offer themselves at the Sea-shore in those Sand hills, which the HOLLANDERS call DUYNEN, which the stony Sea heaps up, Stones of a Sky colour, which contain VENUS. They are called by the HOLLANDERS, ULTRAMARINE.

In this place, is likewise gathered plenty of Ostiocolla 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 LUNA thereout of. There is not therefore, any place that does not contain some Metal, and especially SOL and LUNA.

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 wise volatile Gold; insomuch that no body may on good ground, complain that nature hath denyed him SOL and LUNA, 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 and 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 skilled in Chymistry, but the unskillfull 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 this means of this labour, we may get us, not only abundance of SOL and LUNA very easily, but likewise most excellent medicaments, and which are not to be accompted common; nay, 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 skilled 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 SOL and LUNA as necessity requires? Now these gifts of God do abundantly flow in upon us by this labour; if it were not for the wicked Farnnerianists who are not worthy of any good thing, and do contemn every thing that they understand not, and (so consequently) restrain 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 SATURN, where we will demonstrate by what means SOL and LUNA 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 exhortion of the Philosophers, where they say, MAKE THE FIXT VOLATILE, & THE VOLATILE FIXT, DISSOLVE & COAGULATE & etc.

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 God's permission) to erect a Tryumphant Chariot for Nitre, and to set it thereupon, as the greatest Monarch of the World and 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 SOL and LUNA thereby, I found nothing pretermitted of what may any ways 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 fixed SOL; or by what means they (viz. SOL and LUNA) may be prepared by such like labour in great quantity.

To satisfie such as these I neither will, nor can deferr 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 GEYERSBERGICK, and so likewise out of some Iron too.

Now that such, (viz. Gold) may be made in great quantity we may dissolve the SOL that sticks in Stones, with Spirit of Salt, acuated with a little quantity of Nitre; for such a spirit will not be so costly as Nitrous water is, 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 SOL without those costs (too): And this moist extraction may be excellently well performed in a Vaporous BALNEO.

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 one hours space. 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 SOL permixt with the Lixivium, which is to be thence extracted by the help of the solution of SATURN, out of the Lixivium may Nitre be afterwards made. And now by this means may a most easie and no ways costly

operation at all, be instituted with some hundreds weight.

But as concerning the melting and reduction of the SATURN which contains in it the SOL which is 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 Tigel 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 Wisdom.

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 difficulty 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 Spirits of Salt it may be made in great plenty, insomuch 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 costs 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 my Friends.

Albeit that this be a most easie Labour and of no expences 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 my 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 SOL out of the Minerals without melting, did I not count it wholly an unbeseeming 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, and 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 SOL and LUNA may be gotten even out of the Ores and Minerals themselves, I will a little stretch out the thread 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 stony or not, do for the most part contain in them some Iron: Now then, when a man would thence extract the SOL 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 most 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 Niter, so as that the Nitre thence extracted shall be of more value, than the costs 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.

N.B. 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 SOL: but rather extract every such aureous SULPHUR with a strong Lixivium made of fixt Nitre, and precipitate it with MERCURY dissolved, and so the aureous SULPHUR goes to the bottom, and is to be edulcorated, and SATURN, VENUS or LUNA is to be thereto added, and so they will seize upon the volatile (Gold) and the SOL is by the means of the Lixivium made in some sort fixt, and is to be separated by distillation of the MERCURY: The edulcoration waters do again yield Nitre. So that the extraction requires no costs at all, at least wise but very little.

N.B. 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 MERCURY, 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 LUNA which LUNA is aureous, by reason of the volatile SOL, which was permixt with the SULPHUR. Whereas otherwise, other Cinnabar is by this way (of proceeding) wont to yield only LUNA: For the filings of the LUNA thereto added, become volatile, and vanish away into the Air, for the Cinnabar hath extracted the soul thereoutof, 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 LUNA, edulcorated and precipitated with Salt, or with the Calx of SATURN, either alone or else both mixt together (viz. the LUNA and SATURN) 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 MERCURY called the Mother. What 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 thence from.

Verily it is to be wondered at, that this science or skill hath been hitherto unknown to the Inhabitants of the world, and that no body hath committed the same 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 an humble, and pious Mind; and contrariwise denyeth them to such as are impious and proud.

And here falls in a thing highly needful to be known; by him especially, who would effect ought in Chemistry 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) and this both in the moist and in the dry way. N.B. 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 SOL 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 MERCURY thereto adjoined, (as being of the Feminine kind); every one is bound to

seek after an apt or suitable MERCURY (as being the Female) for his SULPHUR (as being the Male) and to join that MERCURY to this SULPHUR, and let these two celebrate their Nupitials 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 from proceed. Now then let SULPHUR be the seed there, and MERCURY the field it self, yet so as that your SULPHUR (or seed) be pure, and that the MERCURY (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 MERCURY 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 NOLENS VOLENS to leave imperfect, by reason of the defect of Salt and Fire.

I could here present the Student of HERMETICK medicine, with such a foundation, as out of which abundance of commodious conveniencies 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 skilled, my experience in all respects, concerning Sulphur, viz. what is contained in Sulphur, both as to Medicine and Alchemy, and to other things, and unless God be against it and hinder, the operations of SULPHUR are so stupendious 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 babling fellow is a Physican, and every prater an ALCHEMIST, this is the cause why (in plain Terms) the Sciences (of Physick and Chemestry) 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 ALCHEMY) 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 superiour, or which may therewithal compare in MEDICINE and ALCHEMY.

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 wholly 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 Alchemy 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 spill over. This done, put to an hundred pound weight of the Metal or Ore, about one pound of an aureous, 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 forasmuch as this water is of such a quality as that it can neither dissolve SOL nor LUNA, it leaves both the SOL and LUNA, and by reason of the admixtion of the MAGNET, it attracts only the Iron or the Copper. When the water hath attracted as much MARS or VENUS 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 aforementioned, and thus are you to reiterate this work, until all the MARS or VENUS shall be extracted out of the Metal, and nothing

remain behind save a dead Sand, which may most easily be separated from the MAGNET, by the pouring on of common Water, for the sand mixeth it self with it, and the MAGNET remains pure in the bottom of the Vessel, which hath received into it self the SOL and LUNA: This SOL now and LUNA 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 SOL and LUNA it has in it; all the artifice consisteth in the preparation of such a water as extracteth MARS and VENUS out of the Metals or Ores: And therefore must it be of such a nature, as to dissolve neither SOL nor LUNA, and be nevertheless strong enough to dissolve MARS and VENUS and to separate them from the SOL: For that the MAGNET cannot extract the SOL out of the MARS and VENUS unless they be afore dissolved. But as touching the quality (or composition) of this water; 'tis no ways expedient to divulge it, forasmuch 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 fluxile, 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 Alchemy, 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 solicitous about Golden Metals or Ores.

Forasmuch then 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 SOL and LUNA; he that does not know such a MAGNET and how to prepare such a dissolvent, by whose help SOL and LUNA may be concentrated, and VENUS and MARS 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 MARS 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 of lesser REGULUS in the bottom (according to the muchness or lessness of the MARS that the stone contains) which REGULUS compriseth in it self the SOL and LUNA which was in the Mineral or Ore, if such an Iron be malleable, Plates may be made of those REGULUSSES, which are to be dissolved (in the Cauldrons made of cast Iron) with that secret water, out of which solution, the SOL may be extracted by the benefit of the MAGNET, according to the aforesaid 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 SOL, and that bring such great profit? We have said before, that

such matters of Minerals or Ores containing such Iron, are every where to be found: Nor can you light on any common MARS which has not SOL 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 SOL to be found in the Iron that we commonly use which (said corporeal SOL) is far surmounted (as to quantity) by the volatile SOL; but if a man would separate it thence by the help of fusion and the addition of SATURN, 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 endued with Gold) in a most plentiful manner, & I could shew 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 othersome 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 SOL; and this I have often experienced some years since, when I lived at KITZING in FRANCONIA, and extracted thence from by the help of a melting Fire excellent SOL: For as then, the manner of extracting SOL from thence by waters only, without any melting fire was to me unknown. For at that time those most eminent Men Mr. CHRISTOPHER HERBST, the chief Physician of the Prince of ARSPARCH, and Mr. ADAM RENNINGEN the said Prince's Lieutenant, and chief of his House, (or Governour) in the Castle of BLASSENBURG near CALMBACH, 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 LUNA; 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 SOL and LUNA 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 HIRCINIAN Wood, BRUNSWICK, and HASSIA yield such kind of Minerals. Nor is SUEVIA destitute of such Iron as is impregnate with SOL; and amongst other things I think good to declare that some few months since, a certain BASILIAN Ruler sent me a portion of such kind of Iron; withal relating, that the lesser experiment did there yield ten Crowns of Gold, and that an hundred weight was of this Iron sold for nine FLORINS price. Which Iron when I had tried by the help of a fusing or melting Fire I got a sufficiently great quantity of SOL, but in proceeding by my moist way, I got twice or thrice as much.

Such kinds of stones as these are found in plenty throughout all GERMANY, to which may be reckoned the red and black Talk, the Irony Talk, black and red GRANATES, SMIRIS, HEMATITES, and the like, which always are endued with SOL, if not with fixt, yet with volatile Gold. So that now it is manifestly apparent, that in those places

where SOL is digged, all the stones are repleat with volatile Gold at least, if not with fixt SOL too: like as all the Iron that is digged in SPAIN doth of a certainty besides volatile Gold contain also corporeal Gold. Nay more, there are not only found such stones that have Gold in them in those hotter places, but also in most cold places too, witness NORWAY; where you may meet with whole Mountains consisting of Iron, Talk, and Granates; out of which there has not hitherto been any SOL gotten by the help of a melting fire with any profit; though I my self have found SOL, in the lesser experiments.

Last year Mr. J.W. brought me various Ores out of the County of EYSFELDEIN, that I might try what they contained. Amongst others, there were some little grains of Iron round like a Pease, though somewhat lesser, thus generated in the Earth naturally: This Earth as I was informed, is altogether black, one handful of which contains 10, 15, 20 Grains; wherefore it is not improbable that all the Earth of that place is repleat with Iron; these little Grains are so very tractable, as that they may be made into Plates with an Hammer, and contain much Gold.

Such a kind as this of black Iron grains (yet not so round or tractable as those but now spoken of) were brought me from SAXONY, which are endued with plenty of Gold, but volatile; they are easily pulverisable, and (as was related to me) are to be found near the Mountain which the GERMANS call GEYERSEERG, where also is gathered a Tin stone, which doth also contain Gold, such as MISNIA yields more plentifully. Out of 100 weight of this Tin, I found that 10 or 12 Crowns of Gold might indeed be extracted; but this work requires such costs as far exceed the price of that which is extracted; and therefore they sell off the Tin, just as 'tis digged out, to avoid the expence of extracting the SOL.

That which is gathered in the said Mountain, I have often tried, nor did I ever find it destitute of SOL, the which may be very well extracted by my moist separation.

The STABELEIN Abbot presented me with such like Iron stones and

several others that had Gold in them, together with diverse Minerals, some 18 months ago, some of which were gathered in WESTPHALIA, some in the Province LUTTINGE, in that part that is under the Government of the Elector of COLOGNE, P. M. The Prince himself having a mind to see by what means I would extract the volatile Gold out of them, came unto me, but he died in his Journey homewards; since that I have not received any more of such like aureous Metals (or Ores).

Amongst other (Ores) I knew an Iron Metal (or Ore) found in WESTPHALIA, the half whereof was very aureous, but of no use, because the Metal-men were ignorant of the way of separating those Metals from one another; whereas notwithstanding both the pure Copper, and the SOL it self may be most easily separated from the Iron according to the way be me delivered.

There were also a while ago several Iron stones brought me by the COLOGNE Merchants, and especially Mr. PETER SEVER (P.M.) which are found in plenty in the Mountains, and do abound with much SOL: Besides this too, all the Mountains of GERMANY, do yield a yellow Earth, endued with Iron and LUNA: Of which kind a certain Physican of ERFORT sent me some, which (as he related to me) at EYSFELDS near ERFORT towards the Province of MORGUNTIA is plenty thereof.

Such an Earth containing silver, I my self found here in the bordering places 'twixt ARNHEIM and EMBRICK, but not of such worth as that of EYSFELD is.

Who knows but that that same place which we call VELAW hides in it vast Treasures. For I have found near AMHEIM a white Clay and Earth out of which I extracted some LUNA: Yea and I found there too, true Veins of Iron, which whether or no they contain SOL and LUNA I cannot tell: For I never proved them, but the first opportunity I have I intend (God willing) to make an Essay.

Thus 'tis evident that there is not at all wanting unto us the matter of effecting some good and profitable thing by, but the love of idleness is the reason why we neglect abundance of sufficiently obvious Treasures.

The Earth nourisheth men of diverse natures; for some of them are altogether slothful, sluggish, and extraordinarily backward to labour, and yet nevertheless get fat bodies enough; On the other hand, there are some who are very diligent, and do too much consume themselves, and concerning whom (being like unto a burning Candle) they may say thus of themselves, BY SERVING OTHERS, AM I CONSUMED. And as much benefit as the Candle get by affording a light unto others and by consuming it self; so much doth there redound, especially from ungrateful men, to a diligent man who by serving others wasts and consumes himself.

These and such like most abject Subjects are plentifully enough to be found in all parts of the World where Mountains are, and out of them may you extract LUNA and SOL by the help of my nitrous Water, were but the way of doing it known, which way hath been hitherto reserved amongst ARCANA by reason of mens extream ingratitude. And I pray is it not altogether useful and expedient that we should gather such Treasures, and make use of them to Gods Honour, and to the defence of Kingdoms and Mankind? Is there not sufficient store of idle fellows, whom it would be very expedient either to invite to labour or (if they shum work) to bansih them the Kingdom?

I believe that this blindness will hardly leave men afore they are reduced to straits, but beware least you hap to begin to grow wise too late.

This work, like as is every other perfection of Metals is done by Sympathy and Antipathy: For that dissolvent which drives off SOL and LUNA from it self, by Antipathy, all this doth a mercurial MAGNET greedily attract by Sympathy, seeing it thus, that viz. as like loves its like, and draws it to it self; so one contrary hates another contrary, and drives it away.

Two contraries do always produce a third thing. Where the Agent acts upon the patient, and that this patient is even enforced to suffer against its will, and cannot by any means shun the force of the Agent, there must of necessity arise some better product from them.

When water is added to water, neither of them suffer, because they are both of them of the same nature: But when fire and water are joined together, the weaker is the sufferer, and from them doth a third thing proceed.

The stinking and volatile SULPHUR is the enemy of SOL, and common Salt, of LUNA; and by how much these have more stench the one, and sharpness the other, so much the greater is the hostility they shew. The greatest matters are performed by love and hatred; such things as are friendly beget a cheerfulness, joy, and vivacity: Whereas, on the other hand, the things that we abhor beget a tedious wearisomeness, grief and death: Therefore the more acceptable a thing is, the more it brings of life; the less acceptable the more of dolour doth it bring. All the perfection therefore of the baser metals consisteth only in Antipathy and Sympathy: And if once we do but rightly know the nature of metals, all things are easily accomplished.

It is storied of a certain Philosopher in ITALY. That he had committed some evil deed, for the which he was accused, apprehended, and cast into prison, being here shut up, he could not be brought, neither by entreaties, nor by threats; no, nor by any means to confess his fact; but at last they put into his company a man of no sobriety or modesty al all, who did so grieviously exasperate him with his words, that the said Philosopher could not brook it, and so rather chose death; for he affirmed, that the mind of man was far more noble, than to be plagued by such a tagrag, with reproachful contumelies.

Even just so is it with Metals, by how much the nobler and purer they are, so much the less will they commix themselves with impure things.

Gold the purest of the Metals cannot be knit with stinking impure and common SULPHUR; for there is an antipathy betwixt them. Salt alone is endued with those virtues as to be able to reduce contrary natures into agreement, and to commix them; and being commixt, the

fixt SOL is able to make the unfixt SULPHUR, like unto it self in respect of fixity, whereas otherwise they always persecute each other with hatred. SOL cannot suffer any thing until it has gotten the nature of a Salt, and then may it be tormented (as it were) by the impure SULPHUR, and be changed into better.

When the Soul of the imperfect Metals (which is a spiritual SOL) is to be forcibly pluckt, and severed from its body, it cannot possibly be done without the dolour or pain of the Patient; for where the pure and spirituous goldenish substance that dwelleth in the corruptible bodies, is to be made Corporeal, and consequently assume a more noble form, the first form must necessarily be annihilated, that so the hidden tender body may come forth to light and be seen.

And this verily is done by another kind of way than the common and already known; by which (said common way) the Metals are separated by AQUA-FORTIS from one another, and are afterwards Molten. For if any one should make one Metalline Mass of MARS, VENUS, JUPITER, SOL, AND LUNA, by melting, and then would again separate them, by the help of common AQUA-FORTIS, he would effect nothing; for the AQUA-FORTIS would dissolve only LUNA and VENUS and part of JUPITER and MARS, and leave the remainder with the SOL undissolved, and that which remains of the JUPITER and MARS (undissolved) would be left behind with the LUNA, and so there would not be made any good separation.

But if so be that any one has a mind to attempt this thing on this wise, and should say, I will dissolve MARS, VENUS or JUPITER, by the help of AQUA-FORTIS, or as much of it as possibly I can, for so the LUNA that is in the mixture must needs be dissolved. Now then when its dissolved I will precipitate it (viz. the LUNA out of the solution, by salt water (if it be so yet) the SOL therefore remains, which could not be dissolved by the AQUA-FORTIS; or, if I should dissolve the Metal (or mixture) by AQUA-REGIA, then the SOL is dissolved, (but not the LUNA) and so I can precipitate the SOL out of the solution, by a Lixivium, and and edulcorate it, and

melt it, and so by this means may I get it. Well (let me tell you) that neither will this way fadge, for these Metals, and especially MARS and JUPITER are too terrestrial, and admit not of such a separation, though there should be in the aforesaid Metals, abundance of Corporeal SOL and LUNA, whereas notwithstanding the greatest part is fluxile, and must be again made fixt and corporeal by solution; for in this work the already pure and fixt SOL and LUNA may be altered, so as that a Mercurial magnet cannot be able to assume them. As for example, Take you a Metal, as MARS, JUPITER, or VENUS, in which (as is well known) there is Corporeal SOL. Dissolve this in AQUA-REGIA, and precipitate the SOL by a lixivium of fixt Salt; boil this precipitate with MERCURY; and see if that precipitated SOL will pass into the MERCURY; you'll find not, for this SOL hath gotten a Crust (as it were) in its precipitation by the Lixivium; that is, it is environed with a saline Terrestreity, in so much that the MERCURY cannot attract the SOL.

Neither likewise can MERCURY attract or assume such a silvery Calx as is precipitated out of the solution with salt water, and that by reason of the terrestreity alone, which adheres thereunto by means of the precipitation, by which it is altered and deprived of a pure Metallick form.

The truth hereof may you easily experiment, on this wise. Dissolve a particle of pure LUNA in AQUA-FORTIS, and dissolve the same quantity pure SOL in AQUA-REGIA, precipitate the LUNA with salt water, and the SOL with a Lixivium, so as that the LUNA be precipitated into a white, and the SOL into a yellow Calx; edulcorate both Calxes apart after the best way that possibly you can, with hot water many times, so long till the edulcorating water be wholly sweet, then weigh these dryed Calxes, and you shall see that the LUNA and SOL you took, are one forth part heavier than before the solution of them; and this is to be ascribed to the Salts only, that have adjoined themselves to the metal in the precipitation, and cannot be thence separated by edulcoration; and therefore such a silvery Calx yields not (when molten) a pure Lunar body, but a certain Ashy

coloured Mass, fluxile and volatile, by reason of the Salts; and this Calx is not changed (or swallowed up) into the MERCURY neither before nor after its being molten, nor (after its melting) can it ever be dissolved by AQUA-FORTIS or AQUA-REGIA, which alteration proceeds meerly from the Salts that have adjoined themselves thereto in the precipitation.

Even just so is it with such a golden Calx, which being separated by precipitation out of the AQUA-REGIA with a Lixivium, will not have ingress into MERCURY, by reason of the impurities that accompany it; and therefore this golden Calx (when it is made hot) kindles, and vehemently operateth upon it self, and this is meerly from the Salts.

From hence it is clearly evident that the Calx of LUNA precipitated by Salt, and the Calx of SOL by a Lixivium, have not any communication with MERCURY, how then can such a Calx, which is (now) at first forced out from many terrestrial parts, and imperfect Metals, and separated from them, have a greater communion therewithal, have ingress thereinto, and conjoin it self therewith by digesting. Other ways therefore must be taken, by which you may extract the volatile and fixt Gold, that lies hidden in MARS, JUPITER, SATURN, or VENUS: Now many there be who do in vain search into those things which they know not the nature of, and so walk in darkness like one that hath already fallen into a Pit.

But if you come to know such a menstruum or dissolvent, which is an enemy to SOL or LUNA, and yet nevertheless doth plainly dissolve MARS, JUPITER, VENUS and SATURN, then the spiritual SOL that lies hidden, will manifestly appear corporeally and visibly, and will pass into the MERCURIAL Magnet.

Besides, this dissolvent must likewise be of such a nature, as that (when in the solution or digestion of the imperfect metals, it makes the spiritual and volatile Gold corporeal, and casts it off from it (as I may say) by antipathy in the form of a powder) this powder may not be environed with any crustiness as above said, but that hath the Calx of LUNA and of SOL may have their natural metallick

splendor, whereto the MERCURY may adhere, and may attract unto it self whatsoever the dissolvent separates by the continual digestion.

Farther, this Dissolvent must be of such a nature as not to be so sharp as to dissolve the MERCURY for then the work would not succeed; indeed it is scarcely necessary to make use of the MERCURY to receive into it the spiritual and fixt Gold which is separated in the digestion, fixation and separation of the Volatile SOL of the Metals; for when it is once evacuated it will never again occupy (or seize upon) its impure body; yet notwithstanding this chiefly is done for this reason, viz. that the spiritual SOL and LUNA in the imperfect metals may be the more willingly made Corporeal, when it finds a fitting subject wherein it may lie hidden and rest. Besides too, this spiritual SOL and LUNA of the Metals, is indued with such virtues, as that it tingeth some part of the MERCURY into SOL and LUNA, when it hath thereinto entred, whereby it yields the more profit.

Thus much likewise are ye to know, that this labour does not only proceed in the moist way, but also in the dry; but yet far easier in the moist than in the dry way; yet in the (dry way) a greater profit is gotten in a shorter time. For like as to one measure of Milk are required 1, 2, 3 or 4 spoonfulls of Salt, that so the Cheese (or Curd) may be separated from the water (or whey) but there needs not the quantity of one spoonful of the Spirit, which is much stronger than the bare Salt: Even so stands the case with Metallick operations; for by how much the greater and more powerful the Agent or Contrary is, so much the sooner and stronger doth it perfect its operations. Hence it is, that where the Agent must be yet more strongly active, (as is in the dry way, it must of necessity be where the strong fire adds virtue and vigour to the Agent) it being consequently more contrary (or powerful) the separation is sooner perfected. For example; Let us see how it is with Milk, where 10 or 20 drops of Spirit of Salt separate some cold Milk, there will

need but half the quantity only when the Milk is boiled or otherwise heated; even so is it with meaner Metals, corporeal and visible; it operates far more strongly in the dry way, than in the moist way; for in the dry way, the external fire aideth our Fire, and hereupon finisheth its operation so much the sooner; but in the dry way must another Magnet be made use of.

Thus much let suffice touching the particular washing or external purgation of the viler Metals; as concerning the internal, central, universal washing, by which the interiour Soul of SOL and LUNA is extracted for the Tincture, I do not as yet (certain) know any thing thereof, nor desire I to know such abstruse and hidden things; content I am with such things as God of his meer grace hath bestowed upon unworthy me, and if God shall so please, so far to profit mankind either by mine or any others help, he will also present as occasion of laying hold thereon, viz. on the Tincture, for all good things come from God.

Now in this action (or operation) is required an ocular inspection, such great things cannot be understood by Books or Writings, and he that desires to excel in these (operations) let him take it in good part, that (I say) he ought frequently to hear me as a master, and to see me labouring about these things, which otherwise he will never learn, for the common Alchemists are plainly ignorant of this work; yea the Ancient Philosophers did hide it as a secret, the most they could, that so it might not be trodden under foot by Swine.

But whereas I do so clearly set down these things, otherwise than ever any before hath done, the consideration of the time (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 aforegoing treatise of Spiritual SOL, which might be extracted, together with the corporeal, and some or other would perhaps very willingly know what is to be understood by the name of Spiritual SOL; 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 SOL it self, because the body which it dwells in is gross, 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 Ass clad in a Lions skin, as if he were their King, and this mearly by reason of his skin; though inwardly he were an Ass? 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 haply is a thief or a knave; and so on 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 sinisterly 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, comtemptible or honourable, though his nature (or education) possesseth other properties.

The like is to be understood, concerning the contemptible Metals, MARS and VENUS, which according to the report of all the Philosophers have more Tincture in them than SOL it self hath; but yet by reason of the gorssness 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 MARS and VENUS 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 MARS, VENUS, JUPITER, or SATURN, and dissolve the pure Soul, and expel it by antipathy, out of its impure house, and contemptible garments, and set before it a pure MERCURY, it possesseth it, and so assumeth another nobler body than it had before, and which then is SOL and LUNA, 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 SOL 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 SOL, I could not leave the speaking of the Spiritual wholly untoucht, 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 SOL. 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 SOL or LUNE.

There is yet one thing more to be added, in some places they are wont to reduce the SOL and LUNA into a powder with MERCURY, that so the Corporeal SOL and LUNA 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 seldomer 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 SOL nor LUNA, when it (viz. such a Metal) is commixt with MERCURY, Salt and Vinegar, and let lie to act upon each other for some days, it comes to pass that the Mercury attracts the immature, Spiritual SOL and LUNA, and makes it corporeal and fixt, so as it may thenceforward be molten. If then the Spiritual SOL and LUNA doth so easily enter into the MERCURY, 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 MERCURY only,

and Salt and Vinegar, with which they mix the Metal with the MERCURY, nor can they possibly do so much as my secret menstruum which penetrateth all things.

When now the Matter, together with the Salt and Vinegar is duly separated from the MERCURY 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 LUNA, 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 MERCURY, so much of LUNA do they receive in its stead, which is a thing well worthy the noting. And deserves a farther inquiry, and is not here set down in vain.

Let not 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 FARNNERIANISTS have given me this document; many there have been who have come unto me and declared the misarable 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 of God, to succour them, by communicating to them some operation, whereby they might sustain their lives, promising that they would requite this kindness by their earnest prayers unto God in my be half.

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 pirvity, 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 they 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 Gift-hinderers 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 Visits.

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

F I N I S .

THE

FOURTH PART

OF THE

PROSPERITY OF GERMANY.

In which are revealed many excellent, useful Secrets, and such as are serviceable to the Country; and withall, several Preparations of efficacious Cates extracted out of the Metals, and appointed to Physical uses; as also various Confections of Golden Potions. To which is also adjoyned 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) wonderful Secrets, and unto every body most profitable, but hitherto unknown.

The PREFACE to the Friendly READER.

Although 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 adjoin some Broth and sugared Sauces and Seasonings to the other Meats disht up 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 do I find any other obstacle, save only the scantness of time, which I am constrained to imploy 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 adjoin (setting aside other things) unto the afore-disht-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 hindred 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 detection of other Secrets.

Now by how much the viler 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 ought have been more adorned with Secrets of greater moment afore its being exhibited to every ones view. And amongst those Secrets, 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 robbed 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 lyes.

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 rendered even wholly invincible. History maketh mention too, that the AEGYPTIANS (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 Yoak of the ROMAN Monarchy, even until that time in which their Books comprising the Art were burnt by the Emperiour 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 throughly stored with such kind of Books, whereby the ROMANS did the easier 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 do 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 adjoin 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 SAUCE, and what is meant thereby.

I have obliged my self by promise, to adjoin unto those my Meats which I have hitherto dist out upon the Table, some good Sauce 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 Sauces be correspondent thereunto, and that even they as well as the meats themselves, be by reason of their savouriness, 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 filled 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 toothsomer) taste to all kind of Fruits, Seeds, and Spices,and Sugar: So likewise must I, in the making and dishing out such Sauces 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 LUNA yielding most sweet Spiceiness.

But afore I dish out my Pickles, I have thought good to set before 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 taste of my Butter and Cheese, whereby they may with the greater delight taste the sweetness of the following Sauces.

And although I was minded to exhibit in this place some excellent and efficacious Metallick SAUCES; 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 Sauces may be made out of the Vegetables, and Sauces 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 Sauce, and 'tis most truly spoken: For amongst all the Sauces 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 sweet 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 savoury Sauces and Picklings needful 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 Sauces as him listeth. And having shewn this, we will proceed on to the description of metallick Sauces.

He that is desirous of a good Sauce or Pickle fit for Flesh and Fish, will not find any thing that is more fit or proper than a well-prepared and rectified 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 Sauces 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 same in little Saucers, that so all those Meats may leave the more gratefull taste upon the Palate: Even so may the same 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 confection of those well tasted Sauces. 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 taste, it provokes to Vomit, if it be taken into the Stomach: 'Tis likewise of a yellowish colour, and with its sharp constriction 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 Lemons. And being furnished with such a sweet or pleasant Juice of Salt, I need not any Wine, Vinegar, or other sharp Juices of Grapes, Lemons, Rasp Berries, Sorrel, and the like, to give a pleasant and savoury taste 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 Sauce 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 taste, such as are Parsly, Garden Cresses, 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 Sauce to Flesh and Fish. But if now the Sauce 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 throughly about without ceasing, with a Wooden Spoon, and then being molten it assumes to it self the saline Vinegar, and the Sauce becomes thickish, the which must be then poured out to the boiled and seasoned

Flesh or Fish. But if green Herbs, as Chervil, Parsly, Cresses, PIPERITIS or Spanish Pepper, and such like are to be adjoined thereunto, you may bruise or chop them small, and then put them into the Pot unto your hot Broath or Sauce, and mix them well together, and then presently pour out your Sauce to the Flesh or Fish, for by this means the Herbs retain their taste and greenness, and so delight the Eyes with their lovely aspect, and please the Palate with their pleasant taste, which would not be if they boiled much with the Liquor, for then they would lose both their subtile taste and green colour. Moreover, you are warily to observe in this thing, that this Broath or Sauce be not let lie upon the Coals too long, and so the ACETUM separate it self again from the Butter;which to prevent, there may be mixed with the Sauce one, two, or three yolks of Eggs, which being well stirred with the same makes it the thicker, and better to stick on to the sopping when you take it out of the Dish where the Flesh or Fish is.

Such Sauces do give the Fish either boiled or fried, a most acceptable taste, 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 Sauce as he listeth, and render the same with some Herbs and Spices, the more savoury 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 Sauce as best likes him, and make it far more pleasant and delightsome 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 Sauces. Nor would I have any one to be so bold (and foolish) as to contemn

these my Sauces afore he hath tasted of the same; for I doubt not but that if he once comes to taste the delightsome pleasantness of the same, 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 taste 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 may'st be a Master of thy desire by observing the following Operation.

Take of Cows Milk, Sheeps or Coats 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 out 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, and lay thereon heavy weights and squeeze out all the wheyish moisture. Then take your Cheese 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 cleansed; Being thus mixed, fill your Vessels or Cheese Fats (which let be) greater and lesser (as need be) 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 urable

Cheeses, not unlike to those they call Parmesant, 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, nay they never are 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 Rennet, from which nothing can proceed but Rottonness 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 condenseth the Cheeses, and impedes any fermentation, which dilateth the said Cheeses and makes them spongious and porous; and by this condensing them, it makes them remain safe and free from all putrefaction.

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

Good Cheese must neither ARGUS be, LARGUS nor MAGDALEN, METHUSELAH, nor HABBACUCK, 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 METHUSALEM, nor light like HABBACUCK, nor full of stinking holes and rotten sores like LAZARUS: which defects if Cheese 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 Cheese 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 Cheese, or Cow Milk Cheese, 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 fit Sauce for Fish and Flesh, and likewise good and durable Cheese; 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 taste, and such as will not easily contract a rank taste, 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 taste, and separate the Butter-milk according to the usual custom, then put the Butter in a wooden Vessel, and wash it so long in pure cold Salt Water, until there be no more Wheyishness left, and as it was at first putting on, and that the Butter appears sufficiently clean, which wash it once again, 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 Salt 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 sort of Salt of a sexangular shape like a Dye, as is prepared in my Laboratory, he may use that, as being by far the purer. As for the Vessel it self 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, washt 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 savoury 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 Cheesyness, let that froth be neatly 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 'tis 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 barrelled 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 Cheesyness, from which it had it 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 I was willing to take out of my Kitchin and set afore you, namely Sauce, Cheese, and Butter of good and exquisite taste, which if they please not the Palate of some or other, I would have him 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 Censures 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 Cheese, he hath thrust his Sickle into the Womans Harvest. Well, let them prate as pleaseth them, Geese 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 Woman's Work, and Boys Play, (but yet) it will reveal to the Ignorant more good, than (is attainable) by the perverse instructions of all such Authors whose Writings are Spinned out to that height of subtility as to exceed every ones Capacity.

'Tis not every one that will easily apprehend those (Knacks) which I teach and reveal under this Cheese-making Trade, and these Kitchin 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 Cheese and Butter making: Let us in Gods Name enter upon another Work of Women, and Boys Play, which Kitchin-like Labour, and Cheese and Butter-making, is meerly 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 stiled Alchemy, 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, forasmuch 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 Sauces.

And whereas the making of the Sauces (or Sweet Meats) with Sugar,

doth not only belong to the meaner 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 Womans 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 Women, and compare our metallick labour therewithall, there presents it self unto us, a very notable agreeableness betwixt them. The Womens Work is to boil and wash, and when they are about to boil, they set their Pots over the Fire, and having wast their Flesh, they strow thereon some Salt and Spices, and boil the same in the said Pots with Water, Wine, and Vinegar, till it be tender, and become fit to be eaten. They likewise feed the Fire they boil withall by putting Wood thereon, whereby the heat may be kept up, and no impediment may beride their Work: 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 Soap, or even both together to take away the remainder of the filth, and to wash out all the Soap and Dirt, then do they again wash off the Soap and Lee with fair and hot Water: But as for the odour that the Soap 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 again repeat the same labout, until all the stinking smell of the Soap be drawn forth by the Sun and the Air, and a better and more wholsome 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 Chests and Trunks, and keep them for their use.

Just so do we deal with Metals,when we wash off their defilements,

and do by boiling turn them into wholsome 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 philosophical, moist, cold, and vaporous Fire; and the other is the elementary and common Fire, by which we stir up the former Philosophical Fire to display its virtues, and render it powerfull and efficacious.

The elementary Fire we make with Wood, Coals, or Oil: The universal Agent, or Philosophical, Cold, Moist, Digesting, Penetrating, Mundifying, Bettering, and not Burning, but Conserving, and vaporous Fire, we seek for in Salt, and leave the Operation to the vivfying Sun and Air; which being well done, we obtain wonderfull Plants, and most efficacious Food, or Sauce for our Life.

And forasmuch as my purpose here is, to treat of such metallick and medicinal Sauces, I will here in God's name adjoin some of them, which being as so many samples or patterns, every one may at his pleasure imitate in composing and making of the like. And he will here find a way of confecting some good Medicament, as clearly and evidently demonstrated by me as was lawful for me to do, nor was it in my power to discover the same more perspicuously: 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 Sauces, it is also behovefull to have a metallick Sugar and Spice, and this, SATURN will afford us in the steed of the common (Sugar) by whose help we reduce SOL and LUNA 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 out-go the sweetness of any Sugar, which thing ISAAC HOLLAND doth very evidently testifie in his Treatise of SATURN. The Chymists do frequently extract a sweet Salt 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. Form it therefore will we prepare our Sugar to make our metallick Sauces withall, as follows.

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 uncessantly 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 Faeces 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.

In these clear Vinegars, therefore being put in a Glass Vessel, pour thereinto (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 Linen Cloath 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 taste; 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 Sauce) shew it self, and discovers its former taste, 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 Sauces 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 pleaseth him.

But that I may contract these things concerning my Sauces into a narrow room, I suppose it is well enough known, that Sauces and Junkets are disht out in the second course for this end, either to close up and strengthen the Stomach, or that if a sudling storm be at hand it may drill the readilier down into the Stomach 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 Stomach by such an unprofitable Prodigality, and so detriment the Body it self too. No, but the main drift of my Sauces should rather be this, viz. to remove that evil which is stirred up in the Body of Man, by the common Junkets and overmuch guzling in of Wine, and so strengthen the Stomach, 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 Ingeny of Men in such wise, as that they may be 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 taste on my Palate than Bar-berries, and Ribes, or ST. JOHN'S Grapes as they call them; which fruits, preserved up with Sugar, do not only get the Stomach an Appetite, but do withall allay Thrist, and do extingusih all the internal heat stirred up and kindled by overmuch drinking: The like metallick Sauce 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 taste; 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 Irons 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 filled 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 that 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, of half an hour at 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 Alchemy. In the bottom of the Retort you will find a molten Mass, resembling LAPIS HAEMATITUS, which being separated from all defilements, will give you a red, brittle, fusile Stone, and in some sort astringent, of great virtues in Medicine, and without doubt in Alchemy 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 full impregnated with the Salts, 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 Fistulaes, if used outwardly and inwardly too.

It doth most safely and most certainly help all the overflowing, of the Menses of Women, and is so excellent a Medicament in the DYSENTERY, LIENTERY, and other FLUXES of the Belly, that its like is not to be found.

Thus have we that true and genuine HAEMATITIS of the Ancient Physicans, of which they have written so many things, but what through the carelessness of the Physicans 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 HAEMATATUS, and in the dead HAEMATATIS of the common Physicans, which is called for at the Apothecaries and administred to stop Blood withall: But yet it is nothing else save the Stone of Iron, and such Ore as is very rich and abounding with this Metal, the fragments of which appears (either) in the form of spear-like Stria's or Streeks, or like a cleft Stone. This our live HAEMATITIS is of the same form, but soluble, and is of a very pleasant and astringent sweetness, and containeth most efficacious virtues for the alaying of all bloody Fluxes both outward and inward. Now that common and well-known HAEMATITIS doth not possess any more virtues than that Iron-sinder-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 Taste as is the Stone it self, which resided in the bottom of the Retort. And being externally applied

in cleansing and mundifying old Fistulous Ulcers, it works much stronger than this our HAEMATITUS (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 Sauce or Junket, as every good Physican 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 HAEMATITUS, 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 do better to pass these things over in silence, because to the greatest part of unskillfull 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 forasmuch as the Metals are not all of them indifferently fit to be administred 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 Sauces and Junkets; 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 Sauce or Junket out of Silver, which helpeth the Distempers and Diseases of the Brain.

The skillfull Chymical Physicans have assigned Silver for a Medicament for the Brain, which Assignment of theirs I acquiesce in, and do here present you with such a Sauce 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 linen Cloth placed in a Funnel, that so the remaining moisture may drain from it. Then tie the cloth very firm, and squeese out, in two balls (or squeezings) 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 Metal) 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 administred (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 do likewise; but in Chymical operations they are of eminent use. Now although this Stone be it self of a fugicious 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 mixtion) 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 powerfull virtues, and for that reason doth the Silver suffer the more, and doth by so much the sooner attain to a constancy in the fire; and so 'tis evident, that the name of Alchemy or fusing of Salt, was not imposed on this Art for nothing. For by the help of Salt, are the Metals to be molten and meliorated, which thing you may take notice of.

Another Sauce 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 squeese 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 therein 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 do 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 so he may come to find, how great the Effacacy and Utility of this Process is, though delivered so very briefly.

Another Junket or SAUCE, 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-grease, and other such like corroborating Simples. This medicament being confected with Sugar, is lookt on as the chiefest amongst all those Medicines which are wont to be administred 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 suitable, 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 do, which are brought us from MOMPELIER. This way of preparing the said Gold, is as follows.

Dissolve the Calx of SOL, 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 thereinto a bit of Tin, and such as hath no Lead commixt therewith, which said Tin, the allayed 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 settle to the bottom, but as subtile 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 so 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 thereunto this Golden Powder with a little Amber grease 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 is it for this work. And in the Composition it self you may use this following weight or measure.

Take of the Calx of Gold 1 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 upon 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 settle 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 one Lot of that purple and tender & good 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-grease, 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 strengthning 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 stirs up the appetite to food.

And thus much may suffice this time about Sauces 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 feastings (or merry-meetings) the Guests are wont to drink Healths to their Lords, and top off many Cups, and store of Glasses full of strong Wine, it cannot possibly be, but that their Stomachs must be stuft with tenacious and clammy humours, and the Head much oppressed with Catthars, and the Bowels filled 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 tenacious 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 clamminess, 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 contemn 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 excell 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 washt 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 administred 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 administred.

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 preceeding 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 sublimate, 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 Reveiver so long till all the Spirits are settled, and that the Receiver be become clear again: Macerate the Lute, which joined 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 Blood. Then pour in thereupon some common fair water, and the Antimony and the Gold will precipitate into a Purple Powder, which is to be washt 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 Liquor, 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 spoken of red Solution, thereby to precipitate the same, but 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 its taken out of the Glass, any washing at all, because being administred 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 Leprosie, Gout, Dropsie, French pox, Plague, Scurvy, and all Fevers 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 LUNE, or purging SATURN, and molten in a Crucible, turns into a red Stone or Glass, 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 administred. 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 adjoined 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 Glass; 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 Alchemy, if all three of them, viz. the Saturnine, the Lunar, and the Solar are reduced by melting into a Glass; this Glass 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 CREAT, 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 deservedly be eschewed.

Or if we did but know the way of fixing it without any corrosivity, by those three principal Columes 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 Salivations, 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 Physican 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, into a sweetness on 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 transmuted 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 Coppery 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 she resembles the fairness of DIANA; and he, the comliness 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 washt 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, until 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 washt off, as made all the Sea green and sweet, and it hid (or swallowed up) MARS himself, being now much diminished, insomuch 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 (slim) lame, (hopping fellow) could not get out again, 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 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 busie 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 DELICATES.

Because therefore we have in the three precedent Sauces, or Junkets, presented you with fine savoury 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 Sauces 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 IGNORAMAS his Fraternity babble many Stories, and falsly boast that no true potable Gold can be prepared, or be in Being without the Philosophers 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 conjoined, are dissolved in a

sweet and not Corrosive MENSTRUUM, and rendred fit to be administred to the Sick in Water, Ale, Wine, or any other Liquor. 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 REGIA, or Silver in AQUA FORTIS, and then to imagine that he hath potable Gold and Silver, he is altogether in an Errour. Potable indeed they are, because they may be drunk like other Liquors; But forasmuch as those kind of Solutions do corrode all things, and bring extream 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 thereout of, 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 corporeal 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 perswade 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 blood 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 until 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 adjoin 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 conjoined 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 fair potable Gold, I do adjoin to my Cates or Sauces 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 pleasanter taste, as having (through long Process of time) lost their Sulphureous Taste.

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

Furthermore, I do here serve out instead of a good drink, the golden-coloured Soul, or my Tincture made of Niter, of which I have spoken in the second part of my Spagyrical 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 Alchemy 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 Spagyrical 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 fruitfull, and this will easily appear to be so, if you do but take some Vegetable Seed and macerate in the same, and then put in the Earth, it grows far speedier and ripens much sooner than other Seeds are wont to do.

I have sometimes macerated Wheat, Barley, Pease, 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 publick use, in these United Provinces; to which end, the most Supreme Orders, General and Provincial, have granted me a Priviledge (or Patent) for many years; whereby it is forbidden to sow or plant barren, Sandy Grounds and undunged, 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

Grain, and to yield fruit, a thousand fold. Nor doth it only make the Vegetables fruitfull, 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 do very well suit with the metallick Sauces or Junkets, 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 Complexion; in the accomplishment of all which things, that pure and golden coloured Tincture of Niter excells.

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

Therefore as touching the Complexions, the Ancient Physicans 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 indued with hot and moist Blood, and of a sound Constitution, are diligent, learned, pious, prone to Venery, Ingenious, Cheerfull, and for the most part long lived, but are subject to hot Diseases, as Fevers, the Plague, and the like; and do in their nature resemble the Sun, amongst the Planets, and Gold among the Metals.

The CHOLERICK have very black Hair, a yellowish Skin, and their Blood is hot and dry, and they are wrathfull, quarrelsome, strong, bold, Warriers, addicted to Whoredoms, subtle, wicked, false, merciless, rejoycing at others harms, as is wont to be in War. They are tormented with raging Fevers, 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 then 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, obstinate, 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 Fevers. Amongst the Planets the Moon, and amongst 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 to 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 fruitfull nature; and thus is it to be understood of other Commixtions.

But forasmuch as a pure and sanguine complexion is esteemed the best and wholsomest, the Ancient Physicans 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 Cholerick, a mad raging brain. Now of this Phlegmatick, Melancholy, or Cholerick (person) do we make a Saguine 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 Cholerick, 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 LUNE into SOL or GOLD.

Now forasmuch 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 seems 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 perswade 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 of 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 searched about in filthy Sepulchres, in which I could not find the Life. God at length vouchsafed to look upon me with his gratious and mercifull Eyes, and brought me unto the right way, insomuch 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 do but prepare us Medicaments destitute of virtues, of fine outside 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 stinking dung, we betake ourselves to the pure and living fountain of God, as being the Centre of all life; and do 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 shut 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 sowre: 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 engendred 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 die, because they are deprived of the Air from which Life doth proceed. Then the Cover being again taken off, and the Air admitted, they do again creep; and following after the Air, endeavour to get out of the Barrel; out of which, if they do 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 do but take the Air therefrom, it will cease growing and plainly wither and come to nought.

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 hot wo 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 Center, 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 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 do they all become dead and so 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 greatness, 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 only the vital food thereof, and rejecteth all the rest like so much excrements. The body it self also doth daily assume food and sustenance by the Mouth, but the Stomach transmits the nutriment that is separated thereout of, to the Liver, to be reduced into blood and flesh; but the Excrements, as the Dung, Urine, Sweat, and the like, it bansiheth out of the body by the usual passages. Thus like wise 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 Essence, which is associated unto that (virtue) which acqueity doth again go off, as a superfluous Excrement, and must necessarily bestow the Life only 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, overcomes and conserves it; according to the testimony of the Ancient Wise 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 off-spring of the vivifying Sun.

Because therefore like desires its like, loves, and seeks after it, a posionous 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 produces nothing else but Wheat, and from Tares do Tares arise. If the Seed or Magnet be aureous and pure, it will also acquire to it self pure and golden Virtues, and be encreased by them.

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

You 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 Liquor put into the Dishes) expose the same Dishes, which contain in them the (thus) dried Salt, in the nighttime, open to the cold and moist Lunar Beams, that the Salt may be by its magnetick 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 again 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 Astral virtues, and may be again 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 fume. 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 hastned). 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 itself. For wheresoever 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, whereof 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 it must be such as may strike the heat downwards at top of the matter only, 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 Ashes 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 so 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 do in this place manifest only 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 Coals, 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 only 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 do grow in stature, and multiply themselves. The whole work therefore of making this kungly 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 only 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, do reduce the Mercurial water, and the Minerals prepared with Salt into fusile and tinging Stones; which thing the Common fire will never perform in a glass closed up, and without Air.

Note this, and believe it, and do 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 parrallel 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 Ebulition. When all the tissing 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, 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 introverted the Silver, and drawn its bitterness forth, insomuch 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 rendred more pure, it resolves it self in the cold Air into a green and bitter Liquor, 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 glazen 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 droughty 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 sharpning 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 horror, the Stomach is refrigerated, and beset with clammy Humours, and most an end the Limbs are debilitated, the Skin becomes Scabby and cold Feavers possess the Stomach. 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 so all the Foeces 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 shoot into Crystals, and part thereof will remain mixt with the Spirit of Salt, and give it a gratefull 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 withall, 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 droughtiness 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 and 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 guzling in of so great a quantity of thick Ale, it discusseth Wind, expells 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 administred to such as are troubled with the Feaver, Gout, 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 more thing that I shall here admonish you of; namely, that by the Spirit of Salts help may a Remedy be administred to many more hurtfull disorders, but especially in the stead of those sharpish 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 Chalibeat 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 emplasters 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 happen that the Master and Mistress being absent, the Household Affairs are very aqkwardly administred 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 these 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 Sauces or Cates, and delicate Drink, can we not be here with content? Verily in my Judgement here's enough disht out for one Banquet. But some may say, in very good time! GLAUBER (indeed) does not only teach us the preparation of good Meats, but likewise of Cheese, Butter, Sauces, (or Junkets) and precious Wines, 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 satisfie 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 forasmuch as this bettering of the Metals meets with but little credit and is very hardly believed and understood, (nay '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 in long process of time maturated by Salt in the Bowels of the Earth: Even so may the same be likewise maturated, 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 COUNTRY-MAN PAYING HIS YEARLY RENT. When his belly is continually filled 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 by. F. The Glass set in with his Alembick and Receiver. G. The Door to shut the Crate. H. The Ash-hole. I. A Bucket of Coals (See the Fig. before the 3rd. pt. of the Prosperity of GER. noted with page 76.).

In the first place you must prepare you some pounds of good Spirit of Salt, after the way which I prescribed with Vitriol, without which it will effect nothing, for out of this (Vitriol) 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 inferiour 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 Coals may be about man-heigth, 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 maturated by the Spirit of Salt, and which have a continual heat, whereby the never-ceasing coction is holpen from the Tower that contains the Coals. Now see that you make all things cleverly and well proportioned, whereby that the Fire may be well and commodiously governed, and may be conserved for twenty four hours at least, without any looking too or medling 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 Countrymans 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 outlet, 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 distallation. This operation and cohobation being often repeated, doth ripen and fix the spiritual Silver and Gold, whereby it becomes Corporeal: 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; insomuch 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 hindred 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 instituted with Copper.

Yoy 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 cooled, Take the glass out of the Sand, and pass the Spirit of Salt with the dissolved Copper through Cap-paper, and wash the white Calx 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 filtred Solution again into the Cucurbit, being first well washed; 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 again distill it off till the said matter be dry, and repeat the same Operation again by pouring on and distilling off. If the Spirit of Salt be augmented in quantity one pound, then put more Salt into the Cucurbit, and again 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 apposition 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 encrease 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 again draw if off so often thencefrom, 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 Mass 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 afore 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 again 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 do 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 impure 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 Ore, 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 do conclude that that first Silver separated in the first Operation, was what was left of the Ore 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 and 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 same 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 Kitchins, but such as are impregnated by the Sulphureous Stars (or Constellations).

But forasmuch as we do at present treat only of Copper, we do 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 taste, 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 Ores, 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; insomuch 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 do 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 and 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 plentifull 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 as soon as ever the Spirit is drawn off, you may presently put it on again, 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 afore) 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 sold 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 plentifullness 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 afore) the mutual melioration of those 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 correspondency with each other, and that love to better each the 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 Tranquility 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 perswade himself, should he be a Master of this Art and Science (here shown) 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, to make any wicked Man not a 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 testifie, saying, IN VAIN DO YE RISE UP EARLY, AND BEING LOADEN 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 so 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. Unless haply a Man should light upon rich Veins and metalline Ores, which should abound with much corporeal Gold, and so by this means should yield great Treasures. Now so much cannot be lookt 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 Artist in this matter, for sometimes I have a very gainfull success of my trials that I make, and sometimes again 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 Ores 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 afore prescribed 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 again read over, and well lookt into.

Moreover, this is also to be known, that this maturation if instituted 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 way 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: Insomuch 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 MACROCOSM or of the Ocean, which we have taught the making the Spirit of, is 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 MICROCOSM 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 PROPOSETH 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 silently betook himself unto his Cell. But he had said before unto the King, In thee 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 true experiment and artifice in Alchemy, that is, in the true melting of Salt, when the Agent of Salt, and the Patient, or Metal, are so throughly conjoined and mixed, as that the Agent is disperst 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 Wolf 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 Wolf 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 Ingeny 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 distinguisht 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 his 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 only swell or puft up in them, and keep in such a positure 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 diversly 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 busied 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 Sauces, and also in the third Part of the Prosperity of GERMANY.

In my judgement, 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 oftner the Earth is moistned 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 washt 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, which in a fat and tenacious Soil is not wont to happen. For the Water or Rain should but only moisten the Earth, that it may not be too closely comprest, 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 and 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 only shewing at this present, by what way it may appear that a metallick Seed may be brought to a faculty or possibilty 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 perswade 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 confess 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 thereunto.

See Fulcanelli "Mystery of Cathedral" Pg 15-16

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 whiteness, and shine like a Star in the Firmament; which Antimony thus purged, is called by PARACELSUS, the signed Star. See "Book of Centuries" How to make the signed star! (1st one)

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 Glass, and to strike Fire out of a Flint. This signed Star being so washt, is to be sown into its own Matrix, and by the solar Heat and fruitfull 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 Mass 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 legitmately and duely 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 therewithall: 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 only 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 only 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 Ores 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 again had, 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 cohobation, and the Spirit of Salt it self will become augmented.

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 Test. 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 again, 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 wawy in fume, nor to run out; in which reduction the spiritual Gold and the fugacious SATURN it self are fixed, so that both Gold and Silver are found on the Test 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 Ores and Stones, is far better than that which is made by the Solutions of LUNE and SATURN, described at large in the third part of the Prosperity of GERMANY. For here, we do not need either AQUA FORTIS or Vinegar for the Solution of SATURN or LUNE, neither need we the same to get the extracted Gold out of the Spirit of Salt, but being free from that labour and costs, we (only) draw off from SATURN, that Spirit which hath extracted the Gold, which (SATURN) attracts and holds the volatile and fix Gold that was in the extraction, insomuch 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 encrease which daily comes in by the addition of Salt and Water, by which the Spirit of Salt is 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 wherewith the Ore is washt, 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 sourish, 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 maist 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 combustible 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 fesible 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 wrapt up in darkness, and indeed 'tis fit they should so be.

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 magnificient. For Example, make a Circle, and cut or divide it with Diameters crosswise (or at right Angles through the Center) so that the extreams of the Diameters which divide themselves in the middle or central point of the cross may touch the Circle, and that of those four extreams (or Semi-diameters) one may touch above, and the other beneath, and the other twain may teach, one to the right side, and the other to the left. Place the Gold in the uppermost extream marked with the letter A, and his enemy namely Sulphur, in the lower extream, 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 aversly these enemies behold each the other. The SOL looking about him espies his capital enemy, Sulphur, directly opposite unto him, and hath LUNE at his left side, and Salt at his right; and very willingly would he enter into friendship with LUNE, and Salt which are joined 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 LUNE placed by the side of the Sun,does not permit the Salt to join it self with the Gold. For when the Salt is with the SOL, it clearly hinders the LUNE from associating it self with the same. Nor can it possibly be that Salt, LUNE and Gold should enter into a thorough familiarity. Thus too is it with LUNE, 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 LUNE 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 LUNE be the companion of them both together.

But now if the Gods please, that these four capital enemies, should unite in one sociable amity, and that wonderfull 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 extreams, 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 this here spoken may any one easily conjecture, what great suffering there is in this Conjunction, and what great streights 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 wonderfull regenerations. Now whatsoever it be that is exercised in but a small suffering, the same 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 magnificient 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 afflection 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 delightsomeness 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 fruitfull 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 guzle down the juice too new and fresh, whereby their Bellies swell, and they receive no nutriment therefrom.

This thing is 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 same 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 pluckt out the coagulated beams of the Sun out of the Cliffs and Rocks, and brings them unto JUPITER, he is so very bountifull, that he sends down the same 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 adjoin the following Process under the Title of THE GREAT COUNTRY FARMER.

And let the studious Artist 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 dispatcht 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 Ore or Vein thereof for much less price; and indeed there is some, that is a wild and sulphureous Ore, 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 Ore of Lead as this is, which yields neither good Lead, nor is fit for the Potters to glaze their pots withall, by reason of its hard fusion, do I chuse for my operation, not only because it costs less than other such Ores of Lead do, but for this reason too, because it hath store of Sulphur, and fit enough for fixation.

This Vein or Ore do 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 powerfull virtues upon the Lead, causeth it to be afflicted with terrible dolours, insomuch 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 Reveivers, and there settling together. The Residue of the Ore, and part of the Salt being burnt

up, and emitting no more flores, 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 again 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 again thrown in upon the live Coals in the Furnace, that they may suffer anew and be sublimed. After that they are all sublimed again on this wise, they are to be again 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 washt, will yield a Salt profitable for many things, and will quit all the costs which have been laid out upon Lead, Salt, and Coals; so that the Spirit of Salt which is gotten, and that which is amended in the Lead Ore by the Salt, cost nothing. The Ashes being washt 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 administred. 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 shew themselves to be. So Common Salt sublimed, as is done in this Labour, will operate far stronger than Common Salt it self unsublimed. 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 so do, 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 administring heat 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 Ducket's charge: If now, standing any-where, it yields me two Golden Duckets out of the maturated Metal, it would do well enough, and abundantly recompence 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 forasmuch as I can set 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 maturating 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 exceeding slowly, and excludes all haste, yet it brings with it this benefit, namely, that it requireth no other labour in the Winter time, but to be only 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 difficulty prepared, one of them, here reckoned up, excepted, out of which the said fire may by an easie labour and business be made, and without costs. It is therefore a great gift of God, and an especial grace from our Creator, if he maketh 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 lyes 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 moistned with often showers, and now and then freed of them by the heat of the Sun, retains in it self a fruitfull Salt, and doth necessarily acquire a fertility: So likewise our Earth doth not only 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 Mass should be but only eight days time in the digestion, and the Spirit of Salt be (then) washt 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 the 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 due 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 through trial, may so do; and if he misseth the effect of his endeavours, let him not blame me, for I do not aim at drilling on any one by my perswasions,to bestow his charges on an uncertain thing. But I mention these things that so 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, Ascention, 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 greatest 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 errour, and miss 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 LUNE, by and by DIANA or JUNO, another time VESTA. APOLLO is by them stiled one while SOL, then PHOEBUS, then LATONS, 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 & etc.

The Common Lead is SATURN, and so is Antimony, SATURN, BISMUTH, TUTIA, LAPIS CALAMINARIS, the Ashy Colour, Yellow, White, and red MAGNESIA are termed by the name of SATURN: The white MARCASITE and ZINK are deemed to be of the Family or Pedegree of JUPITER: ORICHALCUM or (mercury?).

The 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 JUNO, and having a long time suffered Persecution by the biting Serpent PYTHON, and being driven to fly 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 ASTERIA, 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 smell out ought of those Mysteries, unless he shall meet with such like Histories in his metalline labours, 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, 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, until she flies through the Salt and stormy Sea, into the Island ORTYGIA, to her Sister ASTERIA, 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 only some knowledge, but do not profess my self a perfect Interpreter. Yet methinks I cannot choose but say somewhat. The venemous Serpent PYTHON is a sur-name 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, until 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 so 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 PLUTO 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 inferiour Metals, this is to be yet more observed, that every JUPITER is not fit to impregnate LATONA, but that only 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 only 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 preceeded, VENUS could not have received him, for which reason DIANA ought to come forth first, that so she might the more commodiously receive APOLLO from LATONA. I know not how by any means it may be proposed more clearly.

Every one that does but know the nature of the Metals doth well understand, that when Gold and Silver are spiritually dissolved in

one Water, and that plates (of MARS probably) are put in to the Solution of the Gold and Silver, neither of those Metals will adhere to the Plates. But if the Plates of Copper are put into that Bath, he shall presently see that all the Silver that was in the Water will adjoin it self thereto. And now, after that the Silver is thus precipitated and sticks on to the Copper, the Gold will likewise fall down out of the Solution, and apply it self to the Silver; which labour I have more at large handled in the third part of the Prosperity of GERMANY. It could not therefore otherwise be, but that LATONA must first bring forth DIANA and APOLLO afterwards, seeing that VENUS the Sister of LATONA could be helpfull only in the bringing forth of DIANA. It was therefore necessary that DIANA her self should be an assistant in the Birth of her Brother APOLLO, for otherwise he could not have been Born.

My time admits not of producing any more such similitudes in this place. We will defer them till some other time, namely, for the Edition of the Work of SATURN, wherein shall be taught how the most vile, and most abject Metals are to be maturated by the benefit of Salts, whereby they may in a particular way yield forth Gold and Silver.

But forasmuch as I cannot divine, what impediments may put a stop to the edition of the work of SATURN, and that in this very Treatise here is often mention made of SATURN. It cannot I think be any ways hurtfull, if some good thing be yet further adjoined. And such things as are here manifested of SATURN, it will not be needfull again to mention them in other places, seeing there doth yet still remain matter enough for to fill a whole Book of the Secrets of SATURN. And there lie such wonderfull Secrets under the vile and dirty Garment of SATURN, as being manifested, would exceed all the belief of unskillfull Men. For he is not only an expert Fisher in in Fishing Pearls out of the Salt Sea, but is withall an expert Hunter, in driving the Wild Beast out of his green Grove or Cops, and of catching him in his Nets, as we have told you in the foregoing third part of the Prosperity of GERMANY.

Nay, he is a bathing Gentleman of singular skill, who by his bathing and washing his Children, adorneth them with the comeliness of DIANA and APOLLO. When he is alone, he serves only for APOLLO and DIANA to wash off their accidental impurities and defilements, that so they may recover their natural fairness. The other Metals can't brook his so over sharp and rigid bathing, but are rather suffocated and killed therein, than become more fair and more pure. But if SATURN shall have first washt himself even unto the highest whiteness, in a Bath of common Salt, he is not then so austere and severe, but prepares for his Children a far more tolerable Bath, which being agreeable (or proportionable) to their Weakness and Sickness, renders them all fairer and more pure. His greatest virtue consists in his Water which doth both particularly and universally free the Metals of all their defilements. I have often had a particular experience (hereof), and yet daily can (God be praised) shew and teach the same unto others. But I cannot do any such thing in an universal way, and inform others as to that; nor do I vainly brag of so great a matter, though I have my thoughts as touching the manner how the thing may be effected. Nay the more I conveived about that matter, the lesser would I boast of the same.

Verily it is a great shame to boast of that thing, of which thou hast not even the smallest knowledge, or at least dost not know any thing else, but what thou hast drawn in, by the reading of other Writers. 'Tis a common proverb, THAT THOSE COWS WHICH BELLOW, OR LOW OVERMUCH, ARE SAID TO YIELD THE LEAST MILK, and that this is a thing true, yea most true, experience it self doth testifie.

The Chymical Art is bocome at present so common, that almost every body, after he that but viewed over one or two Chymical Books, (though he never moved his hands to the Work, nor understands so much as the Chymical Terms themselves) is nevertheless wont impudently and lyingly to boast of the knowledge of the universal Medicine. Nay thou shalt see some to proceed on to that height of boldness, as even to write Books of so great a Secret, and to dare promise the Revealation of the same unto others, and yet for all this know

nothing at all, and have not so much as any the meanest foundation, but rely solely upon that knowledge, which (being as we said afore, drawn out of other Writers) causeth in them a most uncertain hope, of a thing most extremely obscure.

He that is not a stranger unto, nor ignorant of metallick affairs, can easily discern the Lyers from the true Writers, and can judge who are true, and who false. Such as do know somewhat are not wont to make a bragging noise of their skill. On the contrary, those Brethren of Ignorance do offer unto every one that most secret miracle of Art and Nature, namely, the universal Medicine, which thing a true Philosopher neither ever did, nor ever will do. But as for the revealing of the particular washings, purgations, and meliorations of the Metals, whereby Gold and Silver are to be extracted, if any one doth know these things and discloseth them, and desires not to bury his Talent in the Earth, he does well.

Neither would any one be endammaged by such a discovery though those particular ARCANA'S should be known even unto all Men, and that every body could effect such Operations; for nothing could redound from them but great gain throughout all the World.

But these things here mentioned may sufficiently serve for an evident and manifest admonition for every one to beware of the Books of such Writers, (but why do I say Writers? They are rather Collectors and Describers, who after the manner of Botchers do patch up new Books out of old cast Garments) and to give no credit at all unto them as containing nothing of truth in them, and to think that those kind of Men betake themselves to this Book-patching Trade, meerly to get their Bread by.

Some such Men have I known, that provide not either for their Food or Rayment any other way, than by the sale of such false Philosophical Books, which they have from the Printers to sell to others, receiving a certain price for their labour, which they bestow in profering them to Sale. O miserable Philosopher! Who doth not know so much as to get his Food at Home in his own House, but is constrained to shift after it by the bare selling of such kind of Books.

Let this here spoken be as a warning. If need required, and occasion were, I would not fear to divulge their names too; who having not any the least knowledge of nature, do nevertheless dare to offer the Revealation and Confection of the great universal unto others, and cast such a great blemish of reproach upon the most noble Chymical Art, as makes it much contemned, whereas a more noble and more excellent Art cannot be found. I'll not censure any, but yet it would become the magistrate to examine those great Philosophers, whether or no they were actually and in very deed skilled in that great universal, (which they boast so wonderfully of, and write Books of such great moment, and promise to teach others too, as if they excelled even HERMES himself in the knowledge of the Art) and if in the proof or tryal they gave good satisfaction, and confirmed the truth of their Writings by a real and true melioration of the Metals, then to honour, defend, and protect them, as rare and singular Philosophers. But if they know nothing nor could perform ought of their pretended Art, the magistrates would not do unjustly if they punished such men, and made them exemplary, seeing too that they endeavour to asperse and backbite other honest men, who are endued with the skill and knowledge of such great things, with lying reproaches. A good Gardener being wont to gather good Honey out of the Bee hive which he has in his Garden, if he finds a Nest of Wasps or Hornets any where near, built in some hollow Tree, and that they steal away the Honey from his Bees, he right worthily destroys such a Nest,and roots out of his Garden those Thieves and Robbers of his Honey, that so for the future they may not detriment them any more.

Were but one or two of those Fellows handled in such a manner the rest would be deterred and would not so easily promise others by their deceitfull Writings, the making of the Philosophers Stone, which they are so extremly ignorant of. Certain it is therefore, that no true Philosopher, were he a partaker of the great universal, will indifferently offer the same unto all Men, and calumniate (without any cause given) those that are so innocent (and who have

forgotten more than others have learned) and publickly bespatter them with most false Lyes before the whole World, to the great detriment of the Persons so abused.

But to return to my purpose, and to shew in this place yet another very considerable ARCANUM OF SATURN, you must know, that I have already published divers great secrets in this fourth and third preceeding part, but cursorily only, because I have not as yet attained to the one half part of their most great utility, and I was willing only to shew what things might be done.

But forasmuch as I have fortified their use with good and sharp Weapons, and that one or other sometime lighting thereupon by chance, and reaping great profit therefrom, may possibly judge that he is no ways at all bound or beholding unto me for the same: I was willing for the better information, and instruction sake, to adjoin these few things, which are very weighty and considerable.

In divers places of the foregoing third part, and of this fourth part too, I have the preparation of the MERCURY OF SATURN and LUNE, that is, I have shewn how SATURN and LUNE may be reduced out of their Solutions, by the help of Salt, into a Snow like, fusile, fugacious, pure and dry Water; which Waters are by me called the MERCURIES of SATURN and LUNE, by reason of their fusile and volatile nature: They are metallick Waters not wetting the hands, and yet by reason of their form do they bear the name of Water, because being put into a Crucible, and molten with a small Fire, they are pellucid and transparent like unto Fountain Water, insomuch that they may be seen through even to the very bottom: But yet the Water of SATURN is of a more transparent clarity than the Water of LUNE is.

But forasmuch as our main scope in this place is to make some mention of the use of the Saturnine Water, we will let pass other matters, and declare some of the virtues of the said wonderfull Water in the melioration of the Metals.

Let the lover of Art therefore know, that the Saturnine Water doth display its virtues in washing the Metals that are to be amended.

For if any imperfect Metal, as Iron, or Tin, or Copper, be adjoined thereunto, and held in such a Vessel, as in which, that Water cannot by means of its fugaciousness vanish away, nor through its subtile and penetrating power run out, and that it be digested for a while in such a Vessel, this Saturnine Bath seizeth upon, washeth, and purgeth the Metal, and transmuteth it into a better and more pure Metal, but yet with no great profit, for it only shews the possibility.

But yet if some tinging Species be adjoined thereunto, it does not only make a pure washing, but likewise exalteth and tingeth the same, according as the tendency of the adjoined subject is, either unto a white or a red Tincture. But what those Species are, there's no need of disclosing them to every one. 'Tis sufficient that I have laid open the Water, and the use thereof in the washing of the Metals.

But that the Saturnine Bath may the sooner and readier seize upon the Metals, and wash them, it is the best way, to add one third part of the Mercurial Water of LUNE, to the Mercurial Water of SATURN; which Waters do very readily conjoin, and each help the other in the washing, and do also tinge, according as the property of that Tincture is, which is adjoined thereunto. I will for Example sake adjoin the manner, which shall both shew the possibility of the thing, and administer occasion of further search.

Dissolve one ounce of pure Silver in AQUA FORTIS, and three ounces of common Lead, in more AQUA FORTIS, mix both the Solutions together, and precipitate them, either with common Salt Water, or with Spirit of Salt, which is all a case. Pour off the AQUA FORTIS from the COAGULUM, after its being settled to the bottom, which said COAGULUM, you need not wash with Rain Water, for this Work, but press the liquor only through a thick Cloth and so free it of its humidity; this done, dry this metallick Cheese by the Fire, and you shall have a Bath very fit to wash VENUS, MARS, and JUPITER. And now when you are minded to try whether or no the success will fadge well, divide your Bath into three parts, and wash those three Metals on the following manner.

N.B. Let no Body take it in evil part, that I here silently pass over my secret bathing Laver, serving to wash the Metals in, and not permitting the Water it self to go away in fume: He that is minded to try this Operation may for the first time make use of Crucibles, which, although they may bring some loss by letting go part of the Saturnine Bath, yet notwithstanding they will demonstrate the success of the business, and the loss by them caused may afterwards be prevented by due MEDIUMS. The manner of using the Bath aforesaid, is as followeth.

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 Glass, such as those are, which are made at SIBURG, near COLEN, at BAMBERG in FRANCONIS, and at WALDENBURG, near CASSELA in HASSIA, 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 boiled for about one quarter of an hour, part of the same will be found washt 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 LUNE, 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 so great a Master, for I propose to my self this only end in my Writing, nemely, 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 throughly, 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 Ore 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 Ore, it rather profits than hinders, but the said Ore must not have much earth mixt in it, and that which is on to it must be taken from it by washing off the same with fair Water). One, two, three, or more pounds of this leaden Ore thus washt, 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 Ore 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 washt 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 Ore 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 same with so great a quantity of Spirit, as may quit the costs of the Ore 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 Ores 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 afore 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 so 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 mai'st err and fail. 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 only meerly for their own gain, and without any profitable imformation 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 entring into a Fencing School at NORIMBERG did, behold the Fencers artificially combate together so strongly and so long, until all the others being tired, and forsaking the Stage, there remained but only one as sole victor; who, with a disdainfull look, contemning all the rest, assured himself of the victory.

Being therefore about taking up the Prize Money there deposited, out steps the Country Man, saying, you shall not have the reward, except you beat 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 artifical postures, which he had learned in the fencing School, thereby to make a speedy dispatch with the Countryman, supposing that the Countryman would be frightned, 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 nearer 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 fly off, and the Blood run about his Ears. So artificial a Combatant as this being overthrown, 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 artifical and experienced a Fencer, and could so overcome him, he replied, that he perceived the Fencer used many oblique Skippings but was no strong Man; and therefore I opposed

my strength to his artifical 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 so remains the sole Mistress.

For the sake of those 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 sufficieth me that I can, not only 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 taste for many years; various drinks not unlike in taste 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 and natural Salt-petre, which is no small profit.

The Fire doth likewise very easily endow common Salt with such kind of properties, as render it capable of fatning and dunging barren Fields, Vines, Fruit Trees, Hops, and all other Garden Herbs as well as Sheeps or Beasts Dung.

Salt is also 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 steeped 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 Glass 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 wonderfull virtues, some of which I have declared in my Treatise, OF THE NATURE OF SALTS, stiling 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 rubbed on Beef or other such like Flesh, it keeps the same, though exposed to the open Air, from being infected with Magots, and from being corrupted: And therefore it is an efficacious subject, with which as being a most efficacious Balsom, dead Bodies are conserved 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, which (for certain causes) I pass by in silence at this time. PARACELSUS calls it SAL ENIXIUM, but I SAL MIRABILIS.

Nor ought it to seem at all wonderfull, 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 only the common Kitchin Salt, but even those too, which are of a most biting 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 so 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, insomuch 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 very artificial a invention, hitherto concealed by me, but now I am minded to reveal the same unto my Friends.

By the same Salt too, wine, Ale, Metheglin, 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.

Thus 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 rendred 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 Spices in the fermentation, and so make it the more sweet, more efficacious, and more wholsome, 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 Allum 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 meaner 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, who 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 venemous 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 graced 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. I'll therefore do they do, that bark against me for saying that Salt-peter is a universal Dissolvent, and that endeavour by their tatling 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 throughly into nature, they would never so boldly contemn, 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 suckt 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. Whatsoever 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 wonderfull, 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 ruinating and slaying one another, and being dead, return again unto that which they were afore, and partakes of both natures; which the Ancient Philosophers 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, Lion, 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 Lion precipitates. And whatsoever the Lion devours, that the Eagle doth again snatch from him; but they kill each the other, of whose dead bodies the Griffon exists, which hath the body of the Eagle and Lion. 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 Lion have filled themselves with food and are grown fat; or by how much the bigger the Eagle and the Lion 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, 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 again. When the dominion of the Griffon is divided, and that the Eagle bears sway only over his birds, and the Lion only 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 do 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 again divided by VULCAN, by the perswasion of old SATURN, that so he may return by a reiterated transmutation into the Eagle and Lion; 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 do 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 only 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 often said, I do 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, do even burst for malice.

O most foolish men, with how vain a hope do ye expect the Lion and Monarch from the North, as the JEWS do 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 revealation of which, God alone knows. I do 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, our of whose Ashes other Phoenix's are produced.

He that desires to know more of the Griffon, Phoenix, Dragon, Basilisk, and Salamander, all which do 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 subjoined 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 reserved for my self and my friends somewhat amongst all the Processes, and way 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 Ores, and in the melioration of the imperfect Metals, and transmuting them into Gold and Silver much easier, and far more compendiously, 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 reserved 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 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 Ores, 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 it easily is 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, publickly, and privately unto friends; but with this proviso, namely, if the said friends will faithfully promise unto me, that they will with a faithfull silence conceal those secrets which they shall see and learn from me, and improve the same, only 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.

T H E

F I F T H P A R T

O F T H E

P R O S P E R I T Y O F G E R M A N Y .

Clearly and Solidly demonstrating, and as it were shewing with the Fingers, what Alchemy 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 Foreign Invasions, of all their Inhabitants that are by due right and obedience subject unto them.

Like as the weighty command of God injoins 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 beyond 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 detriment our Country) to take care in publishing, some four years ago, a little Book entitled 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, 'mongst 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 bethought 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 comtemptible, 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 fixt Gold and Silver and Copper out of the MINERA'S or Ores, 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 Alchemy shall be shown, and it shall be proved, that it is not any vain dream, deceitfull Phantasie or Fallacy, 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, MARCHASITES, 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 judgement 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 only be applied to necessary 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 Ores 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 wont 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 only grow more plenteously, but also produce more plenty of Fruits, and such as ripen far sooner, and are of a sweeter Taste, than if they were dunged 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 fruitfull, 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 sound and healthfull Body, whereby we may in fullness 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 Alchemy it self, or the Transmutation of the lesser, or meaner Metals into the greater or more noble, and into Gold and Silver, in 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 advisedly set about shewing it by publick and evident experiments, and its use for the good of the Country.

Now then, forasmuch 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 Houses 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 SOLOMAN. And he made Silver as plentifull as the Stones that lie in the Streets, & etc.

But that I may yet more open the Eyes of the Studious 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 imployed about Mans use; no, those common and sulphureous leaden MINERA'S or Ores which are found to be uncapable of yielding profitable and venal or sellable Lead, are well enough for this Fusion and operation we speak of; and so likewise those Irony and Coppery Ores, out of which (seeing they admit not by nature of any fusion or melting) mallable fusile Copper or Iron cannot be extracted. For this Operation of ours needs not Copper, Iron or Lead to work upon, as being content with those poor sort of Ores, and with the bare Salt which the Earth is every where well replenished withall, so that there's no cause to fear that there will ever be a want of any matter for such an Operation.

But what need I speak much of these unknown, and so very profoundly hidden secrets of nature, seeing I have openly enough taught already, in the second part of the MIRACULUM MUNDI, by what means, pure and natural Gold, may be gotten out of every Herb. This very thing I publickly demonstrated in my Laboratory above a year ago, in the presence of most learned Men, Professors, Doctors of Physick, and other Men both noble and ignoble, as their Testimonies, which are (under) hand affirm.

But there's no need of that, forasmuch as the manner it self of the Operation is published in Print, and manifested to every one, and there can hardly pass over one years space, but that even a thousand Men or more may imitate the Operation and search into the truth it self of the business.

But that the well minded Reader may have a little more light, and may himself see what foundations the work I have undertaken is built upon, I have judged it altogether necessary in a few words to set afore your Eyes, what Alchemy it self is, and whether or no it has any foundation in Nature and Art. For if so be any ingenious Man gives an Herb, an Animal, or a Man any name, certainly he does

it not rashly and without any ground, but well knows and understands for what cause he intitles any thing by such or such a name, and it is chiefly done on this account that by such assumed names the nature of the Herb, Animal, or Man, and its properties might be known. A few Examples will illustrate it the more.

What reason have the Physicians and Philosophers of old to call the Herb St. JOHNS WORT, PERFORATA? Because its leaves are full of small holes, and it is so signed by nature, to shew, that it has eminent virtues (and pecularly appointed) to take away and cure external and internal stabs and wounds of the Body, and this is confirmed by experience. Why are some Herbs called SAXIFRAGERS? Because their nature is, to cleave assunder and break through great heaps of Stones in their growing up, and to penetrate through old Walls, by the growth of their hard roots. Their Seeds likewise are like unto the smallest Sand and after a sort stonyish and do break the stony matter in the Reins and Bladder of Man's Body and bring it forth. So a Serpent hath its denomination from creeping, because it wants Feet, and creeps and crawls along on the Earth.

A Shoemaker hath his title from his making and sewing of Shoes. A Black-smith is not wont to be called a Gold-smith, because he works not on Gold but on Iron, and he hath his denomination from Iron, which he is occupied about.

The same is to be understood of the word Alchemy, which denoteth no other thing save a Fusion and liquefaction of Salt, and so it teacheth us, what cause it was for, that the Ancients called the Transmutation of Metals Alchemy; viz. because of the fusing or melting of Salt, without which, no particular Transmutation of the viler Metals can be perfected and accomplished. Therefore it was not an unadvised and rash action that the Ancient Philosophers did when they put the title of Alchemy on the Transmutation of Metals, but as a Gold-smith is so called from the Gold, which he is a Labourer in, so is it with this.

The name therefore doth openly point out the matter transmuting the baser Metals into the more noble, viz. Salt, which being as an

universal Agent does not only maturate and bring to due perfection the Metals generated in the Bowels of the Earth by a natural Operation, but it also does the same out of the Earth by the Operation of Art, Salt alone, and Fire alone are sufficient for the maturation and transmutation of the unripe Metals. For Salt (as being the Agent) is driven or forced as 'twere by the Fire to display its virtues upon the Metals and by exercising its power, to render them better and more noble, as PARACELSUS openly witnesseth in his COELUM PHILOSOPHORUM, saying, that the Corporeal mixtion of metals though commixt a long time and kept so in Fusion, is neither wont to give (nor indeed can contribute so much as ought to their Transmutation.) But if so be the metals are to be perfected by any amending, they are to be conjoined in a spiritual commixtion, and so they come to their hoped for amendment; and this is very agreeable to the truth, and evidently signifies, that without a saline agent and fire, there is no way of attaining to a particular transmutation and bettering in the metals. ELIAS the Prophet, whose name inverted yields the word SALIAE (or Salts) did not work his most great miracles afore he came into ZARPATH, or SAREPTA, that is, into the melting House (or fusing Work-shop) where he filled the poor Widows Oil Vessels, that so she might have wherewith to live in a time of scarcity. For as long as the terrestrial Salts do lie hid in barren and stony Mountains, in which there grows nothing but JUNIPER Bushes, and are (there) nourished by the Stars, they cannot shew forth their wonders, but they are wont then to disclose them when they come into the melting Houses. Even so is it with Salt, when it comes into the melting Shop, it doth effect so much as not only to fill the Oil Barrels but the Cellars and Barns too, and that plentifully, but especially when the due (or suitable) Salts ELIAS and ELISA do come together, and ELIAS is carried in his fiery Chariot into Heaven, and sundred from ELISA and doth send down a double portion of his Spirit upon ELISA his Companion; by which, ELISA being strengthned and acquiring more strength than it had afore, is made fit for greater and more powerfull Operations.

But amongst those most great miracles, this was an eminent one, that after the departure of ELISA the Prophet out of this life, there was another dead Man thrown into his Sepulchre who by the touch of his Bones was restored to life.

Therefore, like as this miracle did supernaturally happen by the divine power: Even so (doth it come to pass) naturally, by the virtues of our SAL MIRABILIS corroborated with a double Spirit, which doth not only restore a dead (body) and Wood turned by the Fire into Charcoal, when it is cast into the Sepulchre, that is into the Earthen Pot or Crucible to the white Bones of our SAL MIRABILIS, and bring it (in the space of one quarter of an Hour) into its former viridity and life, and with this very green Liquor of the Wood may other half dead Trees, as also other things be restored to viridity, and increase, and their former fertility, more than by any thing else: But also, even various dead insects, if they be put to our SAL MIRABILIS can recover life again. And although that this may seem a new unheard of, and incredible thing, yea a meer Paradox to any one, yet is it as true as truth it self; the true way of which Operation I will (God willing) describe and shew clearly in the first Century of my general Appendix.

But although that these wonderfull Operations of my SAL MIRABILIS may seem such, as to be never capable of being effected yet, to all such as know its Composition, 'tis a thing very easily accomplished. Nor can it be but that the divine wonders should be still more and more laid open by the help of my SAL MIRABILIS, and be exceedingly sown abroad, and made known to such as are ignorant. Which being done, the World will conceive a far other guess Opinion of Alchemy, and judge otherwise thereof than hitherto it has done.

But that such as are admirers of the divine and natural wonders, may clearly see how large an extent those things I have hitherto discovered, are of, I cannot omit the adding of the solar Work or Smaragdine Table of HERMES, the Father of all the Philosophers, the which being in my judgement accommodated to this discourse of mine I will illustrate.

But to summ up all I will say, I have here briefly declared, that if a Spirit be elevated or sublimed from a true Salt by the help of a strong Fire, or be drawn from out of its Body, and be again returned to the same own fixed Body left behind, and be restored to it in a due manner; that fix Salt, gets double the strength and virtue it had, (as hath been shown concerning my SAL MIRABILIS) and does perform things wonderfull; which HERMES and BASIL VALENTINE have hinted unto us in these next ensuing expressions.

Hitherto belongs the small Circular Figure, noted page 19; at the beginning of the third Part of the Prosperity of GERMANY.

The Smaragdine Table of HERMES, & etc.
(See it at the end of the First Part of MIRACULUM MUNDI).

The AEnigma of Brother BASIL VALENTINE.

There is a Stone, of all others the least precious, out of which is extracted a fugitive (or volatile) Fire, and out of this Fire is the Stone it self made, it is of colour white and red and yet is it no Stone. In this Stone doth nature operate, and produceth a Limpid or clear Fountain, which choaketh in the Waters and swallows up his own fixed Father, until at length a Soul be given (or restored) him, and (his) fugitive Mother be made like (him) in the Kingdom. Likewise this Stone brings power and great strength, it exceeds the Sun in Age, (its) fugitive Mother (is) prepared by VULCAN and (its) Father (was) begotten by the Spirit. Likewise the Soul, Body, and Spirit consist or abide in two, out of which, all things are; these things are of one, and is one thing, conjoining the fix and the fugitive. They are two, and three, and one, and if thou art ignorant of this, thou will be frustrated and deprived of the effect of the Art.

ADAM is placed in a Bath, in which VENUS finds her like, now this Bath was prepared by that old Dragon, when he had lost his strength and power. But now this is nothing else (saith a Philosopher) but a duplicate MERCURY. In this is its name hidden, which is to be sought after with all diligence and continual labour.

The Event proves the Actions.

It seemed unto me very expedient to set down here in this place, these few, but exceeding weighty words of HERMES and Brother BASIL, because they do so notably square with this Work of mine which I have here described. And therefore I do here again affirm what I have often said, viz. That he who knows Salts well, but especially Niter and Vitriol, and knows how to conjoin them, is well skilled in Medicine and Alchemy, and sufficiently enough understands that the Smaragdine Table of HERMES is Vitriol, and excellent Smaragd or Emrald, and that Niter is (according as PARACELSUS and BASIL VALENTINE have at large described) the Kingly Infant of the Sun, with whose descriptions we at present content our selves. I will make a more prolix mention of the same in my Centuries, those things that I have adjoined here I could not, for certain reasons let slip and pass by.

Now by these few words it is manifest, what virtues Salts are endowed withall, and what miraculous effects they shew, when they are cast into the melting Fire, viz. Such Salts as are corroborated with a double Spirit poured down from above. These Salts (I say) are wont not only to fill the poor Widows Oil Vessels, but even the Cellars and Barns with Wine and Corn.

But I would not that any should interpret it amiss, in that I make some kind of Comparision 'twixt the wonderfull virtues of Salts, and the miracles of the Holy Prophets; For verily the thing it self admits it, and by such Comparisions, the natural light is greatly strengthned, which thing we shall speak more at large of elsewhere.

Whosoever he be that well knows the nature and properties of Salts, and is something skilled in the management of the Fire, he will hereby easily learn thus much, as easily to perceive that there is such a thing, as a profitable transmutation of the more vile Metals into the more noble ones.

But there are requisite to this Operation manual Arts, peculiar Furnaces, and singular Commixtions of Metals, the knowledge of all which, he must have that desires beneficially to employ himself in these Operations. The whole Operation with all the appurtenances requisite, and all the things thereto appertaining, shall (if God please) be exposed to be seen in my Laboratory this Summer. As my Writings lately published, and the Labours performed in my Laboratory the last year do sufficiently enough testifie that I have both publickly and privately demonstrated and manifested the truth of the chiefest secrets which I have mentioned in my Writings. And as for what remained of being done the last year, this present Book promiseth the demonstration of, this Summer. What Writer alive, did ever endeavour the demonstration of the truth of his Writings by most evident experiments? None at all save GLAUBER.

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 Alchemy, 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 Alchemy 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 adjoined to them in a due manner,

and so undergo a melting Fire, they do (in the fusing) display their virtues upon the Metals, and do so bring them to a maturity as to 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 prolixly in the second part of my MIRACULUM MUNDI. I will teach 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 conjoining 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 not 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 LITGOU or ENGLAND, (rather SCOTLAND) who Journying through ITALY, testifies that he saw in TRAPUNDIA, a City in SICILIA, much Gold excocted 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 TRAPUNDIA, scituate in the West-side, and opposite to the City of 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 excocted in some Articicially 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 imployed about working thereupon. The Gold it self being purged is distributed throughout the whole Christian World."

These are the words of the said Author, 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 sweet (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 earthy 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 altogether as 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 Glass, 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 Emrald: After this, comes a sky-colour, resembling a Sapir, 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 Glass, 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.

Famque opus exegi, quod nee Jovis ira, nee Ignis;
Nec poterit ferrum, nec edax abolere vethstas.

And now, a work I finisht have, of which, Jove's wrath
or flame,
Or Sword, or all devouring time can never raze out the name.

Finis.