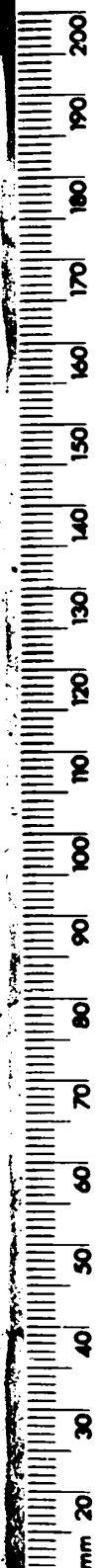


Otto Tachenius.
his
 Hippocrates Chymicus
Discovering
The Ancient foundation of
the late Viperine Salt
with his Clavis thereunto
annexed
Translated by J.W.

London Printed & are to be sold by
 Nath: Crouch, at the George at the
 lower end of Cornhill over against y^e
 Stocks Market.
 1677.



OTTO TACHENIUS

HIS ~~XIII. 17. 17~~

Hippocrates Chymicus,

WHICH *K. 5. 65-1*

Discovers the Ancient Foundations of the late Viperine

SALT.

AND HIS

CLAVIS

THEREUNTO.

Translated into ENGLISH by J. Worde

Me Legat invitus nemo, non scripsimus illi,
 Huic scripta est, siquem Pagina nostra juvat.

Abant ye Unwilling Ones, to those I Write,
 And those alone, who in my Lines Delight.

Licensed Aug. 30. 1676. Roger V'Estrange.



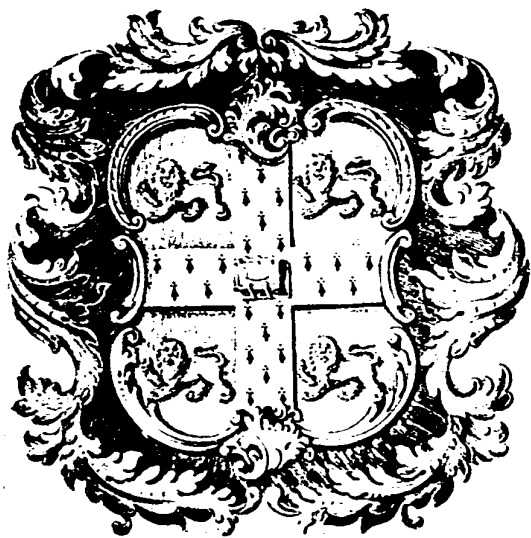
LONDON,

Printed for Thomas James, and are to be Sold
 by Nath. Crouch in Exchange-Alley over against
 the Royal Exchange in Corn-Hill, 1677.



THE
 TRANSLATOR
 TO THE
 READER.

THe Author of these Ensuing Discourses, who is, as 'tis hoped, yet Living at *Venice*, hath his Name in an high degree of Merit amongst the Prime Physicians and Chymists of this Age; His knowledge in the *Spagyrical* Art (in the judgement of those Eminent and Sagacious persons, who have Studied the Controversie betwixt Them), far exceeding *That* of *Zwelfer*, his Antagonist; who during this whole Treatise, goes under the name of the *Reformer*, for the reason mentioned p. 2. The Translation it Self was not performed without Labour and Sweat, partly because the Editions which were made use of, one from *Brunswick*, the other from *Leyden*, were very unperfect and incorrect; partly also, because, The Author being more intent on *Matter* than *Words*, on *Things* than *Expressions* ('tis his own Apology, p. 4.) doth sometimes leave his Sense to be picked out by the Analogy of his Doctrine. If morose and supercilious Censurers shall object Impoliteness, Solecisme, Inept Cadencys and Cohænsions of Words and Sentences; Obscurities, length of Parentheses's



Academia Cantabrigiæ
 Liber.

ses's, and other flaws usually incident, or at least imputed to Translations: In bar to such Hypercriticks, I offer the particulars following, *viz.* That every Language hath its *Idiom*, which is not properly transferrable to another; That a *Translator* is no *Paraphrast*, but being limited to the *Sense*, and in great part confined to the *Words* of his Author, hath no allowable Liberty to make Excursions, or to add any explanatory Embellishments to another Man's *Work*: It is *his* Province to write by the Copy before him (*i. e.*) to Vestigate and Overtake the Author's *Sense*, and faithfully to render it; which I hope is here, not unhappily performed; As for the *Obscurity* objected, The *Doctrine* it self must bear part of the *Guilt* (if any be) For *That* being *Novel*, or at least retrieved from Antiquity, may not perhaps be so clearly and Apodictically explained in a *Compendium* (which the Author intimates more than once) as to stop the Mouths of all Gain-sayers, though plainly enough (especially with the addition of the *Clavis*) to satisfy the Reasons, and convince the Judgements of Candid and Ingenious Readers. Lastly, Since 'tis an easie thing to be Witty in another Man's Labour, I shall conclude with the Poet,

Carpere vel noli nostra, veledē Tua.

J. W. W. de

T H E

T H E
P U B L I S H E R
T O T H E
R E A D E R.

THis Book, as to the *Translation* of it, hath been sufficiently perused, justified, and approved by some of the most learned and experienced Chymists in and about this City: As to the *Matter* of it, it needs no other Commendation than the long since allowed and printed Observation and Approbation of the *Royal Society of England*, in these words;

Philosophical Transactions, Aug. 16. 1669.
Num. 50. page 1019.

O T T O N I S T A C H E N I I Hippocrates Chymicus *Venetis in 12°.*

THis *Author*, though Printed two or three years ago, came not to our Knowledge, till now: He in his *Tract* endeavours to justify the Ancients blamed by *Zwelfer* in his *Pharmacopœa Augustana*, for having committed several Faults in the preparation of a certain *Salt* call'd

call'd *Theriack*, because extracted out of *Vipers*, and diverse other Ingredients composing *Theriack*; and having done this, he thence takes occasion to Treat of the Nature of *Salts*, especially of *Alcalyes* and *Acids*, which he, with some other Chymists, hold to be the first Principles of all mixt Bodies: And being perswaded that *Hippocrates* was also of this opinion, and a great Chymist too, he Entitles His Book *Hippocrates Chymicus*.

Though the Salt *Alcaly* properly signifieth that Salt which is drawn out of the Ashes of an *Egyptian* Herb, named *Kaly*; yet Chymists take it in a larger Sense, and understand by that Word all the Salts, which, like that of the said Herb, draw and impregnate themselves with, *Acid* ones. To this Salt our Author refers almost all the Operations of Nature, and having examined its properties, relates divers, not Uncurious Observations concerning it.

For Example, That nothing pierceth so much as *Alcalyes*, and that therefore Nature hath stored the *Sweat* of Animals so plentifully with it, for that the *Ordure* which continually gathers on the Skin, would soon stop the pores of it, if the *Sweat* were not furnisht with some efficacious Dissolvent to open and pierce Them; Whence he observes, that the best liquored Boots, and such as are Water-proof, will be quickly pierced by the sweat of Horses; adding, that though Riding-post, he had, to avoid that inconvenience, rubbed his Boots with a *Vernice*, which resisted even to *Aqua Fortis*, yet the Sweat of the Horses he rode on dissolved that fence after the second day of his Voyage.

Next,

Nail for whosoever the Teeth, shewing that from the mixture of an *Alcaly* and the *Spirit of Vitriol*, there results a yellow colour, that there is an *Alcaly*, continually transpiring out of the Gums, as out of all the other parts of the Body; whence it must follow that the *Spirit of Vitriol* employed to rub the Teeth, when mixt with that Salt, must tinge them of the same colour.

Then he affirms, that Wood rotten hath no *Alcaly* in it, and that it rots not, but upon the account of the exhaling of that Salt, Whence 'tis (saith he) That the *Venetians* to harden the Timber designed for building of Ships, sink it green in Water, and there leave it many years, which is the cause, That the *Alcaly* having been hindered from exhaling, the Timber rots not, but becomes as hard in a manner as *Stone*.

We cannot pretermit taking notice, That this Author finds occasion in this Book to explain the way by which the Famous *Turnbeiser*, a *Germane* Chymist made that celebrated *Nail*, half Gold and half Iron; which is shewed at *Florence* in the Repository of the Great Duke of *Tuscany*. 'Tis said, that That Chymist, having in the presence of that Prince, immersed in a certain Oyl, the one half of a *Nail* which appeared to be all Iron, that part which touched the Oyl, was instantly found to be good Gold: Several persons having examined this *Nail*, and seeing the Gold and Iron, exceeding well conjoyned, were perswaded that it could not well be effected, but by a true change of one of those two Metals into the other; believing it impossible they could be So-

(a)

dered

The Publisher to the Reader.

dered together. But the *Author* of this Book maketh that a very easie thing, if the Iron be before prepared after a certain manner, which He teacheth; and He pretends, That That was the whole Secret of *Turnheiser*, the rest being nothing but Illusion; for after he had by that means Sodered together a piece of Gold with half a Nail, He knew so well to give the colour of *Iron* to *Gold*, that Men believed that the whole Nail was of Iron; and having afterwards put this Nail into the Fire, and held it in the Oyl, to take off that colour, he made appear that *Gold*, which was hid before.

To



To the Most Serene and Mighty
P R I N C E S,

The LORDS { *George William,*
John Frederick, } Brethren.
Ernest Augustus,

By the Grace of GOD,
DUKES of *Brunswick* and *Lunenburg*, &c.
His Most Bonntiful LORDS.

Pondering often in my Mind (*High and Mighty Princes, and my Noble Patrons*) the Great and many Favours which Your Grand and Princelike Librality hath most Graciously heaped upon me, and thereby Eternally obliged me to Your Excellencies; I became solicitous and concerned in my thoughts, with what Veneration and Industry of Wit (*answerable to the Obsequiousness of my Devoted mind*) I might declare by some Testimony, at least, an endeavour of Gratitude for Your Benefits bestowed upon me. 'Tis the guise of Others in Dedicating their Lucubrations to Princes and Nobles, chiefly to concern themselves in Blazoning their Genealogies, and in Decyphering their Praises and Heroick Acts, in an high Method of Elegancy, thereby extolling them (*as we say*) with an open mouth to the Skies. But I (*well knowing that the full-blown Elogies of Talkative Fame, do displease Your Excellencies, especially since glorious and memorable Vertue it self, for so many Ages backward (together with Magnanimous Bonnty) have flourished in the most August House of Brunswick and Lunenburg, and by God's*

The Author's Epistle Dedicatory.

Blessing will ever flourish in the same) I, I say, waving therefore all such Proceedings do come only furnished with a gift not large, nor great (though you are worthy of both) nor glittering with Gold, Silver, or Precious Stones, Ornaments which (Divine Bounty hath abundantly replenished Your Highnesses withall, but) are denied to me, and persons of my condition: Mine is only a Paper gift, but extracted from the true Protochymick Art, which is most Ancient, and hath more in the Recess than it promises in the Front: Yea it is That, by which the uncreated Spirit, the Founder of the World d'd order and distinguish the (otherwise) confused Natures of things. Hereupon I perswaded my Self, that I could offer no gift more grateful to Your Highnesses, than a new work of this most Vetust, yet Wonderful and Necessary Science. A Work most curious in it self, which hitherto Envy hath forborne to restore, and to gratify the World with: For although the unconquerable Truth comes commend'd only by its own strength, and is sufficiently fortified by its proper and native Vigor (for nothing can subsist, which is not firm'd in the very Foundation of Nature) and so enjoys this invincible Patronage; yet the plain Purity of my Writings being Dedicated to Your Eminencies, and thereby armed with so great Splendor, thus doubly strengthened, will appear more boldly in the sight of the World. Accept therefore (most Noble Princes) this Diminutive Gift for the bare Title's sake, and go on, if not entirely to love, yet somewhat to respect and favour,

VENICE the Ides
of May, 1666.

Your Highnesses most
Devoted Servant,

OTHO TACHENIUS.

THE

The PREFACE to the Courteous READER,
And Lover of the Ancient Doctrine of
HIPPOCRATES.

Hippocrates, That bright-shining Light of Physick, did wrap up His Divine Oracles in Ænigma's, and with an Obscure Brevity, related his Precepts in all the parts of his Works; So that his Instructions and Aphorismes, by reason of their Obscurity, are wrested by Writers into diverse Senses; some of which Galen, with wonderful Skill and comely Order, hath digested into Chapters; but other, some, especially the Golden Book De Diætâ, which is full of Mysteries, he hath left untouched. For the Divine Old-Man bequeathed Those only to the followers of Chymistry, which Art was heretofore, and perhaps in Hippocrates his time, called Natural Philosophy. For who can understand the rare sayings of that Old-Man, or comprehend the Soft Fire mentioned by him, unless he be well vers'd in this Occult Natural Philosophy of Hippocrates. Raimund Lully gives his Attestation hereto; for, says he, Though a Logician may have as profound Wit, acquired, or natural, able to argue concerning outward things, yet he can never understand by any Reason grounded on Sense, how the Seed in the Earth doth germinate, increase, and brings forth Fruit, unless, being assisted by experimental Learning, He first have made some progress in Our Natural Philosophy, rather than in That Sophistical Wordy one, which Logicians do attain to, by sundry Phantastical suppositions and presumptions; who thereby, with the Prognostications of their sequels against the force of Nature, do cause many Men pertinaciously to err, through an intoxicated Mind. But by our Mechancial Science, the Understanding is rectified in point of insight, and of true Mental Knowledge, by the force of Experience: Yea, Our Experiments are superior to all phantastical Probations of Conclusions, and therefore admit not of Them, but do shew the way how all other Sciences may enter vigorously into the Understanding. Whence we further learn by Nature, that

The Writings of the Ancients were like the Oracles of Apollo, Ænigmatical.

T. Ham. chap. 26

In-

The Author's Preface to the Reader.

Inward thing, That it is, and What it is; because by such Science the Understanding is freed from those superfluities and errors, which do ordinarily carry it off from the Truth, by reason of those presumptions and prejudices which are believed in the Conclusions. Hence it is, that Our *Chymists*, have directed themselves through the path of every Science, to enter into all Experience by Art, according to the course of Nature in her Univocal Principles. For 'tis only Chymistry, which is the Glass of the true Understanding, shewing it how to feel and see Truths in a clear light, and therefore *Tabula Smaragdina* saith, By this kind of demonstration all Obscurity is banished and expelled from Man, &c.

Lib. 1 de Diata

Hippocrates points at the foundations of this most Ancient Art, in the beginning of his aforesaid Book.

All other living Creatures, says he, as well as Man, are constituted of Two principles, different in faculty, but concurring, and joyntly fit for Use, Fire and Water: Both of These together, are sufficient both for all other things, and also for themselves mutually; but either of them severally and a-part, is sufficient neither for it self, or any other, &c.

It is my purpose in this short Tract, to expose to View those two, hitherto Obscure Principles, to wit. This soft Fire and Coagulable Water, only out of a desire to propagate Truth; which in this Age is wofully kept under by the Haters of Hippocratical Learning; not that I think it possible for any Men wholly to extinguish it, In regard it is Powerful, Impregnable, and Triumphant above all things in the whole World, as Holy Writ also testifies; For Zorobabel says, Wine is strong, The King is stronger, Women strongest, but above all things, Truth beareth away the Victory; all the Earth calleth upon Truth; The Heaven praiseth it, it is always strong, it conquereth and liveth for evermore, &c.

3 Esdr. 6. 3 & 4.

Obj.

I know many men according to the variety of their Dispositions, will diversly censure me, for publishing That which Nature hath decreed to manifest only to Philosophers; and Those too, that ing hard after it, by labour and Study.

Theor. 1.

For, says Raimundus Naurus, my Lady and Mistress

The Author's Preface to the Reader.

appeared to me, and with Tears in her Eyes, bespake me thus; Alas! what shall I now do? endeavours are on foot to take away my Weapons and Instruments from me, and to plunder and discover my Secrets, &c. Whereupon I obliged my self to hide her Instruments and to preserve them from the hands of their enemies. These Instruments of Nature the profound Lullye, being so instructed by Hippocrates, keeps in the dark and points at them only in two Words, calling them *Entia Realia*.

So also Basilius Valentinus hides Them under the barbarous terms of *Asa*, and *Phalaia*: *Tea*, the same Mechanical Instruments of Nature, which Hippocrates calls *Fire and Water*, He elsewhere styles, *Gladiatores*: And as Hippocrates did display them only to a few Disciples, after the manner of the Pythagoreans, under the operation of various Arts; so Basilius, following his Master, chooses to represent them under the notion of *Brewing of Beer*, and other Rural Labours.

A Clavi. 1. 2.

But Paracelsus despising vulgar Allusions, though condemned of Heresie by the Church, yet agrees with Hippocrates in This most Ancient Learning, and holds forth the aforesaid Instruments of Nature under the names of diverse * Spirits.

See Cur. Triumph. Antin. * One Spirit draws, another thrusts out, both do by sm. thing. &c. Hip. 1. 1. De D. x.

The rest of the Ancient Philosophers veiled the said Architectonick Instruments under the fained compilation of *Re-bis* (as if intimating two things) Hence the Rhythm;

Est *Re-bis* in dictis rectissima norma figuris,
From *Re-bis*, as two things,
The right Rule springs.

Others have notified and represented Them under other disguises, &c.

I answer, That I was not without the deep consideration of these and many other things in my mind, yet (for a reason to be mentioned anon) I could by no means be diverted from my purpose; especially being persuaded, that therein I benefit the Common-Wealth, to which all of us owe the greatest part of our Fortunes: For in displaying these Instruments of Nature, I do likewise exhibit a sure and certain Method, hitherto observed by few, exclusive of all Ambages and Fallacies; so that for the future, This most Ancient, Noble, and Necessary Art of Chymistry may for ever be vindicated from the Calumnies and Barkings of Illiterate and Flagitious Persons, who are its rude and ignorant Haters.

Ans.

For

... *Lib. Giant-
... (not only against the aforementioned lights of the
World, but also against Those, who out of their Zeal for Picty
and Freedom, have endeavoured by their assiduous labour and
meditation to conquer those Difficulties and dispel those Obscu-
rities, which the Ancients (worthy to be had in perpetual re-
membrance) have propounded) than the names of Apostates,
Mountebancks, Empiricks, or Experimentalists (though
this last Epithite they sparingly give; as not willing to men-
tion any thing of experience) Yea, they likewise threaten and
crack amongst unlearned ones (a just Wonderment that so great
Arrogance can be spent on so small a Subject) that they will
shortly manifest to the World by their Pens; the Vanities of
Chymistry, though they never yet knew what this Ancient
Dame was, nor had ever the honour to salute her, so much as
at the Threshold. O how sorely do they mistake our Friend
Galen, whose Followers, yet they profess themselves to be. For
he teaches, * That in every thing a Man must first be his
Crafts-master, before he begins his Work. Assuredly there
is a great difference between the Skill of making Experiments,
and an habit of uttering vain and empty words. Of such
Heraclitus said of old, It is not best to hide their ignorance;
but 'tis fit (as Plutarch speaks) to discover it, and to endea-
vour to heal it.*

*Such Learned Men, who have not had their minds darkned
by vain and prejudicate Opinions, have had far other thoughts
of Chymistry: For Mathiolus writes to Andrew de Blau,
That no man can be an ordinary, much less a compleat
Physician, who is not well exercised and versed in Chy-
mistry. But what need is there to allsage the Testimonies of
Learned Men in the case? Nature it self fights for Her,
which, without this Art, cannot produce so much as one grain
of Seed; as shall be demonstrated: Hippocrates was very
well skilled in this Ancient Doctrine, as will easily appear;
Yea, He commends it to all the true lovers of Physick: Nay,
without this Art the enemies and opposers of It would live like
Bruit-beasts, not having an House to defend themselves a-
gainst the injuries of the Weather; for they would want Lime
and Brick for building: neither would there be Glasse for Win-
dows, nor Looking-glasses, or Spectacles, necessary helps
for*

*for Old-Mens eyes. Yea from whence could the least gain be
expected? unless the melting of Minerals, and the separating of
Metals '... been found out by Chymistry? Were it not for
This Art, Printing would fail, Nature of her self would ne-
ver bring forth Linnen, nor Paper, nor Ink to Write, or
Print with; neither should we have any Colours, of which
this necessary and noble Art hath produced an infinite number;
for Cinnabar, Ultramarine, Blew, Minium, Cerusse, Pur-
ple, * Aurum Musicum, and the temperature of other Co-
lours, are the products of It: Yea, who can enumerate all the
Benefits arising from this Art, for the use of Mankind? The
whole Northern Region, as well as my own Country, owe
much to this Art; for hereby is made a Drink out of Barley,
which is called Ale, or Beer. Now Barley, as Galen teach-
eth, if it be a little boiled, causeth Windiness; if boiled to an
higher degree, it occasions Obstructions. But our Ancestors
being instructed by Hippocrates, through the help of this Art
have excited the instruments of Nature in Barley it self, and
have changed it into a new Seed, no longer called Barley but
Mault. They boil this Mault after it is grinded, and again
excite the inward Organs to Alteration, which action is called
Fermentation, a Fervendo. After this manner, as Hippocra-
tes instructs us, is this most wholesome Drink made: of It.*

*But what do I speak of Beer? The Juice of Grapes, of it self, ^{wine.}
would never be made Wine, unless Art did concur to stir up
the Organs in it to Operation. The like may be said of Bread, ^{Bread.}
which in the absence of this Art could never be compleated, unless
the instruments of Nature in the Meal, by a proportionate degree
of Fire and Water be excited from without? For when These be-
gin to act upon one another, for want of new matter, the Lump
or Dough first sours, then by degrees it putrefies, and at last
breeds Worms: But Art retards, or hinders the Operation of
those Instruments by vehement Heat or Cold; and so the Work
is perfected, and Bread made, which is so necessary for the
Sustentation of Man's life.*

*Neither do Aliments alone stand in need of this Art, but
also the most Wholesome and Effectual Medicines cannot be
made without it, as amongst others, We may see in Treacle;
for unless the infinite Instruments of Nature in the Simples,
which make up that Compositum, be united by Fermenta-
tion, and so suffered to rest, it would be altogether useles.*

* In lib. Hip.
de Aliment.
Comment. 3.
Text. Pharma-
cia.

Lib. 4. Epid.

* An Artificial
Gold used much
in Italy by
Painters.

The Author's Preface to the Reader.

* Lib. De Viribus Cordis. Tract. 2. c. 4.

For *Avicen says, That, That Medicine is of double Vertue which hath suffered Fermentation. For which cause the Inventor thereof, being well skilful in Chymical Operations, adds Wine, that the Work may be more readily done. For all Natural things are transformed by Fermentation, as is plainly seen in the Juice of Grapes, in Brewing of Beer, and in Making of Bread.

Obj. But it is alleaged, though Reason and Truth it self do evidence these things to be so; yet notwithstanding the Noveltyes which you introduce into Philosophy and Physick, and the Mineral and Metalline Remedies prescribed by you, which are very contrary to Man's nature, and were unknown to Antiquity: These are the things which we implead and oppose.

Ans. I answer. It is an impossible thing to introduce Noveltyes into the World; but to perfect, alter, thoroughly to mix and compound things introduced already by the Creator, is very possible. This Hippocrates teacheth, and it is allowed to Art. So Flax or Hemp, by various alterations is made Paper: Grass by the like Alterations is changed into a Glove, and also into Glew. The Juice of Flowers by a various Alteration is made Honey; and Honey in like sort is changed into Hydromel, (i. e.) Mead or Metheline (a most pleasant Drink in Lituania, nothing inferior to Spanish Wine) and at length it turns to Vinegar, which is afterwards easily reduced to Elementary Water. Bread-corn by Alteration is made Hot-water. Sundry Simples gathered together and mixt in one, by Fermentation become Treacle. So, since Hippocrates his time, Cassia, Sena, Mechoacan, Cremor Tartari, and infinite other things are found out, which he made no mention of; which yet are not new, but only retrieved and brought forth into use again by long Study and Experience. So that we may boldly say with the Wise Man, There is no new thing under the Sun. Whatsoever therefore the Followers of Hippocrates have handed out, and as it were Mid-wifed into the World; the same was from the beginning, though our eyes were not so clear-sighted, as to discover it. But Stephen Palquier answers this Objection very Elegantly,

Dicitur esse novus, nobis Paracellus, ob idque;
Crimen, in obscurum pellitur exilium.

At novus Hippocrates, novus est Chrysippus, & ipsi
Roma Asclepiades, tempore quisque suo.

Qui nova damnatis, veteres damnetis oportet;

Aut ista nihil est in novitate novi.

Englishted

The Author's Preface to the Reader.

Englishted thus,

Some Paracelse of Novelty implead,
For which judg'd Crime he erst was banished.
So Hippocrates, Chrysippus, and at Rome
Asclepiades too, were New, They'd all one Doom.
They who condemn new things, condemn the old,
Or else do both mis-judge, and are o'r bold.

As for Mineral and Metalline Remedies, neither these were not newly introduced into Physick, but were in use among the Ancients. For Treacle that most ancient Compound, is altogether Ineffectual without Chalcitis; Alkermes takes into its composition Lapis Lazuli, and Gold, the perfectest and noblest of Metals. The same Mesue made Pills of the same stone of good use, in Melancholy and Madness; which latter Practitioners guild over with Gold or Silver.

Gold.

At Vilna, the Metropolis of Lituania; I knew a Silver-Smith, a lusty Fellow, a Batchellor, unlearned, yet of so happy a memory, that in his own Mother Tongue, he could repeat almost word for word whatsoever he had once heard. This man from his youth to that very time, which was the 47th. year of his age, had accustomed himself daily to eat a little of the filings of Silver, as he was at work, and he firmly believed that the use thereof encreased his memory.

Silver.

Emeraulds, Rubies, Jacinths, do they not enter into various compositions, which we call Cordial ones?

Gems.

Sulphur is daily prescribed in the Diseases of the Lungs, and is praised by Dioscorides a very Ancient Writer.

Sulphur.

Iron is commended by the Ancients in the Diseases of the Spleen, and we use it at this day with good success; Mineral Waters were in great veneration among the Ancients, and we also have recourse to them every year in desperate cases.

Iron.

But what will they say of Salt, without which Man's Life cannot be sustained, and which we use every day in seasoning our Meat? Is that a new Invention? or had the Ancients no knowledge of it? yet it is excoted not only from the Sea, and from Fountains, but there are besides Mountains and Mines of native solid Salt, like Marble; out of which it is hewn, and grows again, like Stones in Quarries.

Salt.

I my self have seen such in Valachia, and near Craecovia,

a greater Revenue arising thence to the King, than from any other thing; which yet cannot be called a Vegetable, nor an Animal; it must therefore needs be a Mineral.

So for external Remedies, The Ancients never composed their Oyntments, Plaisters, Collyriens, and such like, without Minerals and Metals.

Lead. Of Lead, mix'd by Chymical Art, with Vinegar they made Cerulle for the Unguent and Plaister, which is called White; of Lead is made Litarge, of which is made the Emplastrum Tripharmacum: All these were found out by the Ancients.

Copper. Of Copper and Vinegar by the same Art is made Verdigrease, which enters into the composition of the Egyptian Oyntment, so called from its Swarthy colour, the invention also of the Ancients.

But why do I spend time in mentioning these things, there is not an Old Woman in Italy, but will inveigh against the opposers of this Art? for without It, it is impossible for them to find out any thing to Colour and Dyetheir Hair.

In a word, whatsoever Famous and Excellent thing is performed by Art, it proceeds from the foundation of This Ancient Philosophy; though men know this well enough, yet they are ashamed to speak it out. The Old-Man, Hippocrates, admiring at this stupidity and turning to his Followers, says (smilingly and with a low voice) The Divine Mind hath instructed men to imitate her Works; they know what they do, but are ignorant of what they imitate. They are Hippocrates his words. So that, Hippocratical Chymists do not endeavour to produce new things, but to recal from Oblivion, Things approved by the Ancients.

It is further objected, That the strong Remedies of Quick-silver, and Antimony do evince the ignorance of Chymists; The use of them being abominable, and taken at Mouth, they oftentimes endanger Life.

As for the ignorance objected, I wonder not at it, for it is an Epidemical Disease in all Professions, and especially in Physick, which of necessity takes it original from this Ancient Art. This made * Hippocrates to say, That Physick was indeed the noblest of all Arts, but it was depreciated by

As if Lapis Armeus, L. zuli, and Unguent's of Quick silver, were pleasant.

* De Lege.

reason

reason of the ignorance of those who practised it. 'Tis ignorance therefore which occasions all the Mischiefs in Physick; neither doth it raise greater envy any where, than amongst those who follow not the Chymical way of Practice, whose envy sometimes appears in their looks: So that now a-days a Physician is ordinarily despised, and exposed to the Scoffs and Taunts of Facetious Wits: Oh, where is the Majesty wherewith Physicians did once shine amongst themselves? What's become of the esteem and brotherly respect one towards another, which * Hippocrates so much commends? In our age one Physician undervalues another, carping at what he says or does; yea, he quarrels at, and opposes (behind his back) That which he understands not; extolling himself amongst the ignorant Vulgar, for the sordid hope of a little Gain. If such persons by the help of our Furnaces, had learned that the Principles of Chymistry (i. e.) The Instruments of Nature, according to Hippocrates, were the Foundations of Medicine, Physick had never been divided into so many Sects, as it is at this day. For now there is a Sect risen which divides Physick into two parts, Chymical and Galenical, against the mind of Old Hippocrates, who never mentioned but One, neither did Galen take notice of any such division. The opinions of Hippocrates and Galen seem too praiseworthy to these men; for they are contented with a few Rules, and though ignorant of the instruments of Medicine, yet do pride themselves in being accounted and called the only Canonical Physicians by Old-Wives and Pl. brians. Galen, who was addicted to no Sect, yet most accomplished for Learning and Prudence, calls such men Servi, for He was willing to consult with all sorts of persons; Fisher-men, and men of the lowest rank, with rude and unskilful Pl. brians (why then doth Sennertus in his Book De Consensu, chap. 4. impute This as a fault to Paracelsus) not only that he might escape the censure of Hippocrates (who also was not ashamed to ask questions of plain Countrey-men in the beginning of his Book of Precepts) viz. Ignorance, but also that he might be able to discern Truth from Falshood: For that quick-sighted person knew very well that nothing could happen more Calamitous to the Sick, than to lay credulity, presumptions, opinion, and uncertainties, as so many Syrtes and Quick-sands for the foundations of Physick. And though

* De Decenti Ornatu.

The Author's Preface to the Reader.

in Galen's time Natural Philosophy, which now we call Chymistry, was confined within a few mens breasts under an Oath of Secresie, yet for the sake thereof He travelled over all Egypt, where that Art most flourished at that time; which shews the wonderful Curiosity and Diligence of the Man: for returning into his one Country, he distributed divers rare Medicines, which he there learned, among several Physicians, his Friends; That so they might be approved by their Experience. Thus he wrote of the wonderful efficacy of Fire and of Treacle to Piso, a Piece mst worthy to be read: And he highly extols Æschiros, the Empirick, his Master, from whom he learned how to burn Crabbs.

De Simp. Med.
f. 18.

Wherefore Galen's Praise remains entire, and He will always be accounted a most sagacious Person; To whom, as well as to Hippocrates, a Reverence is due, as to the beginners and producers of many, if not all Good Things.

So that Natural Philosophy (now styled Chymistry) according to Hippocrates, is a most Ancient Science, being derived from the Greek words 'Als, signifying Salt, and Cheo, to Melt: Hence came the word Alchymy, as much as to say, The Art of melting Salts. And 'tis rightly call'd so. For Nature her self can produce no fruit at all, unless the Internal Salts of the Seeds be dissolved in the Earth (as I shall Ocularly demonstrate:) And these once dissolved, do again act upon one another, and so arise into a Plant for its peculiar uses, and then they cease from their labour; for as Hippocrates affirms, One Spirit draws too, another thrusts from, both doing the same thing, and it inclines to either part (the Encreasing and Vegetating) and so they imitate the nature of Man.

The Chymical Philosopher, instructed by Hippocrates, takes these Seeds thus brought by nature to Maturity, and in them considers those Two (Salts) the Organs of Nature, viz. Fire and Water; and by Art, he urges them to action, by melting the Salts according to Nature's Law, as Alchymy teaches, and then a new thing is produced, which was not before; for Example Bread, In This the Hippocratist or Chymist again takes into consideration, the Instruments of Nature; which he further assists by his helping hand, melting the Salts; and imitating Nature, he again brings forth a new Production, which

we

The Author's Preface to the Reader.

we call Vinegar: Now the Chymist observing that in this Vinegar the Fire doth exceed the Water (our Master teaching, That no Sapor should overcome by its proper faculty:) He therefore consumes the Acid part by its contrary, and again divides the Fire from the Water, and so a new Production called Hot-water is generated, which afterwards by the occult help of Art, is fixed into an Alcaly; and so the Curious Hippocratist goes on mixing and altering, till he obtains his intent: And at last he destroys both the Instruments or Faculties by repeated meltings of the Salts. And though hereby he may seem to ignorant Persons to have produced some New things, yet there is no such matter, for the things are most Ancient, only he melts and re-melts the Salts as often as the Laws of Nature will permit; which is not beyond the fourth Repetition, as * Learned Men with reason say. But of this enough at present. Hippocrates shews that this repeated Fusion-melting, and Exaltation of Salts, honoured by the Ancients with the Title of Alchymy, hath place, not only in the Vegetable, but also in the Mineral Kingdome; for, says he, Gold workers do beat Gold, wash it, and melt it with a soft Fire, for it will not be made up with a strong. By which saying he discovers the ignorance and unskilfulness of Those, who write that Chymistry is exercised about the ignoble fusion of Metals and Minerals, as if these would be melted with a soft Fire; but the contrary is well known to such who have overseen either of them to be melted; for Gold requires not a gentle, but a very strong Fire; Wherefore the Philosopher doth not here understand this rude way of Operation, though he takes his beginning from it; which he presently clears by a plain familiar example: Man, says he, doth thresh, wash, and grinde Bread-corn, and baking it, he uses not a strong Fire to make it up in a body, but a soft and gentle one.

Wherefore the Fire of the Chymical Philosopher in the extraction of Animals, Minerals, or Vegetables (called Small Elixirs by the Modernes) must be moderate. Hippocrates teaches, All things to be like which were unlike. But as soon as Fire exceeds the degree of being moderate, 'tis no longer the Philosophers fire, but the Artists; for then things are not advanced by the intervention thereof, but are altered thereby, as our Master teacheth in the fore-cited Book.

*Dee, Holland,
Etc.

L. 1. De Diet.

Galen had no
knowledge of
Metals, or of
Quick-silver.

Who-

The Author's Preface to the Reader.

Whosoever therefore do apply themselves to the Fusion or Li-
quation of Salts, either with a gentle or a vehement heat,
They all have their dependance on this Ancient Chymical
Philosophy; So that such persons are in a gross and ignorant
Mistake in the judgement of Hippocrates, who exclude A-
pothecaries from this Art. For when Pharmacopœans do
pound Vegetables, and wring out their Juice, then it is that
they make a fusion of Salts, expelling and thrusting out the
Exotick and Forrain, not being of one and the same temper
(they are Hippocrates his words) but when they condense the
melted Salts with Sugar into a Syrup, then they thoroughly
mix and alter them; So 'tis, says Hippocrates, with the na-
ture of Man, all Arts communicating with humane Nature.

Wherefore if Nature do precede Art, and Art doth but imitate
Nature, there is no man under the Sun, who hath not within
himself, as it were a Chymical and Salt-melting Shop; only the
Canonical Physician, who bears an hatred to the opinions of
Hippocrates, by reason of his ignorance of this Ancient Art,
excepts himself, as being altogether unacquainted with this di-
vinely inspired Science. And by means of such Ignoramus's,
Physick is accounted the meanest of all Professions, for it hath
no foundation to build upon: Of such Ignorants, Seneca speaks,
That they are always learning, but never attain to the
knowledge of the Truth.

Hence it is that Galen in his rich Writings approves and com-
mends Hippocrates to us, as the Guide and Author of all
Good, which Epithites he frequently bestows upon him; there-
by eternizing and consecrating his Name to Posterity.

This so well grounded opinion of Galen, hath moved me, ne-
ver, as long as I live, to admit of any other Doctrine in Phy-
sick but that of Hippocrates, which I believe will be Coævum
with Nature it self.

Ars Glaucon.
initio. and lib.
1. De Venz-
sect: adversus
Erasist.

Otto



Otto Tachenius,

HIS HIPPOCRATES CHYMICUS.

The Occasion of writing the Ensuing
Treatise.

CHAP. I.

THe perfect knowledge of all Sciences is so diffi-
cult, that the Life of Man would sooner be at
an end, than he can attain unto the compleat
understanding of any one of them; (so as to
be put beyond all dispute) by the help only of * Paper-
books. Socrates having made a through disquisition in-
to almost all Sciences, was then judged the wisest of
men by the Oracle; when he openly professed, that
he knew nothing at all: This the Preacher seems to
confirm to us; I beheld, says he, all the Works of God, that
a man cannot find out the reason of the Works which are
done under the Sun, and the more he labours to find it out,
the further it is off; though a wise man think to know it,
yet shall he not be able to find it out. The Divine Hippo-
crates was not ignorant of this difficulty of obtaining
knowledge in our Art of Physick, which made him inge-
niously to confess it in his * Epistles to Democritus:
For, says he, though I am an old man, yet I am not arri-
ved to the true knowledge of Physick: And the same per-
son avers, * That our life is too short for the acquist of any

A man
knows on-
ly so much
as is cer-
tainly dis-
covered to
him, by ei-
ther Men-
tal or Ma-
nual Ope-
ration and
Experi-
ment.

* Which
yet are not
wholly to
be reject-
ed.

Eccle. Ch. 8.
v. 17.

* In Epi. 1.

* 1. Aph. 1.
one

B

one Science, from the very Foundation thereof. Hereupon he advices us, to honour and esteem those which have endeavoured to search out the hidden works of Wise Nature; adding withal, that no one of them could be justly blamed, though he were not able fully to find them out. But it seems the Writer who reformed the *Augsburg* or (*Auspurg*) Dispensatory, was of another mind; his Book was printed at *Tergov* by *William Vorhovm*, A. D. 1657. Upon occasion of that Book, a few days since, my respected Friend, *John de Lanou*, a Famous Bookseller of this City, asked my advice, whether I thought it worth his labor to Print it here, &c. 'Tis true, I had heard of the Title before, but I had never seen the Book, for I had not so much leisure as to spend my time in reading such Pieces: Nevertheless, upon that occasion, at spare hours I read it all over, and could not but take notice of, and wonder at that corrupt Custom (so familiar to him and others, against the direct Precept of *Hippocrates*) that whatsoever a man had honestly found out by great Labour and Study, and had commended it to Posterity in writing for the good of the Publick, the same should presently be traduced, defamed, and spurned at amongst the Ignorant Vulgar, not by force of Reason and Experience, but by monstrous Calumnies and Reproaches, that so (like *Herostratus*) they might procure some fame to themselves, by the ruine of other mens Credit. The Reformer of the *Auspurg* Dispensatory treads in those steps, railing and declaiming not only against the Ancients, but the Moderns also; Followers of *Hippocrates* and *Galen*, in such sort, that there is hardly an Arrow in the Quiver of Slander, which he shoots not at them. I had formerly instructed this Man in the way of making *Viprine Salt*, but under a Metaphorical disguise (for I had denied to teach him in plain terms) and now he proclaims me for a Cheat, and that I hinder by Imposture the making of it publick: I ingeniously confess, that here, at least in part, the Reformer speaks truth; for whatsoever made Physicians who were lovers of Truth famous heretofore, the same things Impostors do craftily adulterate. Our *Hippocrates* was afraid

L. 1. de
Diet.

Pharmacoe
f. 487.

said of such Cheats, which made him conceal his Antipestilential Medicament, by which he had procured so much Honour to himself, and had happily and securely cured that Disease; as his Epistles do testify.

Paracelsus did also dread Impostors, who by his wonderful Art cured the (otherwise incurable) Contagions of the Body, as his Epitaph speaks; which may be seen graven on a stone at *Saltsburge*, in the Hospital of *S. Sebastians*.

In our dayes *Lazarus Riverius* feared the like Cheats, and for that cause he published his *Specificus* against Feavers under a Metaphor. So *Helmont* very prudently vailed the Liquor which (with *Paracelsus*) he calls by a corrupt Name *Alcahest*; which yet is not free from Adulterators; but instead thereof the Reformer substitutes *Vinegar*; * hereupon, being instructed by my loss, I became my own School-master, and have often thought upon that Saying of *Eschourentorius* to *Gratarolus*, *Thou knowest on easier terms the Sentence passed at Bononia, that he was proclaimed a Traitor to his Countrey, and worthy to be hanged, who first made a Pilatory at Trent in Germany; which is an Engue whereby Raw Silke by Spindles is artificially drawn into Threads.*

* In Ap-
pend. t. 72.

So that I have hitherto concealed That which might ennoble a Physician, being jealous, not without cause, lest by my sluggishness and neglect, it might fall into the hands of Impostors, and thereby the worthy and the unworthy should undergo the same Fate.

But the earnest importunity of this * Reformer hath caused me to select some things out of the heap of my Observations and Experiments (which I had designed only for my own use) and now to make them publick; yet still I keep to the Precept of † *Hermes*, *That the Wisdom of the Author ought to be greater than his Book.* But I must follow the Clew of inevitable Fate; and I undertake this labour the more willingly, that I may discover the right way to those that wander, and may bring back Straglers into it: As also, that those who have hitherto opposed this Art, might at length correct their mistakes, and begin to be wiser: And further also,

* Pharmac.
487.

† *Libro*
Radice.
None are
worthy of
the name
of Teachers,
but such who
teach by
sure Principles
and causes.
Arist. in
Proem. Meta-
phys.

that they who practise it, may assuredly understand that it is founded on the Principles of Nature; and for the future may be delivered from the crafts and deceits of Sophisters and Impostors. In this work, I mind more the Truth of the Cause, than the Ornaments of Elocution; for the speech of Truth, says *Euripides*, is plain, neither matters it therein what stile we use, especially since *Cicero* doth not require Eloquence in a Philosopher, much less doth *Celsus* in a Physician: For as *Plato* saith, when we dispute of things, the rudeness or the elegancy of words are not to be heeded, but only that satisfaction may be obtained, as to the Doctrine of the things themselves; neither have I inserted florid disputings, or odious altercations, but whatsoever offers itself more occultly to the Senses, that, Experience being my guide, I have despoiled of its coverings, and have exposed the truth of things naked to the eyes of all beholders, so that every individual man may know it; for Truth loves brevity, not disputation. By this Compass I have Steered: Draw near therefore, all ye Lovers of Truth, and you shall behold things (both admirable and pleasant) with your eyes, yea and handle them with your hands, which have hitherto stood remote from our sensation and knowledge. Now to the work it self.

Three words are sufficient in a just cause.

Qui nimium properat, serius absolvit.

Or,

No more haste, than good speed.

CHAP. II.

* *Pharmac.*
f. 481. **T**He * Reformer begins with a lofty Brow: Now, says he, let us come to the examination of the Salt of Treacle of the Ancients, whose preparation was so Childish and absurd, that their simplicity did no where more appear than about it, &c. And a little after, Animals only have Volatile Salt, and in a violent Calcination, leave commonly nothing behind them, save only Terra Mortua; yea, the rest

of these absurdities are not to be passed over in silence, in that they substituted Sal Armoniack in the place of Common Salt, not at all, as I perceive, understanding the matter, because all the Sal Armoniack is vanished into Air, and so there remains nothing to them, neither of the Vipers, nor of their added Salt. Thus he.

Do not rashly condemn the guiltless, not having thoroughly weighed their cause.

But for my part I cannot see that the Ancients deserve to be accused of absurdity or simplicity in this thing, so as to incur the undue reprehension of the Reformer: so that before we judge, we are to hear, and that both sides; and we ought to find out what the *Sal Armoniack* of the Ancients was, and for what reason they substituted it in the room of Common Salt? and for what end? and wherein their offence lay? so as to merit the rash anger and bitter despiht of this Reformer.

To make these things more plain, it is necessary that we dive into the secret nature of certain Salts, in order to the examination and understanding of them, and of the differences between them, by accidents proper to them, and known to Sense, and that not by Logical and subtle Syllogismes, or imaginary Non-Entities, but by Experimental and Natural History: I say then, to prove, that not Animals only have fixed Salt, but, against the Opinion of this Reformer, all Vegetables also have not a grain of fixed Salt by Nature, unless they acquire it by Art. But first I will speak of things more known, proceeding afterwards, by degrees, to those which are more occult. *Pliny* witnesseth, that Natural *Sal Armoniack* was in great use amongst the Ancients; It is found, says he, in Africa, in the Country of *Cirenia*, till you come to the Oracle of *Jupiter Hammon* in lumps, somewhat long, and under the Sands. *Diascorides* confirms the same; that *Sal Armoniack* is praised from the Country where it is found. This Salt endures constant in the fire, being, after its manner, of a more Salt-acid relish, than our common *Trencher-salt*, as I shall shew; and therefore the Ancients found it more advantageous for Medicines, and for that cause have more commended it to us: But that which is brought to us is not in longish lumps, neither

No imaginary things here.

L. 1. Cb. 7.

is it Natural, but is made by Art, *viz.* of the Natural, and of the Volatile Alcaly of Animals, as the resolution of it shews, according to the Axiom of *Aristotels*, for it is divided into an Acid Spirit of Salt, and also into a volatile Alcaly (all salt things are divided into two substances, *viz.* Alcaly, and Acid, as I shall shew by degrees) both which being separated, and again reunited, become the *Sal Armoniack* which it was before. The Acid part or Spirit, hath all the properties of that which is distilled from Common Salt; but the Alcaly is of the same nature with that which is sublimated from Mans Urine, only 'tis not so stinking: Whence I conjecture, that they chose Camels Urine, not Mans, for the composition: For the Urine of Camels, as *Pliny* observes, is more profitable for Fullers; than the Urine of other Animals, from whence there must needs be a richer Alcaly; perhaps because they eat no Salt, as other Animals do, for common Salt doth not wash out, or cleanse; therefore *Nausicca*, the Daughter of *Alcinous*, was said her Linnen in a Fountain on the Sea-shore, as *Homer* records.

But Artificial *Sal Armoniack* is made after the same manner as *Sope*; for Nature works alike in both, as *Hippocrates* says; to wit, of the Acid part of *Armoniack*, and the Alcaly of the Urine of Camels (or of other Animals, 'tis all one) I have made the like Salt from the Alcaly of Soot, and the Acid Spirit of Salt, (for want of other) for the Urine doth dissolve the Salt by Maceration; and the Alcaly of the Urine, which otherwise in a few days would vanish, here being delayed and stop'd, finds the Acid which it imbibes; and so of the Acid part of the Salt, and the Alcaly of the Urine, a new Artificial Creature is produced of a salt resin. But that which is not of the same nature, nor † accords with this new Salt, of its own accord is severed, and sinks to the bottom. The clear Salt liquor swimming at top they boil and scum, and again suffer the *Faces* to settle; and at last coagulate it into a Cake. This is the *Sal Armoniack* which is brought to us, but it is not that which the Ancients chose for Salt of Treacle, as the Reformer guesses; but

* All things necessarily consists of that into which they can be resolved.

L. 28. c. 8.

Olyf. l. 8. from vers. 85. to 96.

* L. 1. de Diat.

Sal Armoniack.

† Hp. l. 1. de Diat.

but that is the Natural which is found under the Sands (*cauus*) as *Pliny* shews in the fore-cited place, of which I shall speak more clearly in the Progress of this Work; but before I proceed, I must explain more fully what Alcaly is.

CHAP. III.

Sal Alcaly, what it is.

IT is not my purpose here to deduce the matter, *ab ovo*, as they say, or from the very Elements, but to manage a Demonstration concerning things Physical, Natural, Material, and known by our Senses. Know then, that *Salt-Kaly* is made of the Herb *Kaly*, coming in great quantity out of *Egypt*, which is there burnt whiles it is green, and so brought over to us, and is called by some *Soda*, and *Alumen Catinum*; but the right name is *Sal-kaly*. This Salt is not found in Natures three Kingdoms, unless it be produced by Art, through the help of Fire; whence it is that this *Virgin* is said by the Ancients to have three Fathers, *viz.* Nature, Fire, and the Philosopher.

This *Sal-kaly*, as other Salts, is part of the *Composition*, yet deprived of its seminal vertues, only it hath an absorbentive, *Sope*-like, and resolving property; and by reason of this inanition, being as it were without form, it sucks up and imbibes all sorts of Acids, (the Ancients call it impregnation.) Hence it is that all Salts which do mortifie Acids are called by one general name, *Alcalies*, which are found not only in the vegetable, but also in the Animal and Mineral Kingdoms: And in these three, there are several sorts of them, *viz.* fix'd, volatile, manifest, occult, and of a middle nature, taken from parts of Animals which are to be demonstrated to the eye. But first I shall begin with that which is more known, which is found in a Flint, which considered, *quatenus*, a Flint, is thought by the unskilful to be under the Regiment only of one Rector; but the skilful

I call the Senses the Guides of Life, and of all its Operations

Alcaly is inane and empty.

Glass-

Glass-men of *Murano* have observed, that though taken from its Native place, it weighs 100 *l.* yet it yearly acquires 10 *l.* or thereabouts, to its weight. Hence the *Hippocratist* learns, that *fovis omnia plena*, yea that it receives nourishment from the ambient Air, but as soon as the External and Artificial Fire supervenes, then the skillful Operator sometimes converts it to Glass, and sometimes to Calx or Lime: So that the *Hippocratical* and *Chymical* Philosopher comprehends two different Faculties in a Flint (being so instructed by his † Master Fire and Water) so called, for the two reasons which constituted a Flint: These Faculties the Chymists alter by the help of a due Fire, which alteration is called *Incineration*, for of its own accord it turns to a Powder, whence it is called by a common name, *Calx* or *Lime*.

In this *Calx* or Calcinated Ashes, the Chymist again comprehends the above-named Faculties, which for our better understanding, we will now once for all, * and at all times hereafter, call the *Acid* and the *Alcaly* from their effects.

Calx then, or Lime, hath two Salts, or (as *Hippocrates*) two Faculties in it self, the *Acid*, and the *Alcaly*, both most constant in the fire, and one contrary to the other; and when the *Calx* is sprinkled with water, then the Salts are dissolved, and act upon one another. The *Alcaly* sucks in, and acts upon the *Acid*, and this again assumes the *Alcaly*, not for the destruction of either, but for the Production and Generation of a new thing, and whatsoever they lay hold on in that Generation, not being too heterogeneous from their natures, is concreted with them into the hardness of stone; so one contrary is coagulated by another.

This knowledge of *Calx*, if the Reformer had learned out of *Hippocrates*, the Poor Man had never gone about the fixation of viperine *Alcaly* with *Calx*, as with a lamentable voice he declares in his Discourse concerning Salt of Treacle. After the *Hippocratist* hath learned, that according to the Laws of Nature, *Calx* is petrified by contrary Faculties, then he reminds the Lesson of his Master and Instructor, viz. that like is to be dissolved

* *Colmeperita* says, that the occult Food of Life is in the Aire.

† *L. 1. de Diet.*

* *Acid* and *Alcaly* the instruments of Nature.

That the Fire is *Acid*, the Water *Alcaly*, I will shew in its place.

Pharmac. f. 485. Contraries are coagulated by contraries.

ved by like, and that not only in Artificial, but in Natural, especially in Physick, and Humane Bodies, as will anon appear; for *Arts de imitare Naturam* they are *Hippocrates* his words, who also teacheth, That agreeable things adhere to one another.

Hip. 1. 1. de Diet.

CHAP. IV.

Alcaly and Oyl are made Soap.

CAlx, or Lime, as I have said, hath two different Faculties, *Acid* and *Alcaly*: I have shewed before, that *Alcaly* hath at least a Soap-like and absterive virtue, which *Hippocratists* have taught to extract and separate by its like: Therefore Soap-men add to the *Calx* a facitious *Alcaly*, burnt out of Vegetables in a triple proportion, because it moistens the *Acid* part in the *Calx*, and melts the other part by its like; wherefore they moisten a little the Alcalized Ashes, with which they cover over the unlacked *Calx*, and so leave them, until the Lime or *Calx* falls asunder, as a sign of mutual action; then they mix them together, and pour on water, that the Mass may become moister (according to the Rule, *Salts all mix unless they be dissolved*) then with a sufficient quantity of water they extract the Lixivious Fiery *Alcaly*; (I call it Fiery, because this boiling *Lixivium*, or *Ley*, consumed in a moment a Drunken Man with his Woollen Cloaths, so that nothing of him was found till his Cotton Shirts, and the hardest Bones, as I had the Relation from a Credible Person, Professor of that Art, which Fiery *Lixivium* they call *Magistra*, which is charged with so much *Alcaly*, that an Egg will not stand in it. Of the same nature is made also another *Lixivium*, which will not bear up an Egg; with this last *Lye* (for certain reasons) in boiling of Soap, they first mingle Oyl or Tallow, (which is contrary to *Alcaly*, and containing an occult *Acid*, as will appear by degrees) but they boil it with a soft fire till they wax white, then they add the *Magistra* in a triple pro-

Likethings are dissolved by like. *Hip. de locis in homine.*

Of Lime and Honey is made a mixture good for the brawniness of the Feet.

portion

The greater is increased by the less.
Hip. l. 1.
de Diat.
Hip l 1.
de Diat.

L. 1 de
Diat.

portion to the Oyl or Fat; and in boiling, the Oyl and *Alcaly* are coagulated, till they are compacted into one Body, as contraries, and throughly mixed; For they never consist together in the same, but are always altered; so that of necessity the things severed and produced from them, must be dissimilary in their nature. For out of the manifest *Alcaly*, and the occult *Acid* in the Oyl, is produced a thing of a Neutral Nature of a salt relish; sometimes they make tryal of it by the tongue, if the taste be sweet, they add the *Magistra*, if it be biting, it must be boiled till it hath absorbed the Oyl; but if it be more than ordinarily pungent, then they pour in Oyl leisurely at discretion, as *Hippocrates* teacheth, *Spiritus unus trahit, alter protrudit, &c.* One Spirit draws to, another thrusts from, but both do the same thing, and tend to either part, and so they imitate the nature of man. Sea-salt, because it is no vacuous and empty Body, as *Alcalyes* are, is not coagulated with fat, or Tallow into Soap, for it hath both its Faculties, not to be separated without difficulty, as I shall shew hereafter: For which cause, *Nausicca* the Daughter of *Alcinous* washed her Linnen out of a Fountain on the Sea-shore, as *Homer* relates, 6. *Odyss.*

CHAP. V.

The Composition, and Dissolution, or Destruction of Glass.

Glass is made of the same Flint; and the same *Sal Alcaly*, by the Rule of Contraries, but not the moist way, (as Soap) but by a dry and fiery Fusion and Liquefaction: For sometimes three, sometimes two parts at least of the Powder of Flints are mixed with one part of *Sal Alcaly* (not of *Acid*, *Trencher-salt*) which by corrosion slacks the Flint, and absorbs it in the fire of Fusion. I say, part of the *Alcaly* sucks up the *Acid* which the Flint contains for Lime or *Calx*, and it swims a top of the slaked Flint, and is called *Axungia Vitri*. The *Fel Vitri*, being another part of the *Alcaly*, makes a coalition with the Flint, and is saturated by it; and because

ANACRYON
Croll. in
Lap. Medi-
cum.

cause they consist not in the same, as *Hippocrates* teaches, they both become a Pellucide Mass; then Artificers say, the Glass is baked: But the *Alcaly* swimming a top, and saturated with the *Acid*, that they scum off with an iron Ladle, and call it *Fel Vitri*, and cast it away as unfit for Glass, for by the mixture it is changed into Salt; therefore Shepherds give it to their Cattle to lick, especially in places where Salt is dear; this, in moist weather, easily turns to a liquor, and then the Powder of Flints subsides of its own accord: The liquor by heat is coagulated into true common salt, as its Granulation, and also its Distillation shews; but the Bottom, or *Fæx*, is a Medicine not to be despised in difficulty of Urine, as also is Flint fired and slaked in water.

But this Water is sometimes prescribed without success, especially when the Flint is less heated by its proper heat, and that Diuretick vertue ceaseth, which then perisheth and ceaseth, when the heat of the fire doth *Alcalize* the Flint (*i.e.*) when both Faculties go together into one, for then it doth not reach to the Urinary places, by reason of its fixedness; yea, at that time it hinders and retards other things which provoke Urine, in as much as it troubles the digestion of the Stomach, (which is made by *Acids*) and appropriates it to it self. Then the Ancients began to reduce Glass into Powder of Flints, by Extinction, into an *Acid* Salt, with good success.

This Reduction and Preparation which is purely Hippocratical and very Ingenious, the Reformer (like himself) calls sleight, unprofitable, inept, and by all means to be exploded. See, saith he, how basely such Putative and Wordy Philosophers do discover themselves, who are destitute of that Philosophy which is true, and into what errors they fall, discoverable and derideable not only by those who throughly search the secrets of Nature, but even by Clowns and Rusticks, old Wives and Gossips: Glass this way prepared (as our Reformer pungently goes on) cannot be given without danger and hazard to a sick man, though he be not presently sensible of it.

Burning of
Glass.

Pharmac.
f. 732.

A monstrous
Speech is
the sign of
a monstrous
Wit, says our
Galen.

But I will prove against the frivolous Objections and Grounds of this Reformer, that he who taught this Burning of Glass was in the right, and I will vindicate him from these Calumnies wherewith he is aspersed, especially from this, *That Glass this way prepared, cannot be given to the Sick without danger and detriment.*

Take then clear and transparent Glass; melt it with more *Alcaly*, like Glass, afterwards expose it to the moist Air, and you shall soon find the whole Glass to be resolved into water; pour upon this a sufficient *Acid*, contrary to *Alcaly*, and the Powder of Flints will subside.

This Powder is no longer Glass, but the Powder of Flints, which the Reformer abhors, and says, it cannot be given to the Sick without detriment, forgetting that he himself commends the Powder of Flints to Queens for producing of Milk. The Ancients were not acquainted with this separating Art, (which was bestowed on Mortals from above) yet they had some hints of it by discourse; and therefore they began to extinguish or flake the Powder, or Flower of Glass, in Ashes of Bean-stalks, whose Salt is of an *Acid*-salt nature, as I shall shew by and by; they repeated the Extinction always with new Ashes, and washed away the Powder of the Glass with water, so that every Extinction was the destruction of the Glass, or *Alcaly*; this they washed, and again extinguished, until the Bean-ashes had destroyed all the *Alcaly*; and had left an impalpable Powder. This is the Powder of Flints, as That before melted with *Alcaly*, and precipitated with *Acid*, which the Reformer thinks cannot be safely given at Mouth, so much as to Country people, though he commends it to Queens (as I have said) to procure Milk.

In this Preparation (which the Reformer out of his sloth and ignorance) calls *sleight*, lies hid the profound knowledge of Natural things, as will appear by degrees, and the taking of it is not at all to be feared, as the Reformer falsely teacheth: But ignorant persons are of necessity subject to great fears.

Glass,
whereof it
is com-
pounded,
into the
same and
by the
time it is
resolved.

In Append.
Pharma-
cop Reg.
L. 136.

The over-
busie Re-
former ha-
ving his
eye on the
Ancients,
in the in-
terim sees
not his
own er-
rors.

The true
preparati-
on and
knowledge
of Simp-
les, re-
quires al-
most a
mans
whole life.

Rumor

Rumor sine Capite.

A Report without ground.

CHAP. VI.

There is a way reported and practued of drawing out the Diuretick Vertue from Calcined Flint, by the destruction of the *Alcaly*, (that is, by a rule contrary to the *Alcaly*) with *Acid* Spirits, after this manner; into Spirit of Salt, they put by piece-meal unslaked Lime, the Spirit is presently absorbed by the *Alcaly* of the Lime with great force and vehement ebullition, they draw forth the insipid Phlegm, and dissolve the Lime saturated with the *Acid* Salt, they melt it with a gentle fire in a Crucible, straining it into a cold Mortar; when it is cold they beat it to Powder, (it then emitting fiery sparks) from which, with hot water, they elicit the saltness; this they purifie and coagulate, and again suffer it of its own accord to run into a salt liquor, not unprofitable. But there are some Sophisters and Impostors who give forth, that this Liquor is distilled in a *Lembick*, for they mix the foresaid Liquor with Calcined and Powdered Flints in a fourfold proportion, and distil it with an open fire into an *Acid* Spirit, which by a wrong name they call *Spiritus Calcis Basilii*. Now let us see to what Original or Parent, we may ascribe the foresaid distilled Spirit.

First of all, the Spirit of Salt was absorbed and swallowed up by the vitrifying *Alcaly*, and most constant in the fire.

Further, the *Acid* part of the Flint was separated by the water, and cast off under the covert of the *Faces*.

Thirdly, the fixed *Alcaly* of the Flint or Lime drinks up the *Acid* Spirit of the Salt, and a Salt is made of the volatile *Acid* and most fixed *Alcaly*.

Fourthly, they mix this Salt with the Calcined Flints (i.e.) with the unslaked Lime, which abounds more with *Alcaly* than *Acid*, as I have shewed in Glass and Soap.

C 3

And

of
fiery
flames

And though this Mixture be urged with the strongest fire, what else can it distil forth than a volatile Acid? that is, the same Spirit of Salt which the *Alcaly* had absorbed and drunk up: Famous and Learned men have commended this Spirit in the *Gout* and *Stone*, as a singular Remedy, but the success hath not answered: But *Basilins*, ill interpreted and understood, wrote not to Impostors, and therefore he is wrongfully accused by them for a Cheat: Rightly therefore doth the *Comædian* commend us, *If thou be wise, make thy self ignorant of what thou knowest.*

An Addition to this *Examen.*

By this Method (after you are once instructed in this *Hippocratical* Learning which I hold forth in this short Tract) you may in every Process, as well Chymical as Medicinal, by ingenuity and discourse, discern, prove, and separate Truth from Falshood, without any expence or loss of time; so as no longer to be gulled by Deceivers and Cheats; yea, by the same method you may in your Operations, and in writing of Books, travel on perpetually the right way (without wandering) in this Natural; Chymical, True, and Ancient Philosophy, through all the three Kingdoms, Animal, Mineral, and Vegetable, as you will confess in the Progress.

CHAP. VII.

Qui bene distinguit, bene docet.
To distinguish well, is to teach well.

FOR our clearer light and understanding, it will be worth the while, before I proceed, to demonstrate to the Eye the difference of *Alcalyes*, and to shew what the contrariety, or the absorbing and imbibing of *Acids* is: There are, as I have said, several degrees and Species of fix'd Salt-*Alcaly*, as of *Tartar*, which hath a singular privilege, of Lime-trees, of Hazel, of all sorts of Oaks, and those which in the Forrests of *Norway*, *Lituania*, and *Moscovy*, are burnt out of green wood in-

to Pot-ashes: Also all hot and Oily Herbs, as *Rosemary*, *Lavender*, *Rue*, &c. all of them, in a word, are contrary to, and destroyers of *Acids*, whose difference the following Experiments shew.

Dissolve an ounce and half of sublimate *Mercury* (which by the * mixture is changed from *Acid* and *Alcaly* into Salt) into fifty ounces of common water distilled: into a part of this clear solution, infuse by drops, yet somewhat quickly, the fixed *Alcaly* of *Tartar* (which is the Liquor of *Tartar* resolved of its own accord) this in a moment divides the *Compositum*, absorbing the *Acid*, and the *Mercury* presently goes to the bottom of a colour obscurely red.

* Hip. l. 2.
de Diat.

From the Calcined *Fates*, or Lees of Vinegar, there is drawn forth with water, *Alcaly* of *Tartar*, which though produced out of the same Vine with Wine, yet it precipitates a *Mercury* sparkling and splendid.

The wonderful difference of fix'd *Alcaly*.

But when the same *Alcaly* is Calcined by Art to a redness, then the same *Mercury* falls down like pounded *Cinnabar*.

The *Tartar* being burnt up, if you add the *Calx*, and draw forth the *Alcaly* with simple water, then the falling *Mercury* glisters like Gold; but extracted out of the Herb *Kaly*, it precipitates a *Mercury*, much more dark coloured than the former: The *Lye*, or *Lixivium*, which Soap-boilers call (*Magnes*) which consists of the *Calx*, and *Alcaly* of Oaks, yields *Mercury* darkly yellow.

There is an *Alcaly* brought out of *Spain*, tis not certain whether a simple or compounded one, which yet precipitates *Mercury* of a Tartary yellow colour.

But when the same *Mercury* is precipitated with *Alcalyes* of *Cephalick* Herbs, as of *Rosemary*, *Lavender*, &c. these indeed are *Alkalies*, but not of *Alkes*, as the former, but much more volatile: These, I say, cast *Mercury* red and shining.

So *Celandine* hath a wonderful *Alcaly* (so that its fish Essence (which yet I take to be the Gift of Heaven)

He which hath not tasted the relish of Salts, shall never attain to the desired Ferment of Ferments, says the Author of the Rosary.

Arsenick, called by Paracelsus the Soot of Metals, fired with Nitre and resolved, is not excepted.

Balsamus Samech.

ven) (i.e.) the *Alcalized* Liquor of this Spiritual Salt is praised, not without a Mystery, by *Paracelsus* and *Lully*, and it casts a most red *Mercury*. I once carelessly neglected the small Vessel in which 'twas put, and caused it not to be washed, and about a Month after, at the top of the Liquor there appeared a Golden Flower, not unlike the Flower of *Celandine*, (it was chamfered in its Coalition, like *Nitre*) to the wonderment of the beholders.

These Examples do shew, that by how much *Alcaly* is fuller of Fire, the *Mercury* falls so much the darker, because that in the very instant of absorbing, the Fiery *Alcaly* affects and flashes against its Sulphur like Lightning; but the further it recedes from Ignipotence, the *Mercury* falls the brighter: so that volatile *Alcalyes*, as of Soot, and of all Animals, from the aforesaid Solution, do precipitate *Mercury* of a white and snowy colour; all which will more clearly appear in the Progress. So *Mercury* precipitated from the *Balsam Samech*, casts a snowy colour; somewhat inclining to yellow; but if you pour on more than its Nature can bear, then it turns to a glittering colour.

But salt things, of what kind soever, do not precipitate *Mercury* out of the above-named solution; yea, by how much the nearer they approach to the nature of Salts, so much the less they hurt *Nitre*.

Examples follow.

Alcaly of *Saltpeter*, though its first Original be from *Alcaly* of Urine, yet with *Sulphur* being fix'd into *Alcaly*, (and therefore it calls for by saltish) it somewhat disturbs the *Mercury* to be dissolved, but doth not precipitate it; but if you add to this dissolved mixture, before it doth deflagrate, and leave burning, a certain fixed and dried *Alcaly* (of *Tartar*) and keep it over a gentle fire, then first it melts the *Sulphur*, and the pingueous *Acid* of the *Sulphur* preparing for its flight, is greedily imbibed or drunk in by the *Alcaly*, which is also pingueous; as it happens in the preparation of *Lix Sulphuris* the moist way: The heat still continuing, the *Nitre* also is melted, whose sulphureous and inflammable part is associated

ciated to its like, viz. to the *Pinguedo* of the Sulphur; yea it is greedily received in by the *Alcaly* (a middle part of which is sufficient, in respect of the Powders, as of * *Nitre* three parts, of *Alcaly* of *Tartar* two parts, of * *Sal Fulminans*, *Sulphur* one part) and so becomes Salt. In this Salt mass, each of the Sulphurs doth boil, or bubble up, and the fire continuing, and being increased, they take flame, which in the kindling, not enduring the narrowness of place in the Salt, bursts out into the Air with a noise like Thunder: That these things are so, the *Alcaly*, which is sometime left behind, may inform us, especially when it is kindled not in a Concave, but in a plain place, and very leisurely; for then it is changed by the *Acid* Spirits into Salt, and doth not any longer precipitate *Mercury*. Hence by the way we may learn, that

This is the ground why *Ceraunocryson*, or *Anrum Fulminans* gives a crack, or loud noise.

I have elsewhere shewed that the Spirit of *Nitre* in *Alcaly* is made *Nitre* of *Tartar*. Gold is almost all Sulphur (after its own sort and manner) as I have also experimentally demonstrated in its place; for which reason it is not corroded by *Acids*. Gold therefore being dissolved in salt water of *Nitre*, *Allum*, and *Sal Armoniack*, or common Salt, if you pour in by little and little (not all at once) a certain *Alcaly*, the *Acid* Spirit of the *Nitre* (for the Spirit of *Allom* or *Vitriol* in the distillation of *Aqua fortis* doth not ascend) takes to it self a Body in the vacuous and empty *Alcaly*, and so becomes natural *Nitre*; but the sulphurous *Nitre* easily adheres (*via humida*) to the sulphurous *Gold, because of the similitude between them; and they are so thoroughly mix'd together, that by no art of Ablution they can be separated (i. e.) when the *Acid* of *Nitre* is imbibed by the *Alcaly*, it is coagulated into natural *Nitre*, which finds the Sulphur in the dissolved Gold, and with it, as being of the same nature, to use *Hippocrates's* words, it receives coagulation, as I have shewed in *Calx*: But if you pour on more of the *Alcaly*, so that it exceed the degree of *Nitre*, then the *Nitre* also inclines and defects to the

Anrum Fulminans.

pretty often

* This is the cause that Gold dissolved in Spirit of Salt, and the same fore-cited *Alcaly* precipitates, is not *fulminans*, for it returns to Salt, which resists the flame.

nature of *Alcaly*, and it can no longer be called *Aurum Fulminans*, of which more anon. - But, to return from this digression.

* Anat. Crost. in Epide me- dicam.

So also *Fel Vitri* * contracts the same relish, becoming Salt from the Acidity of the Flint, for it doth not precipitate *Mercury* at all.

Liquor of *Talck* (not Oyl, as the ignorant vulgar think, for it conceives not flame) stirs not *Mercury* at all; as neither do Salts from all Diuretick Herbs, as Bean-stalks, Broom, *S. John's Wort*, Rupture Wort, Nettles, &c. all these, I say, are Acid-salt, and do not precipitate *Mercury* from the said Solution; but when they are Alcalized by a quick flame or Fusion, then the *Mercury* falls down reddish.

Hence it appears, that that most Learned Man of the Ancients, who taught us to extinguish red hot Glass in the Ashes of Bean-stalks, and not in its Salt, did rightly institute the burning thereof, and not according to the Doctrine of our unskilful Reformer, lest the Salt should unadvisedly assume the nature of *Alcaly*, of which I have spoken before in the fifth Chapter.

The salts of the Ashes of vulnerary Herbs, such as Bettony, Agrimony, Winter-green, Elatine, Star-wort, Sanicle, &c. all yielding a tart Salt, are therefore unfit for vitrification, and do not precipitate *Mercury*, which is of the same taste, as shall be shewed in its place: But all the aforesaid Salts, by the fire of Fusion, do change their nature, and become *Alcalyes*, are vitrified, and do precipitate *Mercury* of a sparkling colour: Hence *Zour* upon *Exodus* observes, that Glass is made of any Ashes, (i.e.) when they are reduced to *Alcaly*.

Black of vitals: not all alike

Constancy of Salt in the Fire.

Common Salt doth not precipitate *Mercury*, from the above-mentioned Solution; yea, although it be burnt a long time, and with a quick flame, it would never become *Alcaly*, neither doth it change its nature by digestion; wherefore it is the perfectest of all Salts, and by a singular priviledge is called by *Helmont*; *The excellentest of Salts*. So Salt of Vipers doth not precipitate *Mercury*, unless the *Acid* and the *Alcaly* be again separated one from the other, of which hereafter.

Salt

Sal: vit

Salt of Wormwood, being Acid-salt, doth not for that reason precipitate *Mercury*, neither doth it absorb Spirit of *Vitriol*, as the Reformer teaches under the Title of *Coagulated Spirit of Vitriol*; but when it is Alcalized, it precipitates *Mercury* yellow, and then also it absorbs the Acid Spirit of *Vitriol*, and vitrifies.

Pharmaco f. 783.

Hence we learn, that in a fire stronger than the nature of the thing will bear, Salts will be fixed, and converted into a Neutral thing; wherefore many things are produced by the sole Regiment of Fire, not as if they were entirely generated anew, and brought forth to light for increase (as the vulgar, being ignorant of this *Hippocratical* Learning, do suppose) but only by a simple alteration of the Subject, as my *Hippocrates* shews; and they also know, who have skill to make an Harmonious Conjunction between the External and Internal.

L. 1. de Diet.

So also, without the help of Fire, Salts are changed from their natural temper; as for example, mingle Liquor of Salt of Wormwood, not Alcalized, with Rosemary, and the Solution becomes milky, both of them being coagulated into a Neutral thing.

On this Foundation stands the Process of the *Febrifuge* Medicine of *Lazarus Rivorius*, hitherto known to few; but I shall crave leave a little more clearly to explain it, know then, that it is made of one only Subject representing *Alcaly*, and two *Acids*, all of them not having yet undergone the Fire, but by Exaltation so often repeated, till you see it again changed from blackness into a most white, volatile, artificial Salt, not unpleasant to the taste, to which afterwards the fourth *Athleta* is added (i.e.) *Scammony*, as appears in the Process. But who can enumerate all the Metamorphoses which arise from the mixture of Salts; some of them assuming one form, some another, by their mutual mixtures, as *Hippocrates* teaches.

Rivorius Febrifuge.

It is to be observed, that Salt of Soot having its Original from the stock of Vegetables, doth precipitate *Mercury* from the aforesaid Solution white, spongy, and light, as do the volatile *Alcalyes* of all Animals; as shall be said anon; but if they are converted into Salts, then the *Mercury* falls no more.

L. 1. de Diet.

Alcaly of Soot: is made Salt.

D 2

Hence

Hence we may conclude, that almost all oily Herbs, and such as are counted hot and pingueous, do yield *Sal Alcali* by a light and simple Incineration; to which if the *Hippocratist* renders its proper *Pinguedo*, by an hidden Coction, they are converted into an admirable Salt, which is then called by our Chymists (*Elixir Paruum*) and is of great * vertue in Physick, of which in its place. The salts of other Herbs do degenerate and turn into imperfectly Salt, or into *Acids*, and by a quick flame, or the fire of Fusion, are reduced into vitrifying *Alcali*.

* See Riple, Bacon, &c.

CHAP. VIII.

The Founders Art: doth further shew, that Alcalyes and Acids are absorbed.

ALL Minerals, of what kind soever, having in them hidden Metalline Bodies, are joyned with *Acids*, (*i. e.*) Sulphur of several sorts, which do hinder the Metal from being purged from the impurity of the Mines. In this streight, it is needful to have recourse to *Alcalyes*, which do the work speedily: Reducing therefore the Mineral to Powder, they mix it with *Alcali*, and melt it in a Crucible; the Fusion is accelerated by *Nitre*, which is kindled with the Sulphur, as part burns away, so part with the *Tartar* is turned into *Alcali*; that *Alcali* absorbs all the *Acid*, with which otherwise all the Metal would fly away; but this way it easily goes to bottom, and that Artists call *Regulus* (*i. e.*) pure Metal, free from Sulphur, which again under a Probatory cup-pell with Lead they further purifie, for which you may consult the Say-masters and Refiners, it being my intent to speak only of the Foundation of Salts.

I have told you, that Metals are turned by Acid Minerals into Fume, which is manifest in Silver melted with Lead in an Earthen Pot made of Pot-ashes; put the Sulphur piece-meal into it, whose acidity as it flies away, it also expels the Metal, which you may gather up again with a moist Linnen Cloth spread abroad in the Chimney.

Silver flies away with Acid Minerals.

Another Experiment: to prove that Metals are carried off by the Acid Mineral, is, that *Cement*, which is called *Regale*, which is made of common salt, and Powder of Bricks, with which they stratifie or spread over Gold Money bound in with Copper: In this *Cement* the Gold, without Fusion, dismisses the Copper, and together with the Acid Spirit of Salt, vanishes to smoak; which yet carries off with it something of the Gold; but when the Acid Spirit, being loaded with the Gold, assays to pass through the Earthen Covers, the Gold is precipitated, and sticks to the Covers, whiles the Spirit corrodes them, which are afterwards pounded together with Quick-silver and water: This recollects the Gold, and restores it to his Master, when it is separated from it through Leather.

Gold flies off with the Acid Mineral.

As Minerals bearing Metals are precipitated into *Regulus*, the same way is *Regulus* of *Antimony* precipitated (*i. e.*) with *Tartar* and *Nitre*, because the *Alcali* of *Tartar* imbibes the Acid Sulphur from the *Antimony*, and segregates the pure *Regulus*.

Regulus Antimony.

Antimony is also melted with common Salt, but the Acidity of this latter doth corrode the *Antimony* in the vehemency of the fire, and it is raised into bubbles, and so less *Regulus* falls. These examples concerning precipitation the *dry way*, may suffice.

So any *Alcali* being dissolved in water (which is called the *moist way*) as it always drinks up the Acid, it also cleanses *Salt-peter* from every Acid, which therefore the ablest Physicians do chuse for a great cooler in the *Quinsey*; for which reason it is called *Sal Prunella*. A certain dull Fryar hearing *Sal Prunella* to be commanded by Chymists, came by night to a skilful Apothecary, and demanded of him whether this *Sal Prunella* were extracted out of Sloes, or Garden Plums; yet these are the men who would be accounted by vulgar Ideots and silly women, the only *Regular Practicioners*: I say, they boil * *Nitre* in Alcalized Lye, till a drop stands on cold Iron like Suet; then they set it aside in a cool place without pouring it into any other Vessel, and in a night suffer it to concrete into most clear and pure

* *Nitre* burnt with Sulphur, doth more hurt than good in a *Quinsey*, for it becomes salt.

Flakes, which the next morning they wash off; for the *Alcaly* hath drunk up all the hurtful and impure *Acid* from it, as it happens also in mans body, as *Hippocrates* shews in his first Book of *Diat.*

CHAP. IX.

The Prerogative and Priviledge of Alcaly of Tartar.

I Have mentioned already, that amongst the fixeder sort of *Alcalyes*, Salt of *Tartar* is endued with a singular priviledge; for though it be an heavy Body, terrestrial, impure, and mixed with filth, yet being digested with any Metal whatsoever, in a due space of time, it turns it into running *Mercury*. Having experimented this, I affirm it for a truth to convince the incredulous; but if any refuse to believe it, I am not much solicitous.

A Friend of mine endeavouring to obtain *Tartar* from generous, mature, and clear Wine, did elicit and draw forth the Spirit, and suffered the Phlegme to exhale; the remainder being thick as a Syrup, he permitted to concrete in a cold place, into *Pellucid Tartar*, which he burnt; and as the custom is, with common water extracted the *Alcaly*, which he suffered to run down into a Liquor of its own accord. A sudden occasion offering it self, that he was to go to *Rome* with a certain great man; to the end that the precious Liquor might not be lost in the interim, he commanded his Servant to preserve it in a Vessel which he appointed and shewed him for that purpose; his Servant, by a mistake, poured it into a Neighbours Vessel, like the former, in which Silver was which had been dissolved in *Aqua fortis*, to which *Sal Armoniack* sublimated and dissolved in distilled Vinegar (begun for another work) had been added: My Friend returning after nine Months, and seeking for the Liquor of *Tartar*, he found the Cucurbite into which his Servant was injoynd to put it, quite empty: The Servant answering, that he had poured it into a Neighbours

Gold is almost all Sulphur, and gives the least Mercury of all.

bours Vessel, looking there, he found not the Liquor, but dry Earth (nine Months exsiccated) which he touched with his Rod, and a great part of the running *Mercury* discovered it self; at that time he could not believe that running *Mercury* could be made out of perfect Metals, being so perswaded, according to the Axiom, *That it is easier to make, than to destroy perfect Metals*, which made him neglect the Experiment, imagining in himself, that the *Mercury* had fallen into the Vessel by some chance. But at length he learned out of *Basilius Valentinus*, that Salt of *Tartar* hath this priviledge above all other Salts.

The ingenious *Helmont* hath confirmed this Experiment in these words; *I have found*, says he, *that the Cruddy of Saturn is dissolvable by the fat of fixed Salts, and that the parts of the Compositum are so divided, that it suffers Silver to run crude.*

There came then to my mind a strong *Lixivium*, wherewith old women boil *Litarge* to black their hair. (of which *Porta* also makes mention in his *Magia Naturalis*) into which I dropped Spirit of *Vitriol*, and presently the *Alcaly* suffered the Metal to run into a white Powder, which I reduced into Lead; by which means, I knew for certain, that *Alcalyes* do invisibly contain and hide in their Bowels Calcined Metals.

This Experiment being made, *Helmont* goes on, saying, *That calcined things are most sharp, but they are dulcerated with dissolved Sal Armoniack and putrified Tartar; (i.e.) they are turned into running Mercury, which is not any longer tart or biting, as Calcined things are, but insipid to the taste.*

I return now to the Salt of *Tartar*, which in form of Liquor was poured into the *Cucurbite*, in which was Silver corroded by *Aqua fortis*, with *Sal Armoniack*: All these changed their nature into Neutral Salts, different from their former state; so the Silver made no more any shew of Silver, of which * *Basilius de Tartaro.*

Durch, &c. *By my Spirit they take revenge, and break (or dissolve) all Metals.* For as all Sublunary Bodies (Experience being witness) do consist of two things, *Acid* and

Alcaly

Mercury out of Silver.

Tract. potest. Medic. S. 4.

Blackening of Hair

* Litt. de magno mundi. Mirac.

Diana nuda.

Luna Cornea.

* As I have elsewhere said of Fulgur Fulminans.

Alcaly (as I shall mechanically shew in this Tract) the same may be said of Silver: from this Silver the Alcaly of Tartar, by due digestion and coction, hath absorbed so much of the Acid Sulphur, as was sufficient for the Mercury in the state of Silver (now it being segregated and divided from it) for its constancy; into the place of Mercury, succeeds the Alcaly (Philosophers call it Adulterium) which it embraces from the Silver; and therefore loseth its form and beauty, and changeth its nature, so that it is melted even with the gentlest fire, as Lead or Sal Armoniack mix'd with the Calx of Flints, and it is called by Crollius, Luna Cornea, because it may be cut with a Knife like Horn. This Luna Cornea, though it be washed an hundred times with hot water, and * melted with a swift Flux from Tartar and Nitre, yet it is impossible to separate them one from the other, unless in Balneo Saturni, in which that of the Silver which remains, returns to pure, but the Salts, with the Lead, into dross and Litarge; which also again, by simple Fusion, is reduced into Lead; but the dross, which were Salts, are hurried into Element together, with the Sulphur of Silver, which they had absorbed.

CHAP. X.

That the Bodies of Alcalyes are Vacua, proved by examples.

A Vacuum in Nature demonstrated by Art.

Regeneration of Vitriol.

Wherefore Salt of Tartar is a Medium, wherein not only Metals, but Minerals also do revive and obtain, as it were, a Resurrection, though by Art, and a strong fire, they seem quite destroyed. Pour Spirit of Vitriol, drop by drop, upon dissolved Salt of Tartar, till the hissing noise cease; reduce the Liquor into Chrystals, or dry it all up, and you shall find a Salt, having the nature of Vitriol, it provokes vomit, and being superbibed, purges by Stool, as white Vitriol is wont to do: It is mingled with Nitre and Quick-silver, 'tis sublimated into red, to which add common Salt, and it becomes a Corrosive Sublimate; it is distilled per se as Vitriol:

Vitriol: The whitest Mucilage subsiding in the bottom, is the same Fax, which in dissolved crude Vitriol, by the affusion of Salt of Tartar, falls down black: It endures the fire, and resisteth fusion; as the Colcothar, or Caput mortuum of Vitriol, which yet without the affusion of Spirit of Vitriol was easily melted: That fixed Salt is Vitriol Regenerated, called by the Writers of the Rudiments of Chymistry, Tartarus Vitriolatus, and Universalis digestivum. It is made much more excellent and perfect from crude Vitriol dissolved in water, and Liquor of Tartar poured upon it, until it cease to be troubled, which point of Saturation is not found without difficulty, for if it exceed but one drop, it turns the mixture either into Vitriol or Alcaly, of which my Hippocrates, Nunquam simul in eodem consistunt; coagulate the clear Liquor into shining Chrystals: This is more Noble than the former, because in distilling the Vitriol, the violence of the fire elevates the Liguamen of the Copper, and mixes it with the Spirit, so that it becomes troublesome to the Stomach. But in this simple way, the Alcaly consumes only that most simple Natural Acid, which corroded the embriolated Metal in its Flux. This is that simple Acid, agreeable to our Nature, in Acid Fountains, refreshing the Drinkers, and acceptable to the Stomach, though taken in great quantity; of this I determine to speak briefly; yet * Paracelsus relates, that in a Village called Veltin in Helvetia, there is a Fountain, the like whereto is not to be found in the whole World.

L. 1. de Diet.

* De morbis Tartaris.

So also Spirit of Nitre re-assumes a Body in Salt of Tartar, and becomes cold natural Nitre, conceiving flame, and is a Remedy for the Quinsey, which otherwise being separated are Caustick, as I have shewed in Aurum Fulminans. If you add Spirit of Salt to the same Salt of Tartar, then, after Coagulation, it becomes common Salt, as it was before it was turned by a strong fire into Spirit; and therefore, since the Acid Spirit of Salt by solution returns to Salt, we may cease our wonderment, why amongst all Acid Spirits, no other dissolves Gold, but that of Salt? because that by Corrosion it re-assumes the Nature of Salt, even as the water common-

Regeneration of Nitre.

Regeneration of common Salt.

Of Acid Spirits, only Spirit of Salt dissolves Gold, and why?

Tartarus
 Regeneratus
 by some
 improperly
 called
 Trinafo-
 lia a Phy-
 losophorum.
 Distilled
 Vinegar
 becomes
 for Oyl,
 conceiving
 flame.
 What
 more plea-
 sant than
 to know,
 those
 things, and
 to see them
 with our
 eyes, and
 handle
 them with
 our hands
 under a
 grateful
 sense,
 which
 common
 sense doth
 not appre-
 hend, and
 by nature
 are put re-
 mote from
 us.
 Oyl made
 water.
 Oyl made
 Aqua Ar-
 dens.
 Aqua Ar-
 dens made
 Alcali, and
 Elementa-
 ry water.

ly called *Aqua Regia*, which without Salt touches not the Gold at all.

The same Salt of *Tartar*, if it hath imbibed Vinegar distilled from Wine, is made common *Tartar* of Wine, having all the properties thereof, excepting only that in *humido* it doth more easily melt: Cleanse this Regenerated *Tartar*, by solution, from all its impurity, and afterwards distil it with a strong fire through a Glass retort placed in Sand, and you shall obtain an Oyl, and bitter Liquor, as that which is elicited from crude *Tartar*, yet the Oyl somewhat resembles the goodness of the Wine, of which the Vinegar was made. 'Tis almost incredible to be spoken, that distilled Vinegar should contain in it an occult fatness, and yet it is very true; but Salt of *Tartar* hath not this pignudo, for it is fixed and tryed in the fire. At *Rome*, from one Ounce of this Regenerated *Tartar*, I drew forth six Drachmes of Oyl, of an Orange colour, and grateful smell; but at *Venice*, a pound scarce afforded me one Drachme, and that black, coloured, and stinking: I say, it is even incredible, that in Vinegar, not only the qualities of the Wine, but of the Country where it grows, should manifest themselves. From what hath been said, it appears, that *Acids* do attract *Alcalies* at their pleasure, and rule over them as they list.

In like manner it reduces Oyls, either distilled or expressed, into their first Elements; for they being mixed in a just proportion (*i.e.*) to satiety with Salt of *Tartar*, and digested afterwards out of a Glass retort placed in Sand, one Moiety returns Oyl, the other Moiety is water. Again mix this Oyl with new Salt of *Tartar*, as above, repeat the distillation, and you will see all the Oyl converted into water, a little Earth being left with the *Tartar*, which you shall know increased in weight; so that Oyl, which otherwise is wholly inflamable, here you may find turned into odoriferous water; and again distilling this water out of a Glass, you will extract *Aqua Ardens*, which again, with Salt of *Tartar*, returns to *Alcali*, and afterwards into Elementary water, like that which remained in the Glass.

There

There were two pound of the remaining Salt of *Tartar* in the Retort, which I laid upon an Iron Board or Slate, that it might run into a pellucid Liquor: I distilled all the Humidity out of the Retort placed in Sand, and breaking the Vessel, I again dissolved in the Air the Salt, which was in the bottom, upon the Iron Slate (which is not prejudiced at all) which is done in about forty hours space, and there remained nothing on the Slate besides a little slimy *Fax*. I again distilled the Liquor, encreasing the fire, as before, till nothing came forth, either dropping or smoaking, and I again dissolved the same Salt, having broken the Retort, on the Iron Slate; I renewed these Operations twelve times, and all the Salt of *Tartar* was turned into the Element of water: I gathered up the *Faces* which were left each time on the Slate, and I extracted all the saltness from the distilled water, with which I made the same Process, as before; so that all the Salt of *Tartar*, as the Vinegar, Oyl, and *Aqua Ardens*, were turned into insipid water, and *Terra Mortua*, of no savour or smell; which Earth and Water, a little before, seemed Caustical. 'Tis a wonder to consider, what becomes of this Fiery Vital power and vertue, both of the Oyl, Vinegar, and *Aqua Ardens*, as also of the Salt of *Tartar*; yet this vertue or form persisted constant in the fire, until the reduction into the Elements; I now call it the *Reform*, for our clearer understanding of it, of which more particularly in its place: You may call it as you please, either *Fire*, *Form*, *Archeus*, 'tis all one to me; *All are like, though they appear unlike*, as *Hippocrates* affirms. If the Reformer had had any knowledge of fixed *Alcalies*, he had never prescribed to Podagrical persons Oyl of *Venice Soap*, for whatsoever of Oyl distils from Soap, is like that from Brick, and contains nothing of *Alcali*: So also, they who dissolve the Body of Soap, and say, that it is good for gouty diseases, are in a great mistake; the taste may be an Omen of their disappointment which is found manifestly salt; for it doth not precipitate *Mercury* from the above-mentioned solution.

Wherefore the *Alcali* of *Tartar* seems to bear a re-

E 2

presentation

Salt of
 Tartar
 turned into
 simple E-
 lements.

L. 1 de
 Diet.
 In Append.
 ad animad.
 f. 84.

presentation of the Philosophers Chaos; wherein they say their Mercury hath a Resurrection; of which Paracelsus. *The Regeneration*, says he, and *Renovation of Metals is thus made*; as man returns to the Earth whence he was first taken, and so shall be again Regenerated at the last day: So also Metals may again return to Mercury (of which they were first derived) and be dissolved with it; and re-become Mercury; and again by fire (which also shall judge the World) be re-produced and clarified. This way (as he goes on) are stones Regenerated, and also special tinctures of Silver and Gold. Thus far Paracelsus. In the mean while, I would not advise any man to persuade himself; that Salt of Tartar, after whatsoever manner prepared, is the Catholick Chaos of the Philosophers, though Metals in it may return into running Mercury. 'Tis enough in short to have advertised this.

But I am enjoyned silence by *Harpocrates*; concerning fixed Salt of Tartar, lest I should be injurious to the curious disquisitions of Learned men, who have spent much labour and pains to attain the full knowledge thereof, it being a Medium giving vivification to many things. *Basilus*, *Paracelsus*, and others, have taken great notice of it, who have stript it of its cloathing, and have chosen it for a Dissolver, seeing it doth illuminate and vivifie its objects, almost after the same manner, as the fixed Alcaly of Herbs extracts from Calcined Flint another, and like Alcaly; which it is not possible to elicit by any other savour, than by its like; and it makes it much more powerful, and turns it into a nature truly fiery; so that we ought to make our progress from things known to things unknown, as *Aristotle* rightly adviseth.

This is that which *John Baptista van Helmont* makes a noyse about, *Learn*, says he, a dissolvent, which is always the same, and you have attained the inward Essences of things, which he proves by an example, demanding, why *Lapis Ossifragus fix'd*, not Calcineable, should cure a broken bone taken by the mouth, and yet not the Stone, or the Gout? I answer this Worthy Man thus, that the ridiculous *Al-takest* of the Reformer, and the secret solvent, are nothing

L. p. de
natura re-
rum.

Of which
see Roger
Bacon, Rip-
ly, Isaac
Holland,
yet read
them with
caution.

Alcans
example
deters me.

The Aca-
demical
Spiri: un-
derstands
not this
Mystery,

De Pibr.
627. v. 25

Tia. de
verbis lar-
bis, & la-
pidibus.

thing but Vinegar distilled from *Arugo*. And although it corrodes the *Osteocola* Stone, yet the Stone by the corrosion acquires the properties of Vinegar; whence it comes to pass, that it reaches not to the Urinary places, but is presently precipitated in the Stomach, as hereafter shall be demonstrated to the eye.

Wherefore hitherto, Salt of Tartar hath plaid its part in its mean dress, but when it is dispoiled of its Garments by the hand of a Philosopher, so as to appear in its naked, lucid, and resplendent form, then it reduces the things which are committed to it, into the same, or a matter like it self (I remember having once prescribed Crabs Eyes, so dissolved, to a Woman in a long *Quotidian* Ague, which could not endure Physical Potions, a Timid Canonical Physician then present, interrupted me, saying, it was a Mineral, and full of danger) and because it is without form, as all Alcayes are, it assumes the form of that with which it is united (for *Sal Tartari* is a middle thing between a Mineral and a Vegetable, and therefore easily comprehends the nature of them both) and so goes forward. Thus much is sufficient to have pointed at the differences of fixed Alcayes.

Append. ad A-
nimadv. f. 72.

He that knows
little, fears
much.

CHAP. XI.

Concerning the Volatile Alcaly of Animals.

AS fixed Alcayes do absorb all Acids, and according to the nature of the Acid are changed into Salt, as I shewed above; so also the Volatile Alcayes of all Animals, from whatsoever parts of them extracted, are likewise turned into Salt, imitating the property of the Acid; and as Urine contains a Volatile Alcaly by the ferment of putrefaction, so do Sweat, Blood, Flesh, and Bones of all living Creatures, by a diverse ferment, every one according to the vertue, innate to the place. And as I have shewed the intrinsic difference of fixed Alcayes with Mercury sublimate resolved, and the singular Prerogative of Salt of Tartar, so touching these Volatile Al-

What Ferment
is, I will shew
aunc.

calyes, I will go on to demonstrate in my progress, their peculiar priviledges and endowments. The Alcaly of all Animals, of Urine, of Blood, of Sweat, (yea of the Stones of all Animals) of Serpents, of Frogs, &c. do præcipitate a white Mercury out of the aforesaid solution, so that by this Mechanical Method, you can discern no difference, and by consequence this Alcaly is not of a Salt taste, as the Reformer presuming on his own opinion, hath taught; for Salt things, as I have shewn, do not præcipitate Mercury out of the aforesaid solution, but it receives a form, according to the property of the Acid, as will more clearly appear in the progress.

The Ancients took notice of this fundamental and specifick difference (which they call *Occult.*) I say, they observed, that Volatile Alcaly drinks up as much of *Sal Armoniack* as is sufficient for its constancy and saturation, for artificial *Sal Armoniack*, so that the Alcaly of Urine and the Acid part of the aforesaid Salt, do so strictly embrace one another, that *per se*, they cannot be separated; for the Salt of Urine, in the torture of the Fire, seeking to escape, carries away with it the Acid part, which it had absorbed, and they are both sublimated together into artificial *Sal Armoniack*.

Now, that Common Salt, either Ours, or the *Armoniack* of the Ancients, hath an Acid part, communicable out of the Fire; is proved by this Experiment; viz. Drop Liquor of Tartar upon Salt, when it is resolved, and in a few moments, you shall see the earthy part to be separated, and the Alcaly of Tartar to embrace the Acid, of which more plainly hereafter: So, without the Art of Distillation, the Ancients essayed to associate the Alcaly of Vipers with Natural *Sal Armoniack*.

Wherefore the Ancients, after they had observed out of *Hippocrates* the occult difference of Volatile Alcalies (of Animals) and the Acidity of Common and Cireniack Salt, under the name of *Faculties*, they began to stratify Vipers with Natural *Sal-Cireniack* or *Armoniack*, as *Pliny* saith, in the place before-cited (as they saw, concerning Urine and Salt) to the end that the Alcaly of Vipers might imbibe as much of the Acid Salt, as might suffice

suffice, for stopping its voluntary flight. This Composition, not altogether without cause, they then called *Sal Theriacale*, *Salt of Treacle*; because they had learned, the Flesh of Vipers to be good against many poisons (yea by such an ingenious Viperine Decoction, I have more than once cured the French Pox in Curious Persons) and consequently by reason of its seminal and mural Ferment, that the Alcaly of Vipers, must contain the same Faculty.

This Contemplation of the Ancients is unworthily charged by the Reformer with *childishness and absurdity*; He himself, being much more absurd, as not understanding the memorable Inventions of our Ancestors. And whereas he casts in their Teeth, *That they had not the Art of Purifying*. That indeed is true; but they are not therefore to be calumniated, nor detracted from, in point of Honour, much less to be scoffed at, for so my Master advises. Some Ages hence, perhaps this *Reformer* will be laughed at, for writing such absurd things in his Time; for occasion will not be wanting many thousand years hence, to find out, and learn newer and better things; *Because Nature discovers not her secrets all at once, neither are they exposed promiscuously to the view of all, but are, as it were shot up in her inner Chappell, of which this Age brings forth, one thing; the Age following, another.* But let Us hear my *Hippocrates* speaking much more modestly of this thing; *'Tis an unworthy thing, to blame any one of them for not finding; all, are rather to be commended, for seeking and enquiring after.*

These things being præviously understood, let us now consider, What excellence and prerogative, the *Viperine Salt* of this Reformer hath, above the Inventions of the Ancients, which yet, They prepared by an easie Operation; but He, with great charge, labour, pompous ostentation and triumph.

The Alcaly of Vipers (under that Title, *Pharm. f. 486.*) distilled out of a Retort, drinks up the Acid Spirit of Common Salt, which I have shewed, with Alcaly added, to be separable, without the Art of Distillation: from that Conjunction (*i. e.*) of the Acid Salt, and the

F. 481.

Senec. l. 7. Nat. Quest. c. 31.

L. 1 de Diet.

The *Sal Viperinum* of the Reformer's Common Salt.

The Alcaly of all Animals are alike, and empty Bodies.

The occult quality is the Ferment of the place, of which hereafter.

Artificial *Sal Armoniack*

Common Salt is Acid Salt

L. 1 de Diet.

L. 1. de Diet.

Alcaly of Vipers, is made Comon Salt. If we urge this Common Salt with Fire of Sand, it will be elevated into Artificial *Sal Armoniack*, as having all its properties, which is proved by this Experiment.

Mingle the Powder of Salt of Tartar (*i. e.*) the Fixed Alcaly of Tartar, with an equal part of the Viperine Salt of our Reformer, distil this Mixture in a Retort, placed in Sand, and you shall presently see the Alcaly of Vipers to ascend by the neck of the Retort; because the Fixed Alcaly of Tartar apprehends and catches the Acid Salt; then the Alcaly of Vipers, willingly leaves her Acid Companion, whilest it is forced to fly away by Heat. Do the same with Common *Sal Armoniack*, and you shall find no difference; and therefore what the Ancients did with the Body of Salt, That the Reformer performs (with greater labour and cost) with the Spirit of Salt; and if the Ancients *Sal Viperinum* be of no use, as he says, surely His, hath the same property.

Pure Alcaly of Vipers.

Pure Alcaly of Urine.

But when, That Alcaly is expelled with Salt of Tartar from the Common *Sal Armoniack*, then you will have the pure and dry Spirit or Alcaly of Urine, which the Reformer most foolishly calls *Salt Spirit of Sal Armoniack*; as he also with the same sottishness, calls that *Vinegar*, which he distilled from Meal mixed with *Sal Armoniack*, out of a Retort. The *Acid Spirit of Sal Armoniack*, adding withal this gross mistake, *These two Spirits out of Sal Armoniack, the Acid and the Salt* (though both of them contain not a drop of *Sal Armoniack*) though produced out of one Subject; yet are contrary one to another, and being joyned together, destroy one another; wherefore let the *Apothecaries* carefully distinguish between the *Salts and Acids*. But the Reformer informs them very grossly concerning Tastes, yea he presumes to teach them; that, which he is ignorant of, himself; witness, amongst many other things, **Aqua Mindereri*, for the Hearing.

Append. ad Animad. f. 73, 74.

*The Water of Mindererus for the Hearing.

For this Water hath Urine and Vinegar for its Foundation; which mixture the Reformer doth not only disallow, as believing, without further enquiry, *That the Salt and Acid, are destroyed by one another*; being ignorant,

tant, that the destruction of one, is the generation of another. Thus he huggs his own opinions as the Ape doth her Apelings, but also he asperes a worthy Man with reproach and calumnies, who hath candidly communicated his experiences for the Publick good; notwithstanding which, the Reformer (after his manner) thus scribbles in his *Appendix: Besides many other Absurdities, I see Vinegar and Urine to be poured on, which are plainly contrary one to another; for the Urine of Animals distilled, yields a sharp Saline spirit, which is a destroyer of all Acetous spirits.* Thus he.

Ad Animadver. Fol. 336.

Hitherto I have demonstrated, that the Volatile Salt of Urine is by no means Salt, but Alcalizate, and therefore being mixed with Acid, from them both, there arises a Salt tart Sapor; wherefore from the mixture of the Volatile Alcaly of Urine, and Distilled Vinegar (which two do never concrete,) there is made a distillable, salt, and most piercing Liquor, I question whether any thing be more subtle in nature (of a simple mixture) for an old Obstruction, For which cause the most Ingenious *Mindererus* rightly, and with good Judgment, commends and prescribes it for Thickness and Difficulty of Hearing; because it is salt as Sweat is, as shall be proved, and in regard of its Symbolicalness and congenious nature thereunto, this Distilled Salt and Volatile Water, pervades the membrane of the *Tympanum*; yea it is willingly admitted into it. I said this Spirit was Salt, which is proved by experience, for it doth not precipitate *Mercury*, from the often named Solution, as other salt things do not, which according to *Galen's* opinion do cut, attenuate, and discuss the excrements, they dry, they support and strengthen Nature, and that in a rude lump of Salt, why may not then this most subtle Spirit be also Salt? Wherefore let the Skilful judg, whether the most Learned *Mindererus* be not unworthily blamed by Impostors. The Reformer understood *Hippocrates* but ill, who says, *That a Physician using reason for his guide, will never enviously calumniate another, for thereby he betrays the weakness of his own mind.* Now let us consider *Salt of Tartar*, which drinking up the Acid, had separated it from the Alcaly of Vipers, and remained

Without hurt or pain it pervades the *Cornea Tunica*, and dissolves the *White-spots* in the *Pupel*, k. f. there by the *Small-Pox*. The ignorant carp at what they do not understand.

L. 6. Prae.

in the Retort; they call that (but improperly) *Caput mortuum*, especially that from common *Sal Armoniack*, from whence the Spirit or Urine hath been extracted. That *Caput Mortuum* is a compound of Acid and Alcaly; and will be doubtless of a salt relish, like the Viperine Salt of this Reformer, and common *Sal Armoniack*, as hath been said and shewed; and for confirmation thereof I will repeat another Experiment.

Dissolve the said *Caput Mortuum* in water; cause the scæces to go to the bottom, and coagulate the clear liquor with a gentle heat to a Siccity, and with *Bole Armoniack* in a four-fold proportion, mix it into a very fine powder; urge this with a naked Fire, from a Glass Retort luted, into a great Receiver, and the Acidness of the Salt, which found a body in the Alcaly of Tartar, by the power and heat of the fire is put to flight, but in the greatness of the heat, it flies not alone, because being absorbed by the fixed Alcaly, it carries off with it the fixed Salt of Tartar, so that from the Acid and Alcaly being mixed, and urged with a violent fire, there is extracted a Spirit Semi-Acid-Salt, which, as it is an artificial product from a various mixture, doth not precipitate *Mercury* from the aforesaid solution; yet it is not of it self unfit for Medicine, as neither for destroying certain Minerals; but one Operation being finished, part of the Tartar returns into the element of Water, and the Acidity of the *Sal Armoniack*, from the other part of the Tartar, cloaths it self with a new body, which is again sublimated and separated.

The Spirit of
Sal Armoniack
re-assumes a
body in Tartar.

It may be demanded, why in this place a Spirit is elicited from the fixed Alcaly of Tartar and the Volatile Acid; whereas above from the Alcaly of Flints, and the Acid spirit of Salt, it succeeds not? To which I answer, that the Acrimony of the Salt of Tartar, in a fire, not very vehement, returns quite to nothing, as I have shewed elsewhere; and for this cause, with its associate, it is easily elevated into Spirit, but the Alcaly of Flints, is more fixed, which before it flies, is rather, with its adjunct, turned into Glass.

CHAP.

CHAP. XII.

How Volatile Alcaly is generated in an Animal, and the parts of it.

I Have said in the Examination of *Mindererus* his water, that *Sweat (by the Natural *Proto-Chymist*) is made Salt, as is also every compound of Acid and Alcaly, Urine not excepted; which this Operation shews.

Take that Lye, wherein foul Linnen Shirts have been steeped and washed, not boiled, put this Lye into a Glass of a long, narrow, and equal neck, set to a Limbeck at least carelessly, and place it in a digesting Bath or Sand, and in a few days you shall see the Alcaly of Sweat to ascend, yet not stinking, as That which is sublimated from Urine. This Alcaly could not be separated from Sweat, unless its Salt relish were divided, which consists of Acid and Alcaly, both Volatiles, as I have shewed in *Mindererus* his Water, and elsewhere; so that the Lye is a Fixed Alcaly, absorbing the Acid part of the Sweat in the Heat of Digestion, and the fugitive Alcaly being divided from it, goes to top and a cold place.

* I call Sweat, either that insensibly transpiring, or that which makes wet; 'tis all one here.

The pure Alcaly of Sweat.

Once observed, as I was travelling post, this Salt, Volatile, Fat, and (therefore) penetrating and resolving Sweat; how, although my Leggs were armed with Boots made of the choicest Leather, and well waxed, so as to admit neither Rain nor Water; yet the Sweat of the Horses, exhaling like a Vapour, had penetrated them, as it also happened to my Companions of good note: To avoid this inconvenience, I invented an Oynment, like Vernish, which in other cases could resist *Aqua-fortis*, and then in a second Journey, for the first days, I found less inconvenience; but the days following, the Sweat had not only penetrated the Vernish, but had plainly dissolved it, as far as the Vapour of it reached.

Sweat salt and pingueous.

Hence I learned, That Sweat was therefore made

Salt by Nature, that it might resolve the filth in living Bodies, which here and there was coagulated in them.

But how the Sweat of all Animals, and whatsoever doth insensibly exhale from them, yea of which the Animal consists, doth acquire Saltness. I shall explain a little more clearly, only for the sake of this Viperine Salt, whose Acidity, as it is occult, so the Saltness of it is more subtil and grateful. I profess my self to be the Inventor thereof, though Momus fret never so much; which the following Epistle shews: And though for Lucre of a little Gain in this Age and Theatre of the World, some unskilful men, and ignorant of Natures instruments, and of this Hippocratical Doctrine, have appeared, who obtrude, I know not what, on the unwary and unexpert; to the Prejudice of my Name, yet I now give the Reader to understand, that, which I have not discovered to any man living hitherto, save by this publique Writing.

The Invention of the Salt of Vipers.

Mareus Aurelius Severinus wisheth prosperity and good success to Otho Tachenius, a great Studier of Nature and the Hermetical Art.

The Epistle.

The confidence which I alwayes had in your friendship and good will, I now really experiment: For my desire to have some of your Viperine Salt, being scarce signified to you, you presently satisfied me therein; for which I return you many thanks. I wish some chance would happen, that you might pass over the Fordye Adriatique to the flourishing Parthenope, it would be neither unuseful nor unprofitable to you. Besides, that choise Matron, whom you visited in her blindness at Naples; from that very day hath impatiently longed for you; wishing that the hinderances of your intended Voyage were removed; but because you have sent me a Viperine gift; I will requite you with another of the same kind, I mean a Volantse of the Nature, Poyson, and Medicinalness of the Viper, printed for me at Padua by the

the Famous Printer Paul Frombottus, who upon the sight of this Letter, will deliver one to you in my Name; and he will give it to you the more freely, if you, shewing a willingness to communicate the useful observations, which you have long made, of this Viperine Salt, do betake your self to the Famous John Rhodius, my special Friend, the Corrector of the Press; who, if need be, can add them, to the end of the Work. I wish also, you would add some preparation and description of this Viperine Salt of your own. I have herewith inserted the preparation of Volatile Salt, out of Johannes Vesperus. Pray tell me how far you approve it, and continue to love me, as I do you: For I desire nothing more at Naples, than to enjoy the hopes of such a felicity as your Conversation and Company would afford. Here you would find a Liberal Harvest; Farewel.

From Naples the Ides of May, Anno Dom. 1650.

The Illustrious Matron, the Wife of Capicius Regens, to whom you gave your Viperine Remedy, Salutes you.

But to what end should I produce the Testimonies of Learned Men, this present Writing sufficiently declares, that this Salt, with all its requisites, was not so much as dream'd of by this Reformer, before I acquainted him with It; as I could shew by his own Letters to me, but that I am willing to consult his Credit: yet unless he produce other Foundations of Art and Nature, than he hath hitherto done, he will never come to the knowledge of this Salt: No more will men of a far higher Order and Rank than himself, however they boastingly and ambitiously word it out, and pretend to be able to attain it.

As Urine and Sweat, so also Blood, whilst it is yet hot and reaking may be commixed with Lye, and Alcaly be sublimated from it; but when the same Blood, without the Lye, is distilled out of a Retort, with the Fire of Sand, then in the Caput Mortuum it leaves much Salt, somewhat

The Alcaly of Blood Volatile and pure precipitates a white Matter; fixed.

More Fixed Salt of Blood, a noble Medicine, doth not precipitate Mercury.

fixed: The *Alcaly* precipitates *Mercury* from the often-named Solution into a white Powder, but the Salt, doth not: Hence 'tis manifest, that as the Lixivious and Fixed *Alcaly* drinks up the *Acid* from the Blood, so the Volatile *Alcaly* of the Blood catches also it's Proper *Acidity*, which is Volatile too, and in the Regiment of Fire, they are both fixed into a Salt, as will more clearly appear in the progress.

But least a New Truth should procure me New Envy, I think it worth my Labour, before I go on, to demonstrate, that *Hippocrates* was not ignorant of the Foundations of this Salt: For he in his Golden Books of Diet hath these words, *All living creatures as well as man, are constituted of two things, different in Vertue, but agreeing in Use, Fire and Water, both of these together are sufficient, both for all other things, and for themselves, but each of them apart, is neither sufficient for it self, nor any other thing, &c.* Thus he,

My Master and Philosopher, hath brought these two Faculties on the Stage, *Fire and Water*, in whose Bowels all * things are contained, which are necessary to perfect generation and transmutation.

A while after he adds, that this is no culinary fire, for he says, men thresh, wash, and grind Corn, and being baked in a hot Oven, they use it; with a strong fire it is not made up in its Body, but with a soft and gentle one; what this soft fire in all things is, will appear in the progress.

* When I had recourse to natural principles then I knew Art to be true, says *Avicen*. I will shew those things which no man yet hath assayed to explain, *Hippoc. ibid.*

CHAP. XIII.

The occult Acid is made Manifest.

The Fire (says *Hippocrates*) is not sufficient for it self; Hence the apperice of Alimental things; IN a sound Stomach there is lodged a Volatile and never failing *Acid*; by the help of which, Aliments, which are all full of Volatile *Alcaly*, none excepted (as I shall shew hereafter) are transmuted and turned into Chyle or Juice, first Sourish, and afterwards by little and little

little into Salt (i. e.) mature: whether the Stomach hath this *Acid* of it self, or elsewhere, it is not my present Enquiry, though a certain Writer intimates the former: 'tis sufficient for me plainly to demonstrate that there is such an *Acidity*, first by Authority, then by experience.

Hippocrates says, *In long looseness of the Intestines; if Acid belching supervene, which was not before, 'tis good.* The meaning is, that *Acidity* returning to the Stomach, it changes the food into Chyle, or Vital Juice, then necessarily Health returns.

Hence all seasonings and sauces for Meats, to sharpen our appetite, are *Acid*; as Juice of Lemon, Pomgranate, Orange, Verjuice, Tartar, Unripe Grapes, and the like; all which notwithstanding differ much among themselves; of which, to avoid Prolixity, I will not now dispute. See Chap. 10.

To recover this *Acidity*, when it is lost in Diseases, the Ancients appointed *Acid* Sirrups, of Vinegar and Sugar, of Vinegar mixed with Water, and the like, that by their means, the Weak Stomach might be refreshed, and the Aliment, though taken in a small quantity, might not immediately putrify; which yet is taken notice of by few, especially of those who persuade themselves, that *Putrefaction* and *Chylification* are the same things.

There was a certain man of the new Sect, and in his own accompt, no mean Person, who forbad Juice of Lemmon upon pain of death, to one sick of a Fever, who exceedingly desired sharp things, as if it were too crude; but he prescribed simple Syrrup of Vinegar. I could not but admire that he should allow Vinegar boiled with Sugar, for an alterative, but not Juice of Lemmons, in his Meats: He Answered with a loud Voice, that Julip of Vinegar was made of Water and Sugar. Our *Hippocrates* speaks of such a Physician, *If he doth not know the constitution from the beginning, and that which predominates in the Body, he can never prescribe that which is good for a sick man.* Now this *Acidity*, being oppressed by a long Disease, returns to the Stomach, either of its own accord, or by the Skill of an ingenious Physician.

But

But that we may have some knowledge of this *Acidity* by Experience, Let an healthy Man drink a draught of Milk fasting, and let him presently vomit it up again, and he shall perceive the *Acidity* with his Tongue, and shall see the Milk vomited up, half curdled, as if Vinegar had been poured on it; (almost the like *Acidity*, is commonly found in Nature, by an helping hand, which in a Glass turns all the Aliment in four or five hours space, by the help of a gentle heat, from an *Acid Salt* into a *Lacteous Chyle*: a pleasant spectacle to behold, which I can ocularly demonstrate to any who desire to see it; but in this place for some reasons I forbear.) By the help of this obscure, though grateful *Acidity*, the *Viperine Alcaly* is compacted and gathered together for its proper uses.

But no Sapor doth curdle and coagulate Milk, but that which is *Acid*: Now it is performed three manner of ways,

1. In the Healthy Stomach of all living Animals, Milk is not simply coagulated by the *Acid*, but in the very coagulation, it is necessarily impressed with the the Vital Vertue of the very Animals, which though it consists in the *Acid*, yet it differs from every other *Acid*, and then it is chylified and received for nourishment: So in a Dog, it assumes the Nature of the Dog, &c. the handling of which Hippocratical Doctrine, being not proper for this place, I do only point at it.

2. In the Stomach of Sick Animals, the Milk is indeed sowed, but not impressed with a Vital Character; wherefore the *Acidity* becomes putrefactive, which nourisheth not, but increaseth the Disease.

Hence my *Hippocrates* in some Feavors (not in all, as some would have it) forbids the use of Milk.

3. Milk is coagulated by manifest *Acids*, and by all of them, either of the *Mineral* sort and Class, as are *Acid Fountains*, *Vitriol* in substance, *Spirit of Vitriol*, of *Sulphur*, of *Salt*, of *Nitre*; or it is coagulated in one only part of the Animal (i.e.) the *Stomach*, and in no other; which is a sign that the perceptible *Acidity* is not admitted into the other parts: but

He which is ignorant of the principles of Nature, hath no true root whereon to ground his Curative intention. *Giber.*

An Admirable thing. *Acidity* is the Vital Organ, and the bond of the Rectior with the body, it may suffice to hint this once for a l.

C. 3. Apho. 65.

Divers Coagulations of Milk.

but if it creep into them by chance, it becomes the cause of Diseases and Death; wherefore *Acidity* lodges at least in all Healthy Stomachs, which, because it generally coagulates Milk; it is called by *Dioscorid's*, *Coagulum*, and commonly in *Italy Conaglio*: yea the Stomach of all Birds, have the above-said *Acidity* so strong and in so great quantity, that unless they frequently eat Sand or pieces of Bricks, whereby to restrain the super-abounding *Acidity*, the said *Acid* would slide down from the Stomach and trouble the other Digestions, whence they would fall into an Atrophy and never grow fat: or else it is coagulated by the Juices of Vegetables; as of Lemmons, Oranges, Barberies, Vinegar, and what ever else tastes Acid and Sharp: Milk also sowres of its own accord (as do other Juices, as well of Vegetables as Animals, when they incline to putrefaction, yea nothing can putrify or be generated anew, unless this *Acidity* do proceed) and then it is also coagulated, and the Whey separated, which carries off with it the occult Volatile Alcaly, by means of which it doth refrigerate, as shall be shewed in its place.

Both these faculties are latent in good and sound Milk, and therefore they cause an occult Saltness therein; which is the reason, that Salt of what kind soever, either Natural or Artificial, never hurts Milk; yea sublimate *Mercury* it self, being a compound of the above-named *Acid Minerals* (i.e.) *Vitriol*, *Nitre*, and *Salt* (whose *Acidity* being sucked up by the *Quick-silver*, as by *Alcaly*, is changed into a very excellent Salt) doth Milk no hurt at all. Hence it appears, that Salt things do indeed dissolve mucilaginous compounds, but destroy not harder and more compact Bodies, as will be more plainly manifested in the Sequel.

What Coagulum is.

Acid and Alcaly in Milk.

Salt things do not curdle Milk.

CHAP. XIV.

The Precedent Doctrine illustrated by the Resolution and Composition of the Stone.

The Analysis
of the Stone.

I said in the foregoing Chapter, that the perceptible, or manifest Acidity, out of the Stomach, was the cause of Diseases; which assertion, the Composition of the Stone doth confirm, which for greater Illustration, I will now Mechanically resolve, and again compound. Take a Stone, cut out from the Bladder, or coming voluntarily from the Reins, (a drachme or two is sufficient) put it into a Glass Retort new and clean (let not the Stone be beat to Powder, but of that bigness, that it may not stick to the Neck of the Retort) put the Retort into Sand, set too a new and clean Receiver, urge it with a moderate Fire; First of all an Alcaly, like Urine, yet of no smell, will drop into the Receiver, and a little after, you shall see the more fixed part of the same Alcaly to be sublimated in the Neck of the Retort: mix both those Spirits, the Liquid and the Solid, and keep them diligently in a Glass Vessel, stopped with Wax, for if it be open, they vanish to Air, of which Hippocrates, taken part it is not sufficient, either for it self, or any other.

L. 1. de Diat.

In the Retort when it is cooled, you shall find the pieces of Stone in the same form as they were put in, yet so light and friable, that if you touch them but lightly, with your finger, they fall to powder, (as dead carcasses in *Roma Subterranea*) upon which entire pieces, if you again pour the Alcaly retreved from the stone, or else other Alcaly of Urine, presently it hardens, as it was before; which is a signe, that the Alcaly, in the aforesaid cadaver, finds an occult Acid, which may absorbe it; for unless it finds the Acid, it abides not alone in the open Aire, but according to its nature, would vanish away, *Because being severed, they*

they are sufficient neither for themselves, nor any others, as Hippocrates teacheth.

Hence we learn, That the Stone (for Example) is not congealed, neither in the Bladder nor in the Reins, unless by the Alcaly of Urine, or the Alcaly of the place, and the Acid unduly, improperly, and by mistake, falling down from the Stomach, and there being degenerated, the Acid and the Alcaly, being joyned there, must needs concrete into a Masse, as I shall every where plainly shew) and they lay hold also on that which is not much different from their Nature, which, together with these two, undergo coagulation, as I have said in Calx or Lime, and daily experience also witnesseth.

Hence Red Stones are congealed by a little Blood, which falls down in the same place from the Acid, out of the eroded vein; wherefore they are more friable and brittle; but the other Stones, having mucilage joyned to them, are whiter and therefore harder. This is that, which my Hippocrates most skillful in Chymistry, doth proclaim. *These things are thus brought to pass by Divine necessity, yet they know not what they do, but every thing fulfils his destined fate:* which is, as if he had said, both these Spirits or Faculties, being joyned together, in whatsoever place, must of necessity concrete and congeale, but being severed, they effect nothing in Nature, neither can they subsist, being neither sufficient for themselves or other things, as my Doctor says. So that, manifest Acidity without the Stomach, in whatsoever place it be, is Morbous and Inimicous to Nature.

I know it, says the Author of the Rosary, because of necessity the work must come to such a Nature

L. 1. de Diat.

This Doctrine of the Old man is most true, for it is daily observed in practice, that Stones do concrete all vacancies of the body, wheresoever the Acid being out of its place, by mistake meets with the Alcaly, as in the Lungs, the Liver, the *pancreas*, the Ureters, the *Intestines Colon*, and the Bladder of the Gaul: which is against the most Acute *Galen*, who teaches, *That the Stone is generated in the Bladder and Reins only by heat: wherefore the Stone of all Animals*

L. 10 de Med. affect.

(of which we now speak) hath nothing in its Composition, but Acid and Alcaly, both Volatile, as also Blood or Mucilage; but when it is coagulated in the Bladder of the Gaul, then it lays hold of that bitterness which it meets there; some going hither, some thither, and being thoroughly mixed amongst themselves, &c.

Hence we may learn, of what Vertue in dangerous Diseases, the Water tempered with or poured upon the Stone which is found in the Gaul of an Hedgehog, may be; which yet some ignorant Practitioners do mightily extol: 'tis a wonder they are not afraid of this Stone, as of an igneous or fiery nature, since it is better from the Gaul, which hitherto they have not observed. If the abluion of this Stone were good for any thing, surely one drop of the Gaul of the meanest Fish, were much better then twenty Ablutions thereof.

Whetefore from the coagulation of the Stone, it now appears, how far *Lisbon-Tribon*, *Cantharides*, *the Blood of an Hare*, of a *Fox*, and the like, have hitherto profited in the Stone; so that *Paracelsus* rightly judges, that the Stone (and the Knotty Gout) are coagulated like Tartar, by two Faculties, according to the Doctrine of *Hippocrates* (i. e.) the Acid and the Alcaly; it also coagulates with it some *faeces*, which by chance it finds there; and *Galen* witnesses against himself and his followers, *The cause being known, 'tis easy to find the remedy*; and therefore whatsoever of the Stones of Crabs, of *Lapis Judaicus*, of Elints, of the Stones of Carpes, of Perches, and the like, being in Powder, or dissolved in Vinegar, is taken at the mouth for the Stone, it indeed imbibes the Antecedent cause of the Coagulum (i. e.) the Acid as I have shewed; but it doth not abate or diminish the Stone, when it is once coagulated. So also Salt things, by reason of their Acid part, do hinder the concreting of the Stone, in as much as they consume and drink up the Alcaly of the Urine, so that the Acid rowing up and down the Body can find no Alcaly wherewith to associate, or be coagulated; but Salt things

Hipp. L. 1; de
Diat.

Lib. 7. de Meth.

things do not dissolve the Stone, when it is already concreted.

But that common Salt doth imbibe and absorb into it self the Alcaly of Urine, and other Alcalies of Animals, as I have shewen above in the preparation of Sal-Armonick, so I will now further demonstrate by another experiment.

'Tis known, That the flesh, of whatsoever Animal, is preserved by common Salt, which in a few days runs down there-from into a Salt Sanguineous Liquor: Boil about a pound of this Liquor, and scum it, and put it into a Glass Retort, and with a gentle fire, draw forth all the moisture; lastly, cover the Retort with sand, increasing the fire, then the Alcaly of the flesh will be elevated into the neck of the Retort (like the Alcaly of Urine,) which the common Salt had absorbed and drawn out from the flesh; only by a few days maceration and steeping, after the same manner, the Salt which we eat, must needs consume and drink up the superfluous Alcaly (gathered together here and there in the Cavities or Ventricles (as *Hippocrates* says) which is unfit for Transpiration; reason it self dictates this, and experience beareth witness thereto; for Alcaly by an easy process is sublimated out of Urine, and the Sea-salt remains, as it was eaten, in the bottom, the same way as I just now shewed, concerning the Salt Liquor of Flesh.

The Dignity of
Common Salt.

Hence we may gather, That Salt is bestowed on Mortals, as a necessary support of Health and Life.

'Tis plain from our antecedent Discourse, that by a Mechanical necessity, the Stone is not dissolved, unless by a middle Sapor between Acid and Alcaly; This Sapor is changed into Urine, of great Strength, and grateful to the intestines (as hath been said) and it ought to be subtil, that it may pass up and down and pervade all freely. If you will call this way of dissolving, either by its contrary, or by its like, you do not much mistake, for the Alcaly if it dissolves, 'tis done by its like; the Acid, if it destroys, 'tis done by its contrary: Who (of what Sect soever) besides *Hippocrates*, could have unfolded this Riddle to us, wherefore

The Wise say,
nothings more
natural, than a
thing to be dis-
solved by that,
of which it is
compounded.

Hipp. de loc. in
Homine.

Ad Glauco. commends Him, not without Cause, as our Director in Physick, and an excellent Master in the whole course of our Life.

A Remedy for the Stone, Asthma, Epilepsy.

There is also a Specifick Remedy, known to few, which in young people fully and perfectly takes away the Stone of the Blader, without relapse, and elder persons may also rake it at Mouth, without any inconvenience. I would willingly communicate it, if I were not afraid of Impostors; but chance here more prevails then reason: The Asthma and Epilepsy, are also perfectly cured by the same Remedy.

CHAP. XV.

A Thing unheard of, and admirable, yet most ancient, discoursed of.

I Have already declared, That the Acidity in the Stomach, I have also shewed, That the Stone, Urine, Sweat, and Blood, are Salt. I have also shewed, how the Salt or Sapor taste is divided with fixed Alcaly, that so the Alcaly may be freed from the Acid; now it is my part, to shew, how, Urine, Sweat, and Blood, &c. do acquire this Salt Taste? All Aliments, and whatsoever doth nourish, have but a little of the Acid, and much of Volatile Alcaly (as hereafter will be more clearly shewed). (i.e.) as much Acid as will bind up and restrain the Alcaly, that it vanish not away (for alone it is not sufficient for it self) as I have formerly noted out (of Hippocrates) the Acidity of the Stomach acts upon that Alcaly; of these two Savors is made a Salt-Juice, which being impressed with that Acid Vital Character, is called Chyle: This passeth not through the Mesaraicks, neither is it admitted thereunto, unless it put on (after its own manner) a Salt Taste (i.e.) a mature one; otherwise it will be ungrateful and troublesome to the inward parts; and so the Acidity of the stomach, vivifies the Chyle, that it may be made fit for nourishment.

L. x. de Diet.

Hence

Hence it is, that my * Hippocrates saith; As the Stomach nourisheth, heateth, and cooleth in Animals; so doth the Earth in Vegetables, which sounds thus; That the Stomach is the President of all Actions which happen in the Body, for the sake or by means of Vital Acid. alone lurking there. I think there is no need, that the Urine of great Drinkers and Toss-pots (who by reason of the quantity, they swallow, do piss every hour, especially, if it be Watery Rhenish Wine, which they drunk.) should pass through all the Channels and Ducts of the Veins, for then it would come forth tinged; but their Urine, though like in colour to simple Water, is notwithstanding Salt, like That which is produced from moderate drinking; which the Alcalizate Lye proveth, as I have shewed concerning Sweat; On the other side, the Urine of dying men, though they make it, in a little quantity, and tinged to, yet it altogether wants Saltness, and also Alcaly, (besides the common; if they take any in their Meat:)* wherefore of necessity that Saltness must be generated from the Impression of the Vital Acidity, having its place in the Stomach; which forsakes dying men by degrees.

De humoribus

Urine of sound men, Salt.

Urine of dying men Saltless.

By this observation, 'tis as clear as noon-day, that the Vital Instrument, in sound animals, (wherewith the Aliment is impressed, before it glides from the Pylorus, lest it should putrify, as I have said out of Hippocrates) is Acid, wherewith the Chyle, in the very Stomach (representing an Egg, or grain of Seed,) must be made Salt. In one word, Chyle is made Salt, by and with the Acidity of the Stomach, and the Alcalizated Aliment; So is also the Urine Salt for the same Cause (even of those who never tasted any Salt) their flesh and bones, yea the very excrements of the Belly are Salt; yet the Alcalye hereof, though it be an hundred times Rectified, in a few hours, is again changed into That, which it was, by means of the Ferment of the Place, or of this hidden Acidity, lurking and abiding there, whence We learn, that the Alcaly of every thing, doth contain and keep and preserve the occult Acid (imperceptible to sense) of the Animal, or else of that part; whence it was taken for which Cause Paracelsus, being illuminated in the

The Proto-Chymick dwells in the Stomach.

This Experiment shews whither a Glisten can nourish.

The difference of the Alcaly of Animals cannot be distinguished by our senses.

Ancient Hippocratical Science, and after him, the famous *H. Incent*, have specified a Liquor for the Stone; (*Ledus* (by reason of the Symbol, or the Ferment of the place, which it may be lawful for me, to intimate;) (So the Viperine Alcaly, having an Alexipharmacal property (after its manner) is restrained from flight by the above-named and declared Acid, and it is celebrated in very many Diseases, especially in the Feet-Gout, Joynt-Gout, and its species, (whose pain, as *Paracelsus* first hath observed, with unspeakable benefit and advantage) is not without occult Poyson) to which, in an exigent, I add a little powder of *Sena*, of *Hermoadattiles*, and of *Cremor Tartar*, ana a *Scruple*;) but it goes through all the passages of Man's body, in an occult Saline form, like Sweat; but when it finds a more Acid Sapor in the Cavities, Articles, and Joynts, then it relinquisheth its proper Acid, and imbibes that more potent, dolorous, and burning One: after the same manner, as it happeneth in Corals dissolved in Vinegar; on which, if a more Acid liquor be intilled, as of Vitriol, or Sulphur: This associates it self to the Corals, and neglects the Vinegar, as is well known to every puny *Apothecary* (see also the necessity of Precipitation, *Chap. 28.*) But when the Acid is not alcalized into Salt before, it passes through the Meseraicks, and by chance is received and entertained within, creeping even to the Blood, it waxes soure, and presently there follow Feavors and Pleurisies; for the Blood, sent forth at that time, concretes into clotts, because the abounding Acid, drives the Alcaly together, as I have shewed in Milk. In this case our Ancestors have found out Specifick Remedies for the Pleurisy, friendly to the Stomach (where they resist not nor hinder Digestion) which abound with Volatile Alcaly, that they may restrain and consume the Acid, such as are, Goats-blood, Juice of Wild-Succory, the Peezil of a Stag, or Bull, the Seeds of *Carduus*, and the like, which are prescribed at this very day with good success, especially after Letting-blood, the blood being now soured in the Veins; for then the aforesaid Remedies do easily absorb That which remains, after the same manner as

* *Ledus* is the
Sourer out
of Mana Blad-
der.

L. 7. c. 2.

Pain of the
Gout from *A-*
cidit.

Different
Cooks seldom
prepare whol-
som Meats.

Remedies of
the Pleurisy.

I have shewed concerning Crude Vitriol precipitated with Liquor of *Tartar*, for one only drop of either Sapor exceeding the other, turns the whole mixture either into Alcaly or Acid; so one drop of the Acid, if it enters into the blood, causes a Disease. Hence it appears that Health consists in a very narrow point, which is a temperament, *ad justitiam*, or *ad pondus*, as *Galen* speaks, *Which we rather suppose and imagine, then that it really is.* Hence* also that of *Hippocrates*, *Bodies advanced to their full vigor, stay not there, but as weighed in an equal balance, turn down to the contrary side.*

L. 11. de Tem-
peram.

* L. 1. Aph. 3.

By what hath been said, the reason is manifest, why Vitriol exsiccated, performs vital actions, with blood, sweat, urine, or excrements, as it may be drawn to some certain Object, of which I forbear on purpose to speak in this place, least I should exceed the bounds of a Compendium.

Wherefore the Vital Instrument, or Seminal Vertue, (call it as you please) in all things, is Acidity, either hidden, or manifest. This Vertue resides manifestly in the Stomach, but in the other members obscurely, as * *Hippocrates* witnesseth. *Man*, says He, *hath more than one Ventricle, all the Muscles have their Ventricle.* Now it is the office of the Stomach to change one thing into another, by the help of the two faculties (*i.e.*) the innate Acid, and the acquired Alcaly, for so we are to understand this, as my *Hippocrates* enjoynes, saying, *Men cut wood with a Saw, one draws to, another thrusts from, so also is the nature of Man.* So that the aforesaid Acid (which I have shewed to be occult in Milk) assumes the Alcaly in the Aliments, and whatsoever is not repugnant to its own nature, it coagulates it with it self, and increaseth into a bulk which is vulgarly called *Nutrition*, but by my Master, *Natural Labour*, saying, *Man cannot be healthy, unless he Labour, but it is meet and fit that a Physician thoroughly know the force of Labours, both of the Natural and also of those which are done by force; and which from them prepare Food for an augmentation and growth,* as upon the Authority of *Hippocrates*: I have given *ride* Examples in Lime and Sope; but these

* L. d. Arc.

L. 1. de Diet.

* In the begin-
ning of the
forecited Book

things being obscure, by reason of their brevity, in the following Chapters, I shall more largely explain, discovering every thing particularly, which here are but generally propounded, *That you may know Nature to be alike in every thing*, as the Venerable *Pythagoras, with my Hippocrates, doth teach.

Since therefore, whatsoever is put into the Stomach, ought to be changed into a Salt Volatile, and the Chyle is not proportionated, but by reason of some Error, from within or without, hath more or less of Acidity, as we see in Drunkards, who sometimes vomit up what they drink in, of an Acid taste; then, *the importune Acidity, creeping through the Meseraicks, becomes unfit (according to Hippocrates) for Aliment, and for the Subsequent Ventricles, and then, the whole Body falls into an unequal heat, and because the Aliment is disproportioned, it must of necessity be unfit for Exhalation, as Hippocrates again teaches in the fore-cited Book, *Of necessity*, says he, *those things which are severed and produced from it, must be unlike, &c.*

Whence we say, that the Pores are obstructed, and transpiration hindered; and then a Feavor, or other Disease, must necessarily follow. Hence every Disease, according to Hippocrates, doth generally consist, either in matter coagulated, or in matter more or less dissolved; and it differs according to the quality of the taste or sapor, of which he reckons an infinite number, in his Book of Old Medicines, and in his Aphorisms, *Sowre Belchings, which were not before, coming on sowre and stinking ones, is a good sign*; he means not in every loose Disease; for Example, In the Flux of the Belly, Acidity is deficient in the Stomach, and in those Persons where it is, there happens a Flux, or looseness of the Intestines from too much Salt Sapor, which Sapor doth at least dissolve those things, which are but lightly and gently concreted; yet it is never pernicious, but is overcome by Milk alone, because Milk is easily mixed and washed off with Salt things: But if the Acid and Alcaly are proportioned with a due heat, in every Ventricle, *like adhearing to like, with-*

not any stiffe or variabce. This is called *Sanity*, and so *Stiegm's* Sope is perfected and coagulated; which also it self, if it be disproportioned; becomes *Morbous*; and must be dissolved by its like; and again, by its contrary (as I have shewed above) it must be reduced and recocted for *Sanity*; and be coagulated into Salt.

'Tis enough to have hinted at these things belonging to this matter, concerning the rise and generation of Volatil Salts in the Animal Family, unless any man shall object, that Volatile Salts are therefore made because we eat Salt things; which I have shewed before to be impossible, by reason of the fixedness of Salt; yea Salt is found in Urine, as it was eaten, being unchanged in its Form and Nature, and without the least Alteration, as may be easily experimented (i. e.) viz. by the inspissation of Urine, and afterwards by its Calcination, Solution, and Coagulation, where Salt is found granulated; as also, Men live on the Alps of simple Milk alone, whose Urine notwithstanding, is not destitute of Acid and Alcaly, which though concreted in the form of Salt, yet it is not granulated as Sea-salt, but of a Cubical form; nor doth it endure constant in the Fire, but the Alcaly, with a gentle heat, forsakes the Acid, as Experience doth declare.

CHAP. XVI.

A return from the former Digression, to the Mechanical Demonstration of Alcalyes.

I have shewed the way of Extracting Alcaly out of Sweat, so also out of Urine, out of Blood, out of the Flesh of all Animals; I have also declared that Alcaly, with the Acid is changed into Salt, not only in the Stomach, but in all the Ventricles, of which *Hippocrates reckons an infinite number;

* In aurco carmine.

* If it be forced violently, and overmuch, it loses its succs.

Hipp. l. 1. de Dia.

L. 6. Apho. 1.

E. 1. de Diet.

ber; and when that Salt hath done its work, then together with its dissident or contrary (i. e.) with the unctuous excrements, it transpires; and is carried off into Elements, as it happens in all sublunary things, and I have shewed in Fixed Salt of Tartar and Oil (and shall afterwards do it more plainly) and also in Artificial Sope, which after it is made, and hath served for use, will return into Water and Earth; which transpiration and reduction to Earth, *ad orbem*, will more manifestly appear by Examples.

Vitriol separates Alcaly from Acid.

Let any one drink, or but lightly taste, a little Vitriol of *Mars*, and presently his Tongue waxeth Black, seeming to swell, as if it were furred with Velvet, whose Pores, are always turgid with the Exhalations Occultly Salt, which either are mingled with Spittle, or vanish into Air; so that as soon as ever the Acidity of the Vitriol of *Mars* perceives the hidden Alcaly in the Spittle, in a trice, it separates the *Colcothar*, which sticks to the Tongue and makes it Black. But lest you should think I speak of incredible things, behold an Ocular Demonstration.

Dissolve *Vitriolum Martis* in fair Water, into the clear Solution, instill by drops the fixed Alcaly of Tartar, (i. e.) the Liquor of Tartar, then the *Colcothar* falls obscurely greenish.

Alcaly	{ Celandine Lavender Wormwood. Rosemary Volatile urine Sweat Blood Vipers. }	{ Precipitates dissolved Vi- triolum Martis of a }	{ Yellow Green Orange more dark then Salt of Tartar Darkly green. Brighter Obscurer }	Colour.

Salt of Bean-stalks, troubles it into a Yellowness, and after an hours rest, elevates Ocre from the bottom: Common Salt, as being the perfectest of all Salts, is mixed with Vitriol; So also *Mercury sublimata*, being an arti-

artificial Salt, and also all Acid things, do not precipitate Vitriol.

Wherefore only Alcalyes do precipitate Vitriol, enclining to black at bottom, but they are not found fixed in a living Animal; but are only Volatile, and being perpetually compact with the Acid, after they have served for use, do exhale from us, and transpire with the Acid under an Occult-Salt-Sapor, which will more clearly appear.

The whole body of Man, as long as he lives, is Expirable and Conspirable, as Hippocrates first observed, and whatsoever expires, is occultly Salt; but this Salt evaporates not only to the External Surface of the body, but the greatest part of it falls down to the intestines; which is thus proved.

Drink Vitriol of *Mars*, dissolved in water, and you shall see the excrements of the Belly tinged either black or green, after the same manner, being precipitated by the inward Alcaly; as I have already declared by experiment: but in the External habit of the body, dissolved Vitriol is not precipitated by the Effluvioms of Salt, therefore it passes in greater quantity, to the Intestines; So neither is the Urine tinged black, for the *Colcothar* is precipitated before the liquor is hurried to the *Mesaraicks*; so that of necessity it must remain in the Bowels.

If therefore the greatest part of the Excrements pass to the Bowels, being designed by Nature for Expulsion, It is sometimes by mistake detained in undue places by the Bonds of Coagulation, or to speak according to *Fernelius* Language in the First Region of the Body, and then of necessity it must be furthered in order to Expulsion, by some Loosning Medicament; So that it seems not to me, that all Loosning Medicaments are to be disallowed in Diseases, as some think, neither are they alone sufficient to procure health and recovery, as the greatest part of Physicians do believe and practice, against the Tenent of Hippocrates.

Purgatives alone are not sufficient to recover health, as Hippocrates teaches.

But it may be demanded why Acid Fountains carrying Iron, make not the Tongue Black, as well

as the Excrements of the Belly? That happeneth, because the Natural Acid Spirit, corroding the Vein of Immature Iron, being mixed with Water, is not saturated, but prevails in the *Compositum*; and the Fountain being drunk off in the very Act of Corrosion, there is not then time given for Precipitation in the Tongue; but as soon as the grateful Acidity is carried to the Stomach, then the *Colcothar* falls, or is precipitated from the Alcali, which flows to the dissolved Iron, for defect of one faculty and excess of another, and whatsoever of Mucilage they catch in that Coagulation, they constrain into their own Nature; as I have above shewed in the Concretion of the Stone, by the Authority of *Hippocrates*, and in a rude Example in slacked and dissolved Lime. This *Coagulum* is called by Physicians *Obstruction*. The Acid or the Alcali may now and then exceed in it; so the Stomach repugne not, which is the president of all Actions, as *Hippocrates* teaches; or if the Acid Waters touch the place (which pass not beyond the *Diaphragma*, a thing to be noted) they without doubt destroy it: I said that Acid waters are to be drunk in the very Action of Corrosion; (i. e.) they are to be taken from the living Fountain, for if they flow down a little from it, then the Action ceaseth, and the Acid Spirit being spent and consumed by the unripe Iron, grows faint, and with the Solution is precipitated into Ocre, which affords not a Black (for it is not precipitated with Alcali) but a yellowish bottom, as it happens to all Vitriol, passing through and carrying Iron. A Physician of the Canonical Sect, having learned well to quarrel out of *Aristotle*, a few years since, caused Water out of a Fountain, corroding a Vein of Iron, to be brought from the Country about *Trent*, to a Noble Senator of this City, being *Hypochondriacal*, who fearing lest the Corroding Spirit would exhale, commanded the Water to be filled in Glass-jars of a long Neck, and Oil to be poured a-top, and so to stop their Mouths with Wax, and to bind them with a Bladder, rejoicing by this subtle Device, as it were, to have imprisoned

Obstruction
what.

* *Lib. de Humor.*

soned the Spirit of the Fountain, which he looked upon as *Spirit of Wine*: yet notwithstanding to such men as these, though they are ignorant of the Instruments of *Medicine*, God so permitting, we entrust and commit our Lives, Fortunes, Wives, Children and Families.

Hence the bold, though ingenious, *Helmont* cries out, *That a Physician is now adays a rare thing in Europe*. This man if he had been truly versed in *Hippocrates* his School, and had read over the Book of Nature, he had never so shamefully discovered himself, neither would *Physick*, the *Noblest of all Sciences*, be accounted the meanest: I say he might have known, that the Acidity doth not exhale, but only by its Action on the Iron, grows weak, and then exhales not, but both of them go to bottom in the form of *Feces*, which is called *Ocre*: neither can I sufficiently admire the vanity of some prating Boasters, who with the same stupidity, hold forth the distilling of a Fountain, and divining by the bottom; so Rich men are sent away empty, and without advantage or benefit.

* *Tras. Catar. Delirum.*

* *Hippo. de Leg.*

Claud. de ingressu ad infirm. c. 1.

The *Spaw Water* is much more Acid, and though it corrode a Vein of Iron, yet it retains a certain Acidity, and therefore it permits itself, and is capable to be carried to another place.

The Renowned Fame of this Fountain, about ten years ago, moved a Noble *Vicentine*, curiously to enquire into the Nature of this Fountain, for his own healths sake; to whom I briefly described its properties, and for what Diseases it was good; being at that time with the Most Illustrious *George William*, Duke of *Brunswick and Lunenburg*; though afterwards I went into *Low Germany*. The Noble Man being returned home, by chance related to a Physician of that City, what I had said concerning the Fountain; whereupon he wrote a long Letter, under pretence of Advice, to the Famous and Excellent *Theodore Kernerdaig*, the Dukes Learned and Chief Physician, which he sent unsealed to the Dukes own Hands, and in the Margin my Name was inserted, that it might easily be read by him

Falsity hath little strength.

him viewing the Letter; the Duke reading it, and disdain- ing so mean a Fellow, asked me, whether I knew who wrote it? I denying it; 'Tis well, says he, that thou art Despised and Reproached by the Vulgar, read it and hand it to Mr. Kenerdaige, that he also may know who Wrote it.

The Incomparable Prince gave no ear to Backbiters, but carryed himself, as if he had never read their Re- proaches. The whole Contents was nothing but Ca- lumny and Railing; wherein he accused me, for bring- ing in a new Philosophy; which Reproaches, favouring of nothing but a malignant mind, and stupid ignorance, let them go as they came.

But to the Matter, As Vitriol, and all Waters, containing dissolved Iron, are precipitated into a black bottom, so also, the Acid Spirit of Vitriol it self, although it be rectified, retains the *Liquamen* of the Metal, on which, if the purest Alcaly be poured, it is precipitated indeed, but not into a Black, but in- to Colcothar, constant in the Fire; wherefore they that use this Powder for Whitening the Teeth, are much mistaken: 'tis true, it strengthens the Gums, but it dies the Teeth, with a most tenacious Yel- lowness, as Vitriol it self makes them Black; for per- petually and necessarily something of moisture doth exhale from us, filled with Alcaly, which also about the Cavities or Alveoli of the Teeth, precipitates Col- cothar out of the aforesaid Spirit, which sticks to the Teeth, and makes them Yellow.

'Tis the part of a Wise man to undervalue the Calumnies of the Unskilful.

Spirit of Vi- triol Dyes the Teeth yellow.

CHAP. XVII.

Upon Occasion of Vitriol, the Salts of Vegetables are more exactly and thoroughly considered.

I Have formerly told you, That neither Acid nor Salt, nor any other Sapor, doth overcome and destroy Vitriol, but Alcalyes alone, but the Juice of

of unripe Galls, falls in with Vitriol, and makes a coalition therewith into black, destroying and absorbing the Ac- idity thereof; and therefore this Juice is to be reckon- ed amongst Alcalyes; after this manner, Ink, and all Black Tinctures are made: yea, when the Acidity of the Vitriol is not, to sufficiency, combided by the Al- caly of Galls; which comes to pass, when the Galls are too ripe, and are washed by the Rain; then the Alcaly doth expire, as it happens to all Vegetables, of which hereafter in its place; then the Vitri- ol erodes and eats out the Cloth, and it becomes as rotten; whence the Vulgar say, * *La robba e brusada, nella tinta*. So also, Letters written with Ink, boil- ed with the aforesaid Galls, do wax pale, because the prevalent Acidity of the Vitriol, consumes the weak Alcaly of the Galls, being washed with the Rain, after the same manner as any Acid Spirit spread upon a Writing, presently destroys the Black Colour (*i. e.*) the Alcaly, which another fixed Alcaly doth again recover and reduce. So if you write with Water, wherein Vitriol of Iron hath been dissolved, when it is dry, no sign of of any Writing will appear, but if you smear over the Writing with a simple in- fusion of Galls, in a moment the Alcaly of the Galls makes the Writing Black, which by a powerful *Acid* or *A- qua fortis*, is presently blotted out, *viz.* The Alcalyes being consumed by the *Acid*. Again, smear over the Paper with fixed Alcaly, this will again consume the *Acid*, and the *Wr. ting* will re-appear. By what hath been said, it appears, that Vitriol doth not dye Black, un- less its Acidity hath been absumed by some Alcaly or other.

Things much different do most of all ac- cord. Hipp. L. i. de Diet.

* The Stuff is spoiled in the dying.

The Ground of Cryptog- raphy.

But that the Alcaly of Galls may be made more perfect, anoint them over, at least with some Fat, or with some Oil, the hidden Acidity of which enters into the Galls, being placed in a pot, in a slow Fire of Ashes, leave them there till you see the Galls become Blacker, but not so as to be reduced to Coals; then their Alcaly will be more fit for Colouring, and an Ounce of such burnt Galls, doth more than a

Alcaly of Galls.

1 pound

pound of others; yea it colours of it self, because the Acidity of the Fat, by the Fire, hath acted upon its Alcaly.

Very many Vegetables do abound with the like Volatile and Occult Alcaly, as the greater Houfleeke, Sage, Rinds of Pomgranates; all which do spend and absume the Acid of the Vitriol, and cause the Colcotar to be much less black.

A certain Prince of great Renown, an Enquirer into the Mysteries of Nature, wondered much, when he heard that a certain Gentlewoman of the Nursery in his Court, had taken by Mouth, Rinds of Pomgranates (which are universally judged to be Adstringent) which yet provoked the Courses in her, which had been stopped some Months: To whom, when I declared the copious Alcaly, wherewith these Rinds do abound, and that the stopping of the *Menstrua* did arise from that Morbous Acidity, which the Alcaly of the Rinds had absorbed, it ceased his wonderment.

But you must note, that Artificial Vitriol of an Azure colour; (which is falsely called (*Cyprus Vitriol*)) doth not become black, with Galls; though they be burnt, but with Rinds of Pomgranates it tinges obscurely Yellow: Now it is made of the spangles or thin flakes of Copper, by Spirit of Sulphur, or of common Vitriol; both which in a cold place, are Coagulated into somewhat long-angular little stones, hardly dissolvable, and unfit for Distillation, because it wholly wants that *Cupreous Sulphur*. This, with Urine, waxeth Green, and with the Alcaly of Urine; is cast into an Azure bottom, which by Fusion returns to Copper.

So also *Verdigrease* (as proceeding from ripe Copper and Vinegar) doth not wax black with Galls, but becomes of a light red or Spadiceous colour, and, by the Reformers leaye, I know, and have experimented, that nothing but Vinegar will be distilled from thence, because the remaining *Caput Mortuum*, after Distillation, by the fire of Fusion, is reduced to pure Copper, of which more hereafter.

Whence it appears, that burnt Brass, with tosted Galls, pro-

Rinds of Pomgranates.

Things thoroughly mixed and divided are altered.

Hip. l. 1. de Diat.

burnt galls with brass

Distilled Vinegar yields Vinegar.

produceth not a black tincture, as *Alexius of Piedmont* promises, with which process the Women of this Country do wonderfully vex themselves, that therewith they may black their hair; for as far as this composition tingeth any thing, it owes that Vertue to the tosted Galls; the burnt Brass contributing nothing thereunto.

But *Cyprus Vitriol*, is truly *Hermaphroditical*, richly furnished with natural Acidity, and *Cupreous Sulphur*; for which reason it is always moist, and never of it self concretes into small stones, wherefore it very easily grows black with Galls; which is a sign, that it partakes of the Nature of *Venus* and *Mars* (for Vitriol of *Venus*, without *Mars*, doth not grow black with Galls, as I have shew-
The Metaphor of Mars accompanying with Venus, doth not unbody suit here.

For Iron and Copper, are of affinity one to another, as Male and Female. This Secret (*says Basilus*) you may take notice of, but conceal, for it is of great use. This Vitriol, dissolved in water, is of a Tawney colour, if burnt Brass be dissolved in it, or flakes of Copper, or Iron, then it concretes into little stones, and becomes vendible, but inferior to that which is Medicineable.

The White Vitriol which comes from *Gosloria* and that also from *Carinthia*, doth participate indeed of *Mars* and *Venus*, but are not rich in natural Acidity, for which reason they very slowly wax black with Galls, a drop of this Solution, mixed with Galls, and falling on Paper makes a Party-coloured Iris, after it is dry.

But *Roman Vitriol*, which abounds with Iron, though poor in Spirit, yet it colours quickly, because of the Iron; So Artificial Vitriol, which is made of the filings of Iron, with Spirit of *Vitriol* or Sulphur, doth tinge most readily; and therefore *Dyers*, for want of Sweet *Vitriol*, do add filings of Iron to the Humid, and by consequent the sharp which it doth Corrode, and so the *Vitriol* is Dulcified.

So also *Crocus Martis* (which is made of artificial *Vitriol*, burnt in a covered Crucible, till it be red) being dissolved with Spirit of Salt: and digested with Spirit of Wine, acquires a golden colour; and becomes a noble Medicine. One drop alone of this Solution in half an ounce of the Decoction or Extract of Galls, becomes perfectly black; pour

De Vitriolo.

White Vitriol.

Roman Vitriol.

Vitriolum Martis artificiale.

Crocus Martis, Solutus.

pour out this black, and wash the vessel with clean water, and the Ablution will be of the colour of an *Amethyst*; A drop of the former, on Paper, after it is dried, of its own accord represents divers colours, as a *Peacocks* tail, curious to the eyes of the beholders.

Whilest I was busied heretofore about these curious experiments, I perceived my fingers to be tinged with a Purple colour, as it happens from Gold dissolved in *Aqua Regia* and the tincture endured for some days; This *Basilin* calls *Sanguis Veneris & Martis*, The blood of Venus and Mars, and commands us, not without reason, to observe it accurately, and to conceal it.

Gold. Gold corroded by *Aqua Regia*, and coagulated into the shape of *Vitriol*, doth tinge the fingers, as I have said, of a Purple colour; and with the infusion of Galls, the liquor becomes like yellow Amber, with which, if with a liberal hand you dawb over Paper, after it is dried, it shines as Varnish.

Silver. Silver corroded in *Aqua Fortis*, of *Nitre*, and *Alome*, with an infusion of Galls, doth not change its nature; if you write on Paper with this mixture, after two days every black letter, is, as it were compassed with a Silver and shining list, which cannot be without Alcaly: Hence this rare Man may understand why the Ancients Metaphorically called Gold the *Male*, and Silver the *Female*: A drop of this Solution, if with a large hand it drop on Paper, after the silver list it draws and makes another of a Chestnut colour, a pleasant Spectacle, as if it were so painted on purpose: So also, *Tinn*, and *Lead*, being reduced into *Salt* or *Vitriol*, with the juice of Galls, as also with Alcaly of any sort, yields a white bottom (*i. e.*) the Alcaly of the Galls drinks up the Acid, and the Metal goes to bottom; but not so in Gold, nor Silver, nor Copper, &c.

Mercury. *Quick-silver* dissolved by Acid things, and re-coagulated with the aforesaid juice of Galls, waxeth but slowly Yellow, imitating Gold; which is to be observed.

Wherefore of the seven Metals, being dissolved by Acids, Iron and Silver, with Galls, do tinge of a black colour: Yea, Silver doth the same without Galls, and the black-

ness

ness appears after the Acid Spirits are spent. Other Metals, though dissolved and re-coagulated, do shew as if they were *Vitriol*, but perform not the actions of *Vitriol*.

Find out the cause, if you can, for it is not unpleasant to discover it.

A Semi-acid-Salt Spirit, Distilled from the *Caput Mortuum* of Tartar and *Sal Armoniack*, was mixed with *Bole Spirit*. *Armonick*, of which above. This Spirit, with juice of Galls was greenish in a moment; From which I learned, that the *Bole Armonick* did necessarily contain in it immature Copper-seed, which the foresaid Spirit catcht away with it in the torture of the Fire; I call it a Copper-seed, for *Vitriol* made of Copper, with Spirit of *Vitriol*, being precipitated with juice of Galls, appears of the same green colour, as I shewed above: but when it is made of common *Bole-Armonick*, then it is black.

Whence it is clear, that the Volatile Salt, or the Alcaly of Galls, or of Pomgranate Rinds, or of Vulnerary Herbs, do not dye of a black colour, unless with Iron, dissolved in an Acid Mineral.

Foundation of black colour.

There is another observable thing, that a pure Acid natural Spirit, cannot be extracted or acquired by any man; for being Distilled from *Vitriol*, however rectified, it never forsakes the *Liquamen* of the Metal; neither can it be precipitated from it, by any Alcaly, after the common way; for in these it cloaths it self again with a new body, and returns to what it was, as I have shewed in its place, yet *Paracelsus* doth praise that Acid Spirit, which is found near the Village *Veltin* in *Helvetia*, as in some sort pure, as I have elsewhere observed.

Add hereto, the Counterfeit, which the Reformer boasts for *Magistry of the Seed of Kermes*, which yet is nothing else, but the Alcaly of Allum; which sucked up the Occult Acidity, from the very grains, for fear of a *Vacuum*, inasmuch as it lost its own proper Acidity in the Alcaly of Tartar, Pharm. Regia, fol. 282.

C H A P. XVIII.

Pass we now out of the Mines (Under-ground) into a pleasant Gard.n, to the more hid:en Volatil: Alcayles of Vegetabl:s.

Mechanical Instruments of Vegetables are the two faculties of Hippoc. L. 1. de Diet.

The Mystery of Fermentation was heretofore hid on purpose.

Fermentum, quoddam servando crescit.

ALl Vegetables, as well as Animals, have Vital Instruments, which they make use of, for their encrease and propagation. The prevailing *Acidity* therefore lies sleeping in the Seed (as in an Egg, or in a Stomach) with a little *Alcaly*, for its sustentation, and with the Specifick *Rektor* (of which elsewhere) but when it is cast into the earth, it is dissolved by Humidity, and excited by Heat: The *Acid*, as being igneous, begins to act upon the *Alcaly*, to which the Humid also comes, and the *Rektor*, by the assistance of Heat, informs it: So invisibly, the *Acid* assumes the *Alcaly*, and the *Alcaly* again swallows up the *Acid*, they tend to each side; as *Ferments* do, yea they cease not, till they have finished their several and prefixed Courses for their proper ends; one *Spirit* draws, another protrudes, as *Hippocrates* in the fore-cited place.

So that, the Humidity of every Vegetable, contains *Acid* and *Alcaly*; in some, the *Alcaly* predominates, in others the *Acid*: The *Acid* is most known, but the *Alcaly* yet known to few; which I will now demonstrate to the Eye, in the sweet expressed juice of Grapes, as most known; wherein, the first days the *Rektor* is Dormant, who, a while after, applying the Mechanical Organs, the *Acid* begins to Corrode the *Alcaly*, and This absorbs the *Acid*; and so there happens a vehement Contention and Fight, which from the Heat or Boyling is called *Fermentation*, which lasts till the *Acid*, as Victor, hath overcome the *Alcaly*: In this Fight both the Faculties (or Tastes, or Savors, Instruments, Mechanical or Architectonical, call them as you please, or else the Archeus, or Innate Heat &c.) undergo a great overthrow, there being made a mighty slaughter, the *Acid* being swallow-

ed

ed up, destroyed, and enfeebled by the *Alcaly*, both mutually fall in a mutual embrace into a Cadaver (in respect of Wine) which is called *Tartar*.

If you Distill this *Tartar* out of a Retort, the *Acid* is excited by Heat, and begins again to act upon the *Alcaly*; and This likewise on the *Acid*, and so a new *Fermentation* begins, for which you must use a very slow fire, and though the Receiver be great, yet the incondensibile Odor of the Fermentation (which *Helmont* calls *Gas*) is perceived a far off; yet at last, the *Alcaly* overcomes the *Acid*, and doth plainly absorb it, and both of them, for the greatest part are fixed. The Liquor and Oyl in the Receiver are Saturated and Impregnated with Volatile *Alcaly*, which is of excellent use of it self, yet known to few. If you again re-infuse the Distilled Liquor and the Oyl upon the *Caput Mortuum*, then the Volatile *Alcaly*, which the Liquor did contain, is drunk up by the *Acid* in the *Caput Mortuum*, and becomes fixed, but that which then re-distills out, will be of greater Affinity, to the Element of Water, and so of less efficacy. But the former here, as every where else, grievously mistakes, for he says, That Common Spirit of Tartar, which is not rectified from its remaining *Caput Mortuum*, is by no means to be accounted for pure Spirit of Tartar.

From this his Rectified Spirit of Tartar (and out of his own insipid Brain) he compounds a Medicine, truly lamentable, which he calls, *A mixture of Three, from the Spirits of the Minerals*.

First, The Volatile *Alcaly* in the *Tartar*, is Saturated with the *Acid* of the Sulphur of *Antimony*; That he calls the *Tartarized Spirit of Antimony*, if by chance, some of the Volatile *Alcaly*, do yet remain, what doth he then? He mortifies it with Vinegar from *Verdigrease*, and the *Acid* of *Vitriol*; whence this hurtful, though artificial and unprofitable Composition, consists of Elementary Water and Vinegar; this mixture the Ancients called *Posca*, to which the Reformer adds nothing, but the stinking smell of *Tartar*. But the Spirit of *Tartar*, being prudently Distilled by an Hippocratist, is not *Acid*, but somewhat bitter, and full of Volatile *Alcaly*; on which, if you poure Spirit.

Spirit of Tartar.

Mantis Herm. f. 74.

Mantis, f 750.

Spirit of *Vitriol*, it waxeth hot; that you can hardly hold the pot in your hands; which is an evident sign, that the Acid of the *Vitriol* hath drunk up the *Alcaly* of the *Tartar*; as it happens when water is poured on *Lime*, and as in the slacking and heating of *Lime*, the *Salts* dye, and it degenerate into a *Neutral*; the same is to be understood of Spirit of *Tartar*, with whatsoever Acid it be mixed; so my Master *Hippocrates* teaches.

I return now, whence I digressed (*i.e.*) to the Chymical Fermentation of *Wine*, for whose sake, the *Tartar* fell to the bottom, as a *Cadaver*; But the *Acidity* spread through the *Liquor*, hath dominion over it, and doth defend it, and is called *Wine*, the *Acidity* whereof, is grateful to the *Palate*, because of the *Alcaly*, with which it is joyned, and tempers the *Acid*, till at length the *Acidity*, weary of the *Alcaly*, or excited again by *Heat*, strives to overcome the *Alcaly*, and so a new and insensible fight begins, and the *Wine* fours more, and is called by a common name, *Vinegar*: from which if the *Acidity* be separated in a *Limbeck*, and the bottom burnt by fire, then the *Alcaly* is found out of that *Tartarous* bottom, though it seem impossible to some; to find *Alcaly* in so great an *Acidity*; yet it is true, and it is that which the *Philosopher* means, when he says, *That it is impossible there should be any matter, under which there should not be some form.*

Pour or superadde *Distilled Acid* on this *Alcaly*, and evocate the watery flegme, having the smell of *Aqua Ardens*; or *hot water*, then from the *Acid* and the *Alcaly*, you shall have a re-generated *Tartar*, which out of a *Retort*, yields a fat *Oyl*, and a bitter *Water*, full of *Volatile Alcaly*; out of the *Phlegme*, through a *Phyal* of a long *Neck*, evocate the *Fat* burning watery part, which we call *Aqua vita*; the other part is elementary water; the *Fat* re-assumes the *Alcaly*, out of which again, extract the *Elementary Water*, and repeat this operation, and the whole substance of *Wine* passes into *Water* and *Elementary Earth*, void of all taste and smell.

Hence it appears, that the *Juice of Grapes* hath pre-

Things thoroughly mix'd, undergo alteration. *L. 1. de Diet.*

Without Art, there is not found a pure *Acid* in Nature unmixed with *Alcaly*, and on the contrary. *Hippoc. l. 1. de Diet. Aust. 1. Phys.*

So the *Restor* by degrees varies from our *External senses* into nothing, that *Man* cannot find out the work which *God* operates. *Ecol. 3. 11.*

preserved the *Alcaly*, and the *Acid* (in which the *Restor* doth inhabit) in various hazards, and several alterations, even unto its last annihilation.

CHAP. XIX.

An untrodde Path discover'd.

THAT which I have spoken in the precedent Chapter concerning the *Juice of Grapes*, the same is also to be understood of the *Juice of all Vegetables*; for in them all there is *Acid* and *Alcaly*, more or less, as *Hippocrates* and *Experience* also shew; but with this difference, that in those *Vegetables*, which we call *Cold*, the *Alcaly* doth predominate, and they are not fermentable, unless by the help of an outward *Acid*, or being excited by heat; but in those which are *hot*, the *Acid* prevails, and therefore they are easily fermentable, as in the *Progress* will appear. Also the *Alcaly* of some *Vegetables* is nearer to *fix'd*, and therefore it joynes in with *Acid Minerals*; as I have shewed in *Galls*, in the greater *Housleak*, in *Rinds of Pomgranates*, &c. The *Alcalyes* of others, are much more delicate, so that *Acid Minerals* do presently absorb them, in as much as they are nutritive and fit for the digestion of *Animals*, which consists in a milder *Acidity*: of which sort are *Winter-green*, *Sannicle*, *Betony*, *Fole-foot*, &c. Which therefore are called *Vulnerary Herbs*, whose *Alcaly* restrains and hinders the unjust *Acidity* rising in the *Stomach*, as it lessens it also in wounds, because all *Acidity* out of the *Stomach*, is hurtful, morbus, and accompanies putrefaction, which the *Vulgar* call *heat*, from the effect, for it causes a *Favour*, and putrefies *Wounds*; many skilful *Chyrurgeons* have taken notice of that *Acidity* in wounded men, as the beginner of heat and putrefaction, and have therefore forbade them the use of *Wine*, and not without cause, least the subtle and evaporable *Acidity* of the *Wine* should encrease the *Disease*, I say, the *Alcaly* of

All things are corrupted mutually by themselves the greater by the less, and the less by the greater. *Hipp. L. 1. de Diet.*

Nature delights
in its like na-
ture.

these is not discovered with *Acid Minerals*, but be-
cause they themselves are Nutritive, therefore the
said *Alcaly* associates it self with its similiary Nutritives,
and with gentler *Acids*, than *Minerals*. As for Ex-
ample, Dissolve a drachm of *Sal Saturni* (made with
Distilled Vinegar, for that resists not the Digestion of
Animals) in about three Ounces of Distilled Water,
which hath no *Volatile Alcaly*) of *Rosemary*, *Lavender*,
Rue, &c. Suffer the Lees to settle: This Solution be-
ing sweet in taste, contains Occult Lead; drop the
clear Juice of the foresaid *Vulnerary* Herbs, into this
clear Solution, and it presently grows as white as Milk,
which is a sign that the *Alcaly* of the Herbs absorbs
the *Acid* from the *Lead*, which falls by degrees.

For as fixed *Alcaly*, præcipitates *Mercury*, and *Alca-
ly*, nearer to fixed, præcipitates Vitriol, as I have shew-
ed before: so also here, a milder *Alcaly* requires a
milder Examen.

Paracelsus, first observed That hidden *Alcaly* of Herbs,
and it is probable that by the like Examen he took
notice of their several minute degrees; he had taken
notice, that in wounds, putrefaction came from *Acid-
ity*, and from thence, arose feavorish heats, and
corruptions of Wounds; he also first prescribed Vul-
nerary Potions, and did happily restrain the said *Acid-
ity* and putrefaction, and called the Herbs *Vulnerary*.
And though *John Tanguilius*, a French Man, and
Gabriel Fallopius, an Italian, both famous Physicians,
and excellent Chyrurgeons, do condemn and endea-
vour to explode *Vulnerary* Potions in the Cure of
Wounds, affirming, that by their heat they inflame,
and extenuate the Blood, and excite its eruption
from the Wound; yet though *simple* *Vulnerary* Medi-
dicaments are not known to every Chyrurgeon, and
and are prescribed without distinction and knowledge
of their degrees (for all cannot attain this pitch of Sci-
ence) nevertheless Experience shews, that the foresaid
Potions are useful; with which, also *Paracelsus* cured the
Ulcers of the *Lungs*, (as Histories witness,) and also
the *Hectick Feavor* (as I have also experimented) which
is

Paracelsus his
Analytick
knowledge of
Bodies.

Ulcers of the
Feet or Thighs,
and Wounds,
are Cured by
Potions; why
may they not
do the same in
the Lungs?

is an universal and inept *Acidity*, and that of the solid
parts, which in one word, we call *Heat*, and which, the
aforesaid *Alcalys* do more readily absorb and consume,
than Milk; as I have shewed in its place, and the cure
it self demonstrates.

Therefore *Vulnerary* Potions are not to be rejected, but
used with good Success, in the curing of Wounds.

Many of the accuratest sort of *Chyrurgeons*, and *Phy-
sicians* have taken notice, that *Acidity* is the cause of
Heat and Pain; as also that burnt Harts-horn absumes
in it self Vinegar, and other *Acids* of all sorts, whence
it comes to pass, that it is given with good success in
Feavors, in a great dose, from half an ounce, to an
ounce, in any cooling water, containing *Volatile Al-
caly*; For, as they have observed to their great joy, that
the said burnt *Harts-horn*, absorbs and imbibes the *Acid*
Volatile Salt from Vinegar, so it takes away the *Acidity*
accompanying several sorts of *Feavors*.

Besides *Vulnerary* ones, there are also more Occult
and *Volatile Alcalys* in Herbs, which we call *Cooling*,
as *Lettice*, *Purslane*, *Colts-foot*, *Endive*, and its species;
whose *Alcaly*, is very Fugitive, and is found, not on-
ly in their Juices, but also in their Waters carefully Di-
stilled: Whence we may learn, that such Herbs being
dried, are of no value, because their *Alcaly* hath eva-
porated.

So also the Distilled water of *Frogs-Spawn* (the whole
Spawn with Patience is elevated in a *Balneo* into a pure
water, the black and dry Grains or Specks, being left
behind, which are not to be rejected) doth abound with
Occult *Volatile Alcaly*, and doth presently precipitate
Lead out of the aforesaid Solution, more readily, and
copiously, than any other cooling water: This water is
much to be esteemed in many diseases, arising from a
peculiar *Acidity*: I have known a desperate Hemorrhage
from the Womb, happily cured by it, in as much as
at first it sucks up the *Acidity* of the Blood, afterwards
it restrains and expels it.

Also this water applied to the grieved part in the *Foot-
Gout*, presently asswages the pain, in as much as it mor-
tifies

K z

The brevity of
this Compen-
dium will not
allow me to dis-
course of Spe-
cifick Acid.
Yet see ch. 21.

Occult Alcalys.

Cooling wa-
ters have an oc-
cult Alcaly.

tifies and alters the Acrimony: But when the pain is more violent, then the Acidity is in greater quantity and vigor, and the Volatile *Alcaly* consuming the cause of the pain, then must needs, be more manifest, for it indubitably takes away the pain; whence we learn, that the cause thereof proceeds from *Acidity*, if otherwise, the principal indications are to be taken from things helpful and nocent, as *Avicen* teaches.

Foolish therefore, and almost Frantick, is the opinion of certain Canonical *Physicians*; who, against the Doctrine of *Hippocrates*, out of ignorance do fear, and perswade the simple, that a greater mischeif is occasioned by undertaking to Cure by contraries, and by endeavouring to repel the *Catarrh*, by such Simples.

For *Hippocrates* shews, that Volatile *Alcaly* is empty and void, and that it takes away all pain of the *Fect-Gout*, (I mean not the knotty and coagulated Gout) all *Arthritick*, *Nephritick*, *Sciatick*, and such like pain, in a very short time, if it be but outwardly applyed, in as much as it presently imbibes and assumes (being impatient of Vacuity) the Acidness, which is the cause of the pain.

But not only waters, Distilled from cooling Herbs, but also common water both of Wells and Rivers, contains an Occult *Alcaly*, by means whereof it nourishes Animals and all Plants; Red hot Iron, quenched in water, acquires strength thereby, as *Hippocrates* teaches in the fore-cited Book; and daily Experience shews; for Iron hath too much of the Volatile *Acid*, whence it readily passes into Scoria and Rust, but when the Acid is imbibed by the *Alcaly*, then it is made more compact, and resists more; therefore Cutlers of Knives and Swords, anoint their work with shavings of Horns, heating their blades till the shavings melt, and thus they draw the *Alcaly* out of the Horns, and their blades become stronger. Hence it is, that such as pass by their shops, do sometimes perceive the stinking smell of burnt Horns. But it is easily proved, that an Occult *Alcaly* is in common simple water, by the fore-mentioned solution of *Sal Saturni*, which presently grows white thereby: So, if

Silver

Volatile *Alcaly* ease the pains of the Gout.

The knotty Feet-Gout doth coagulate, as the Stone, at least by a diverse Acid.

Hippoc. l. 1. de Diet.

Simple water doth nourish, and there is a great Secret in water, as *Hermes* saith.

Let Canonical *Physicians* observe, that the *Alcaly* of common water, doth not ascend in a Limbeck. Wherefore, distilled, it cools not, as the water of Frogs-Spawn before spoken of.

Silver be dissolved in *Aqua Fortis*, and you add simple water to the Solution, it presently waxes white as Milk, but when the same water hath been distilled, then the *Alcaly*, doth not ascend, neither doth the Solution of Silver grow white any longer thereby. For which cause *John Baptista Porta*, advises Water to be twice, or thrice distilled, for a Tree of Silver and Mercury, which the Vulgar foolishly call the *Philosophers Tree*: So also Water distilled from *Cephalick* herbs, doth precipitate neither Silver nor Lead from the above-named Solution; For these, as I have said, contain not *Alcaly* in their Juices; So that the Water, distilled only, from cooling Herbs, as also common water not distilled, do contain a Volatile *Alcaly*; by means of this *Alcaly*, Water doth nourish: Hence *Laetantius* saith, From Water are all things; which, before *Hippocrates*, *Thales Milesius*, also knew, perhaps by the benefit of this Art, as *Laertius* witnesseth in his Life; So the Ancient *Hermes*, Water, saith he, is susceptible and producible of Nutriment in Men, and other creatures: And without Water, Nature operates not, &c.

Now because our discourse is fallen upon Cooling Waters, I shall not pass over in silence the abuse of Rose Water, which is said to cool, but it is disproved by this Experiment.

At Venice, Rose-water, as commonly all other waters, are distilled out of a Copper Vessel (sometimes lined within with Tinn, though oftentimes the Tinn, for age, is worn away.) This Water is prescribed to Children, because it kills, and expels Worms, and sometimes provokes Vomitting, which Operation, and Virtue, is Vulgarly ascribed to the Rose-water, whereas Rose-water is not simply cold, but of a temperate nature, as containing an occult and insensible Acidity, which is unseparable from it, never leaving it, till it be annihilated; but in flowing through a Copper Limbeck, its Occult Acidity abrades and takes off certain Atomes from the Copper, which are invisibly mixed with the water; if you would discover or separate the Copper, drop into a little quantity of this water, one or two drops, of the *Alcaly* of Urine, and presently all the water turns green,

Lib 5. Magnatur. c. 3.

L. 1. c. 5.

Rose-water doth not cool unless it be distilled through Lead.

Green, because the Acidity of the water doth more greedily catch the light Alcaly, more similiary to it than the Metal, which therefore by little and little, subsides into a greenish bottom; Then the same water, doth no longer provoke Vomit, nor kill Worms, but will be like *That* which is Distilled through Glass Vessels; but melt the green bottom with *B. rax*, and then it returns to Copper again.

All Pot-herbs contain a *Volatile Alcaly* and cooling, and, as all wound herbs beget Milk in Nurses; for *Acidity* is an hindrance to Milk.

Neither is this Occult Nutritive *Alcaly* found only in Vulnerary and Cooling-herbs, but in all Pot-herbs whatsoever, which are therefore desired by the Stomach, abounding with *Acidity*. This *Alcaly* is the cause that such as eat boiled Cabbage or Coleworts, before a fit of Drinking, are seldom inebriated, for the *Alcaly* of this Herb, as it moderates the inebriating *Acidity* of the Wine in the Stomach, so it abfords and consumes That in the Glass.

Specificque Medicines.

But why certain simples do specifically Cure some Diseases, as the Juice of Yarrow, the *Hæmorrhoides*; *Fumitory*, the Jaundies; *Butchers Broom*, the Distempers of the Urine; *Guajacum* and *Sarza*, the Frenchpox, and the like; and wherein all the *Faculties* of Purging simply do consist; it would be tedious to declare in this place, let it suffice to have given some small hint of it, at least in this Writing, wherein, even against my will, I have been inforced to discover Salts hitherto Occult.

Objection.

But I hear some whispering an Objection, that I endeavor to shew the *Volatile Alcalyes* of Vegetables with dissolved Lead, whereas all Salt things do also precipitate Lead from this Solution (as we have confessed before) but with this difference that the Lead falls down with the Salt in the form of a Powder: Distil the clear swimming upon the top, and you will have Vinegar, which carryed the dissolved Lead, but it falls from the Vinegar, because Salt hath a greater affinity with Vinegar than Metal; but mix the *Alcaly* of the Herbs, or rather drop the Juice of the aforesaid Herbs into that Solution of Lead, then it doth not hastily fall down in form of a Powder; but becomes as a Pultis: Distil the

the supernating Liquor; and then you shall draw from it, not Vinegar, but an Insipid Water; which is a manifest Argument, that the *Alcaly* hath sucked up the *Acidity*.

How much Light this Hippocratical Doctrine may give to a Physician, as well in compounding Medicines (that one ingredient hinder not another, yea the Vertue of Simples may by this Knowledge be wonderfully exalted) as in Curing Diseases, let those judge who know how to distinguish Tastes and Savors, and moderately to invert and vary them, which at present I shall only demonstrate in that one Example of the Nettle, which being fresh and moist, stings and blisters, but dried, astringes, and stops blood: the Juice thereof is coagulated in dissolved Lead, into a Black Gobbet, which again in fixed *Alcaly* is presently diluted into an obscure, but penetrable colour; whence we learn, that dried Nettles boiled in *Alcalizate Lye* (yet sweet as they call it) do hinder Gray and Hoary Hairs, if every day they be kembered with them; with *Vitriol*, it again concretes into yellowish clots, which, with the Spirit of the same Vitriol, are again dissolved into a clear and pellucid Liquor. Such, I suppose, were the *hidden vertues* of Roots, and the differences of Shrubs, of which *Solomon* speaks, which he learned from the wise Artificer of all things, in his Disputation from the Hyssop to the Cedar of Lebanon; for it is not credible, that He unnecessarily discoursed of first Qualities, and of Elementary Degrees, which our Botanicks boast to measure, as it were, with their tongues: of *These* it cannot be said, that they are, *hidden vertues*.

Solution.

Vertue of the Nettle.

This is the meaning of that Speech of *Arnoldus de villa Nova* (though on other accounts, his Works want correction) *Where Simples are at hand, 'tis deceit to use Compounds*: Whilest I heretofore applyed my Self to this study, I was much assisted by that Eminent and Skillful Botanick, and diligent Apothecary, *Johannes Maria Fero*, of this City, who, with singular Care and Study gathered together all sorts of Vegetables, to whose Industry I do owe very much, and accordingly I render him my real and hearty thanks.

In App.

By

A Powder a-
ga nit a 2 ar-
tas.

By the help of this Study, I have also found out a Compound Powder, equivalent to, if not exceeding, the vertue of *Chinella*, in a *Quartan*, as they can witness, who have bought, and used it, in order to their Health.

. C H A P. XX.

The Spiritual Representation of Plants.

Out of what hath been spoken and declared, we may discover the foundation, on which the Spiritual Regeneration of Plants ought to be built, of which *Quercetan* speaks in his Book against *Anonymus*, which he said he had seen at a certain *Cracovian Physicians*, who knew how to prepare the ashes of every plant so Elegantly, and how to preserve their Spirits. (the Authors of their Vertues) so Exactly; that, having above thirty of them in several Glass Vessels, Seal'd with *Hermes's Seal*, if any one asked to have a *Rose*, or a *Marigold* shewed him, then he would put the bottom of the Vessel, wherein was the *Rose-ashes* (and the like of any other Flower, which he was to shew) to the Candle, to warm it a little, and then that fine and impalpable Ashes of it self, would represent the evident form of a *Rose*, encreasing and growing by degrees, manifestly exhibiting the figure of a living florid *Rose*, which shadwy representation, when the Vessel was removed from the heat, would again return to ashes. This Secret, says he, I sought after with great study, but could never attain it.

But this Spiritual Resuscitation of Plants, seems not so difficult to the *Hippocratical Philosopher*, especially when it is prosecuted, not with a violent, but a soft fire, thereon imitating Nature, as our Master teaches. I have invented a way for it, which yet by reason of the incommodity of this place, for such kind of Studies, I have not confirmed by Experience: yet for the sake of the Curious, I will here set it down.

The Vulgar
burn by Fire,
the Chymists
by Water.

I have Ocularly demonstrated out of *Hippocrates*, that *Acid and Alcaly*, the Architectonick Instruments of Nature, are in all sublunary things; These, when they are not subjected to the Artificer, but left to the government of Nature alone, then That subject encreaseth and grows strong, as the meanest Flint declares, of which I have spoken in his place: If then it encreaseth and grows, of necessity the Acid, and *Alcaly must have something, which directs their Operations to their proper ends.

This, I elsewhere call the *Rector*, give it what name you please, provided we understand the thing; for I shall not quarrel about words. These Three, *Hermes*, that most ancient Philosopher, calls Body, Spirit, and Soul; So that these Three are latent in that Terrene Receptacle, which represents to us the figure of a *Seed*.

Let half a pound of this *Seed*, for instance of *Poppy*, from a full flower or head, be gathered in fair weather, which you must keep in a temperate place till the next Spring, then in the Evening, observe the clearing of the Sky, whether it promise a fair Night, for the Night must be fair wherein the Seed is to be exposed on a large board of Glass, with the edg turned up, that it fall not down, and placed in a Meadow or Garden full of divers Flowers and Herbs (for unless the soil be fruitful, the Dew will be but barren) In the Morning before Sun-rising, you must carefully take away the Seed, now moist with Dew, from the Glass-Board, and put it into a Phyal, fit for that purpose, having its mouth close sealed with Wax, and so keep it, least the Dew should evaporate (which is very light by reason of the Spirits) these Spirits in the following Chapter I shall shew*, being occultly Acid and Volatile, yea being the hidden Food of Life, with which the Dew is so impregnated in the Air, that when it is included in an Egg-shell, and put upon a *Spear placed obliquely, then the Egg is lifted up by the heat of the Sun, to the top of the Spear (as *Hild-brand teacher) but that the said Dew may be sucked up by the Seed: Afterwards in a clear Night, re-expose the said Glass-board with the Seeds, into the aforesaid Meadow, that it may re-attract and draw in the Dew, which you must also a-

* I have elsewhere shew'd that the Spirit is the Bond joining Soul and Body.

Nature is like in every thing, as *Hermes*, *Pythagoras*, and a terward, *Hippas*, teaches.

They were small Vessels, says *Quercetan*.

* See *Cosmopolita*.

* Which I think ought not to be round.

* In *Magia Naturali*.

again seal up in the aforesaid Phyal, before Sun-rising, that it exhales not, so the Seeds by little and little, by means of the Dew suck'd in, will begin to swell and be turgid, the Acid and Alcaly, acquiring strength from the Dew, and Heavenly Influences, which the Rector will then begin to direct. Let this setting out, and taking in, of the Seeds, be so long repeated, till the Signs of Germination and Vitality do appear. In the interim, whilst these things are a doing, you must, in the same Meadow, stretch and spread abroad clean Linnen-cloths, on wooden-sticks, and so gather the Dew on them, and wring it out, keeping it in a Glass Vessel well stopped, which in its Settling, will afford or depose some Faeces (from the small dust flying up and down in the Air): of this pure Dew, pour as much on the Seeds, as may be about an Inch above them, and so place them, in a Vaporating Bath (for * Raimund teacheth, *That what Nature doth, by the heat of the Sun and Stars, the same it will do by the heat of Fire, provided it be so ordered, as not to exceed the motive and informative Vertue, which is in the matter of the Celestial Influences*) stopping the mouth of the Glass with melted Sulphur: The Acid and Alcaly, in the Humid and Calid, then begin to act upon one another, and so they will be freed from the Earthly body of the Seed, in which they were included; and in the space of a few days, this natural Composition, will wax Green at the top (as it happens to Stagnant Waters, in shadowy places, by the ambient heat of the Summer.) Under this Green Film, is the union of the Faculties perfected, which I have shewed to be Volatile, and together with the Rector, unseparable from the Acid (being immortal *per se*) which union may be called *Confermentation*.

The Receptacle, or body of the Seed, will be a dead Substance, which in a few days will suck up the Viridity, (*i. e.*) the Bubbles of Fermentation, with the Superfluous Liquor (as we see in Pools, growing green at top) and by little and little, it is turned into a most fine Powder, like Ashes, when it is come to a ripeness. This Vessel, being warmed (so doubtless *Quercetan* saw it) the Levity of the Dew, being Confermented with the Rector, and the

* In Testamtu.
6. 24.

As Hipp. L. 1.
of Diet.

the Faculties of the Seeds, will represent the image of *Feppy*.

The mouth of the Vessel, if it be melted with Glass, I judg, will never decay, and because the Practick part doth not attain to, nor follow the Speculative, word for word, there is therefore need of a Skillful and Ingenious Operator. Hitherto, as I have said, I never had a fit place at *Venice*, to make this tryal, nor ever shall, for want of fruitful and pure Dew, which is here troubled by the continual steaming of * *Halinitre* (as the Walls of all the Houses shew) with which, the very Dews being also subtle exhalations (as *Aristotle* teacheth, and our own experience confirms) are mixed, and so they fall down mix'd again,

Such a shadowy Regeneration of things, was hid by *Paracelsus* (being illuminated in this Natural Hippocratical Doctrine) under the Vail and Metaphor of the Generation of Man, whom, certain *Grandees* of Physick, being ignorant of this Doctrine, understanding literally, judg'd him, as an Impious Man, to Banishment.

I add, that in the whole School of Philosophy, there is nothing, though never so diligently sought for, which doth more lively demonstrate to us the Mystery of the Resurrection, than these proper instruments of Nature, being cleansed from their Refuse, by an Hippocratist, and again conjoyned, re-united, and re-produced, in the said Mystery be at all demonstrable by Natural things.

CHAP. XXI.

A Summary Rehearsal of what hath been spoken.

THE Alcaly, and the Volatile Acid, in the family of Vegetables, are burnt together by Fire, into a Fixed, or a truly Alcalizate Salt. The way is indeed promised by the Reformer in his *Manissa Hermetica*, in lofty words, but no where to be found; in the mean time,

* *Halitre* is made of Exhalations of stinking Urine, and other mixtures, embracing one another.
Lib. 1. of Meteor.

Sennert. de Confil. Edi. C. 4.

In his *Appendix*. fol. 101.

Mauffi. f. 788.

The Air doth
Volatize.

This action
may be called
Fermentation,
for the instru-
ments of Na-
ture are chang-
ed.

time, he finds fault with those Salts, whose ashes are burnt with Sulphur; and he blames *Hartman*, as a bad *Writer*, and says that nothing can be more foolishly taught, than to mix Alcaly Salts, with Acids (as if he himself had not taught to mix the Alcaly of Vipers, with the Acid Spirit of Salt; as also the Spirit of Vitriol, with the Alcalizate Salt of *Wormwood*, under the title of *Coagulated Spirit of Vitriol*: and again, in his *Appendix* f. 100. he extolls, such mixed Salts, with great Praises) and a little after he again admits Ashes to be calcined with Sulphur: When uncertainty is the Mistress, what can be chosen?

Know then, that no Vegetable hath any fixed Salt, of what kind soever, unless it be burned with actual Fire; So that the Acid, in burning, may act upon, and apprehend the Alcaly, and likewise the Alcaly on the Acid, as I have shewed in Juice of Wine, and its Tartar: As may be seen in rotten Wood, though you reduce it, never so carefully to Ashes, in what fire soever, you will never get Salt out of it; for the Acid, and the Alcaly, being both Volatile, are already absumed by the Air, and have left nothing but an unprofitable *Cadaver* behind, but if it be burnt before Putrefaction, then you may obtain your desire.

Wherefore our chief care and labour in this Work, must be, that the Herbs may be fresh, and not withered; for then, in burning, the innate Humidity, when it boils up, doth dissolve the Acid and the Alcaly, which, being dissolved, do act mutually one upon another, and one apprehending the other, they are both fixed, according to the property of the Concrete: But that part, which flies away with the flame, and was not caught by the Acid, turns into Soot, from whence, you may by an easy Method, draw forth Volatile Alcaly, but never Fixed Salt, yet by ingenuity it is reduced to a Consistency.

This action deserves to be called *Fermentation*, for both the instruments of Nature are changed into one *Artificial*, which, as in the Sope-makers and Glass-makers Art, is turned with the Acid, its contrary, into a Neutral thing; so also it happens in Man's body, when it is admini-

administred, with its contrary, by a prudent and Hippocratical Physician; for it is the same Operation, as our Master teaches. L 1. of Diet.

Take Green *Wormwood* for an Example, when it is green, set fire to it, and kindle it in a Chimney, or open place, but take great heed that it doth not flame out, tis enough to turn it only into Ashes, which, after the burning, put in an Earthen-pot, large, and low, or also upon an Iron-plate, the edges turned up, and Coals being kindled under it in a Wind-furnace, that the Vent-hole, or Portal, as need requires, may be either opened, or shut: Stir these Ashes with an Iron Spatule continually, till they be very white, and then lay them in a Linnen-bagg Acuminated (or if there be but few, on Acuminated Paper) and pour on Common Water, which as it runs through it, being pregnant with Salt, is called a *Lye*; coagulate this strained *Lye* in an Iron Frying-Pan (not greased in the Kitchen) with a quick Ebullition, and make it up into a Lump, and when it is as thick, as Honey, continually stir it with a Spatule, and it will be dried into a grey Powder, which presently put into a Pot not glazed, the mouth of the Wind-furnace being stopped, and cover it with small Coals, mixed with their powder, and leisurely heat it, scarce to Brunity, or Brownness, but not that it may melt, then cool it, and put the Salt, into a Glass Vessel, that it may be dissolved in a sufficient quantity of Water; stir it oftentimes with a Woodden-stick, then suffer the Solution to rest, two or three days, and when it is clear from the Lees, without much stirring, pour it out, and in a Leaden, or Glass Vessel, placed in Sand, suffer the Water to exhale, without Bubbles, till a Saline-Cuticle grow a-top; then remove the Vessel, and the next Morning, gather together the shining grains of Salt, which you must swiftly wash in clear water, and then dry: put again the remaining *Lye*, in the Sand, that the water may exhale, as before, unto the Cuticle. Both these Salts are to be kept together, in one Vessel, which being prepared after this manner, do resemble the Crasis and Disposition of their Concretes. The rest of the *Lye*, being of the taste of Urine, and of a stinking smell, is to be left to wash Glasses. This

This is the easy and natural way of preparing Salts of Vegetables, which do never melt of themselves, nor are of an ungrateful taste: A Pound of these Ashes, will yield near four ounces of the purest Salt; but four pound of the Ashes of dried Herbs, will scarce afford an ounce of Salt.

What Herbs yield Alcalyes, Salt or Acid, I have sufficiently shewed before.

Alcalyes, out of Vegetables, are made after the same manner, of which yet some are easily turned into Liquor, for they are empty, and therefore desire to be satiated from the Air; as I have hinted above in the Occult Acidity of the Air, which may suffice.

Man. f. 789.

The Reformer teaches, that the ashes are to be boiled, and the Lye thickned to Siccity, and afterwards committed to the melting fire, without discretion; So, in the place of the Vegetable Salt, there always comes an empty and caustick Alcaly; for the Salt of Wormwood, in its Fundamental Point, is of the Acid Salt, and not purely fixed, as I have shewn; but if it suffer Fusion, then both Tastes or Sapor act upon one another, and are fixed into an Alcaly, as it happens in all Acid Salts made by Art; wherefore from the Regimen of Fire alone, things are altered, and they change their Name, Vertue and Efficacy. This is the cause, that the vertues of Salts, prepared by ignorant Persons, are never equal, viz. when they are Alcalyz'd, they are commended by the Unskilful (for example, Salt of Wormwood) to have done good in the Collick (which then came from Acids, which had been drank) but when it is prepared from Salt-Acid, and Volatile to boot, by the Skilful, tis good for the Stomach, and against Old Obstructions, and is then the Basis in the Cachectique Powder of Quercetan. The cause is ascribed to Noxious Humours; So, many Salts, are made fixed, if they be managed with a due Heat, and with all Requisites, as the Subject can bear, which otherwise were Volatile; for the fixation of Blood requires one kind of Heat and Instruments; the fixing of Nitre, and Arsmick, another; when the whole Nitre, by Odor only, is turned to Earth, it requires another Tractation; when Mercury of it self, doth as it were grow fixed, there is need of another Fire, and Vessel; there are other Requisites, when

Fire is a Publick Professor.

A Cachectick Powder.

All things are done by them through Divine Necessity. Hipp. l. 1. de Diat.

when Antimony and Sulphur are fixed; So also there is another operation of Salts, which are all Volatile, as I have shewed in Rotten Wood.

This is the reason, why the wise and prudent Senators of Venice, do cause the Timber, of which they make their Ships of War, while it is green, to lye under water many years, in their gallant and well-provided Arsenal, lest the Air should penetrate it, and by this means, under the water, it becomes almost as fixed and as hard, as stones.

The Venetians Ingenious.

But if it begins to be quailed in the Air, before it be watered, then they must burn it a little, that the Acid and Alcaly, may be melted together, and as it were incrustrated; and so it will endure many ages and never rot: In like manner those pieces of Timber are incrustrated, which are rammed into the Earth for Foundations of great Buildings, lest they should rot.

The Gardeners in these Islands do reduce their Herbs, being dried, in the Air or Sun, to Ashes, and sell the ashes on their Words and Credit to the Apothecaries: who, finding they can get little, or no Salt out of them, do blame the Gardeners, alledging they were naught; Their answer is, that in Transporting the Ashes, the Sea-water hath robb'd them of their Salt: many do easily believe this Excuse, being ignorant of any other cause.

But when fresh Vegetables are reduced to Ashes, as is done in Lituania, Scandia, and Muscovy, for Pot-ashes, then, in the Igneous Ebullition, the Acid and Alcaly apprehend one another, are melted and fixed together. But when they are urged with a melting fire, as the Reformer teacheth, then they change their Nature, and are turned into Vitrifying Alcaly, as * Zoar hath observed: which yet was not much less fixed in the Concretes, before they passed through the fire; which again by Inversion, doth not only put on Volatility, but is also reduced into Elements, as I have shewed in the Alcaly of Tartar.

To this sense Basilin speaks of Sal Armon. When my Wings are cut off, and I am prepared to the Bath. * On Exod.

But if Alcalyes, be boiled with their proper Distilled Oyls, in a just proportion, observing a due time, with an artificial and occult Circulation, and in a fit Vessel, they afford Ene Mirabile. So Oyl of Cinnamon, being absorbed,

Oyl made Salt.

absorbed, by its proper Alcaly (being deprived of its Vestiments) effects in the Palsy, and such like Diseases, as much as can be hoped from it; Oyl of Tartar, being Volatile and Fat, with its proper Alcaly, in a just proportion, is made Sope.

When the Reformer heretofore had been informed by me, by word of Mouth, of this example of Tartar, he presently boils the Alcaly of Vipers, with Oyl of Tartar, being of a diverse Nature, after a Rural fashion, and with little heed, which, by Coction in a Glass of a long neck, with the Alcaly, acquired the consistence of Sope, yet he blames me for my Friendly Information, in a very long Letter, Saying; *The Oyl of Tartar, you advised me to pour on, became like very Pitch, and that so thick, when it was cold, that a man may cut it; So that I perceive you deceived me. 'Tis true, I heard from your mouth before, that the preparation of this Salt, would give great light to Chymistry, &c.* This great Naturalist had not so much Salt (as we say) in his Brains (though he writes and scribbles of Salt) as to enquire into the necessary cause of this Inspissation, but presently calls that, which he understands not, *A Cheat, and an Imposture.* But like, as he hath observed the cause of this Inspissation, which is known even to the Vulgar, and to all those who make Sope; even so with the same heed he hath observed the Things, which he Reforms.

Hearken therefore to me, All Oyl, and also all Pinguedoes or Fats, have an Occult Acid, on which the Alcalyes act, and consume it, otherwise Sope could never be made: for the distilled Oyl of Olives; doth corrode and dissolve Silver insensibly, when it is cast on it but a short space, which would not be, unless Acidity were in it; the remainder being thick, better preserves Iron from Rust, in as much as the aforesaid Acid hath been taken away by Distillation, and is turned, by a strong fire, into a Coal Alcalized, which is plain to the Eye, by the affusion of any Acid Spirit. This is the reason, why the Chief Armourers and Overseers of the Arsenal of this Famous City, before they Oyl their Armour, cause the Oyl to Evaporate at a gentle Fire, almost to the half.

So

Oyl departs
not from the
unchankful
Man's house.

487.

So the common People in sharp Pains (proceeding ordinarily from Acidity) desire to be annointed with the Oyl which burns before Images, and That asswages their Pain. This Relief, the Superstitious People of Greece, attribute to the Image, before which the Lamp burns; But the true cause is, the Spissitude in the Lamp, loses its more subtil Acid part by the flame, and so being destitute thereof, it grows impatient, and desires to be Saturated with a new Acid, and finding That in the grieved part, it draws it out, and unites it, to it self; and so the Grief either wholly ceases, or is at least mitigated and abated.

The Vulgar believe, that Old Oyl is as good as Balsam, because the Oyl of a Hundred years old in the Castle of Breschia, eases many from their pains, arising from Acidity; in which Oyl, by reason of its antiquity, the Alcaly hath in part mastered the Acidity, hence at last it grows very musty; So Venerable Antiquity prescribes Old Oyl in Compositions for External use.

For the same reason, rotten Apples do cool, more than boiled ones; which therefore we call, *Anodynes.*

Fresh Butter hath more Alcaly than Acid, and therefore it cooles more than Oyl; Hence *Schola Salerni, Lenit, & humectat, solvit sine Febre, butyrum.*

Butter mollifies, moistens, and dissolves, yet without a Feavor; for this cause, it is not coagulated in the Milk, unless the Milk be sowred before, and if in making or Churning of Butter, fixed Alcaly be cast in, which consumes the Acid, the Butter will never come; for the Acid must coagulate the Alcaly.

So also Alcalized Salts do easily flow, and are dissolved in the Air, but as soon as Acid is poured on them, to overcome the Alcaly, they harden, and are coagulated.

Sulphur, in its Fat hath an hidden Acidity, and is most readily dissolved, not only in Oyl, but also in Alcaly, but never in that which is manifestly Acid, though it be most powerful; but if it be fired under a Glass Bell, then its hidden Acidity is turned to Smoak, which is compacted into a most Acid Juice, and the Alcaly which erst did friendly embrace the Sulphur, now is destroyed by It,

M

Thick Oyl of
Olives resem-
bles Alcaly.

Why old Oyl
grows mouldy.

Rotten Apples.

Butter.

Sulphur is Acid.

and a new production is made, different from the former.

But Sulphur is praised by *Dioscorides*, in the Diseases of the *Lungs*; though some say, it is the *Anima* thereof, understand, when it is evacuated by an Hippocratist, and fixed into insipid and milky Earth, then it becomes impatient of Innanition, and again desires to be satiated with its like: Wherefore it greedily attracts, and absorbes the putrefactive Acidity of the *Lungs*, which is firmly believ'd to descend from the Head, but without this preparation, it is found altogether unprofitable, for those Diseases, as the Enquirers after Truth, by Nauseating experience, do daily find. This earth is then called by the Skilful, * *Lac Sulphuris*, and that worthily, for it performs many things, which *Crollius* hath mentioned under its Title.

Moreover, Distill also Vinegar (in which I have shewed, that there is Fat Oyl, and *Aqua Ardens*) drive the dry Fæces out of the Retort, and there will come forth *Acid*, and Pinguetous Oyl, reduce the Coal left into Ashes, from These, Elicite the *Alcaly*, by common Water, which again imbibes, and absorbs its own Vinegar: out of the Phlegm is made *Aqua Ardens*.

From the *Alcaly*, and the *Acid*, you shall have regenerated *Tartar*, so there are *All, in all things (i. e.)* you shall every where find the *Acid* and the *Alcaly*.

Camphire (about which, it is strongly disputed, whether it be hot or cold:) is a Volatile *Alcaly*, furnished and saturated by Nature, with its proper Fatness, as I have shewed, like things may be done by Art; for it imbibes into it self the stinking and corroding Acidity of *Aqua Fortis*, which Suffocates by its very Smell, and with it, makes a Mock-shew and resemblance of Oyl; but not with a benign, sweet, and grateful *Acid* (as, Vinegar, and other *Acid Juices*) which is to be marked: After the same manner, *Camphire*, given at Mouth, doth presently attract to it self that Malign, inwardly Venemous, Stinking, Corroding, and Suffocating *Acidity*, which in Acute Diseases, doth range through all the Veins, and torments the Patients without intermission; whereby the Vital Spirit is made

* Milk of Sulphur.

All things in all things.

The often smell of *Aqua Fortis* breeds an *Atrophy*, with most bitter pains. See *Helmont. c. 9. f. 71.*

made purer, chearfuller, and acquires strength, which *Avicen*, amongst Practitioners, first observed; whence he rightly commends, and calls it, *A Treacle against hot Poysons*; *The Vital Spirit*, says he, *acquires Subtilty, and exceeding Sprightliness, and Vivacity, from It, and therefore it cheers and comforts*, even in spite of that Vulgar Proverb, *Castrat per Nares, Camphora odore Mares.*

Camphire.

(i. e.) Smell'd Champhires dose,
Castrates by th' Nose.

I add this, in regard all that I have known, employed about purifying of It, from its Dreggs, by Sublimation, both at *Venice*, and *Amsterdam* (they are called *Resinatores*) whose houses, smelled of nothing, but *Camphire*, are most Salacious, Procreative, and full of Children, as, if you will not believe their own Confession, their numerous Off-springs may evince.

If I speak not the Truth, let me be ashamed.

Camphire so dissolved in *Aqua Fortis*, and precipitated, or rather reduced, with plain Simple water, is made Soap, wherewith Womans hands being annointed, and afterwards washed with water, it takes away that roughness which exasperates the Skin, and makes them soft, and as white as Milk; a singular Ornament for the Female Sex; for our * Master teaches; *That the care of the Sound and Healthy is to be also undertaken, for Comeliness and Beauties sake.*

* In his book of Precepts.

As the *Alcaly* of *Camphire* drinks up nothing, but *Acidity* alone; So also doth *Antimony*, being destitute of its proper and innate Acidity, which consists in a subtil venemous Exhalation, not at all weighty, as its Glass or Powder, called *Mercurius Vita*, doth shew, out of which with *Acid Wine* (its like, but not, with Sweet) is Extracted a Poyson, which the Stomach abhors, and therefore this Wine taken at Mouth, with great violence is rejected from and by the Vital parts, both by Vomit and Seige; and by accident, it sometimes Cures the Diseases of the first Region. Hence *Helmont*, *As long as Antimony provokes Vomit, 'tis no remedy for an Honest Man.*

Antimony.

But when, That Poyson is expelled out of the Antimony

De Febrib. c. 15. 6.

either by the flame of the fire, or by kindled Nitre (of which, I have spoken in its place) then the Alcaly of *Antimony* is again Saturated with the aforesaid *Acid Spirits*, which yet, coming from flame or Nitre, are not proper to *Antimony*; So that in a few days space, out of the Air, It draws an Aliment, like it self, as I have shewed in a Flint, which, out of the Air, extracts a nourishment like it self, not like the life of a *Dog*; So, That, which erst did gently provoke Sweat and Urine, now, like the very Glass of *Antimony* it self, moves Vomit; Wherefore the flame, as also the Acidity of the Nitre, as they are not Poysons, so they are not proper to the *Antimony*, now dispoiled and evacuated; and so the Antimony, being reduced to *Alcaly*, and rob'd of all taste or sapor, which they call *Diaphoretick*, if it finds any Venemous thing in Man's body, it attracts it, and is Saturated by it (*For Nature rejoices in its like Nature*) retaining it, and rejoicing therein, more then if it wandered up and down in Man's body: Wherefore that empty and Diaphoretick *Antimony*, profits nothing in Diseases, unless when They are accompanied with some Acid Poyson, either occult, or manifest, as in the Plague, burning Feavors, Petecriales, or Spotted ones; and in diverse inward Ulcers, in what place soever they be; the venemous exhalations of which, being absorbed by the Antimony, then the Pores do open of their own accord, and the Antimony becomes *Diaphoretick*, otherwise not: Hence *Basilius* says, *That this Powder is of great force, to Cure many old Ulcerated Diseases, &c.* (i. e.) whose Acidities are putrefying and escarotick or corroding, for *These*, this Powder imbibes and destroys, and hereby, as I have said, the contraction of the Pores is enlarged and relaxed (this action, the Vulgar call, *Exsiccation*, for which cause it is also an Ingredient into that Plaister, which *Paracelsus* calls, by a barbarous Name, *Oppodeldock*. But what this Absumption, Imbibition, Precipitation, or Exsiccation are? and how they are effected? I shall again Ocularly demonstrate anon, when I speak of the properties of Iron) and though Pearls, Corals, and other Cordials, do also absorb the *Acidities*, arising about the Heart; yet *These* are not putrefactive, neither

The Mines of *Vitriol* in *Carinia*, being emptied, in a few years, in the open Air, are filled again by it.

So are also the empty Mines of Salt-peter, at *Padua*, whence it is called, *Anima Mundi*, or *Spiritus Multiformis*, by the *Philosophers*.

For this reason *Basilius* praises *Alcaly* of *Arsenick* as the Treasure of Health; yet I would have none but the Learned to deal in it.

In *Repet. Antiquiss. Lap.* f. 80. in my Edition.

joyned with an hidden Venom; So that, it is one kind of *Acid*, which, emptied and Alcalized, *Antimony* doth imbibe: another kind, that Pearls Attract, in the Palpitation of the Heart: another, which Crabbs Eyes draw forth in Wounds and Bruises: another, attracted by Goats-blood, in Pleurisy: another, by Iron, in Obstructions and Loosnesses: another by the Volatile *Alcalyes* of Vegetables in Hecticks; another by the *Bezoar* Stone, when rich men fall into a Swoon (I say rich men, for unless the proportion of this precious Stone, which is very dear, be correspondent to that Acidity, which is hateful to Nature, it is given in vain. Hence *Crato* says, he never observed any good from it, though it were frequently given; which I persuade my self to be true, especially it being prescribed by Grains, as Books persuade: The skilfullest Practitioners of this City, have observed this Defect, as well as *Crato*, who therefore prescribe Western *Bezoar*, not that it is better than the Eastern, but because it is cheaper, and therefore it is given in a greater Dose. For it is commonly believed, to provoke and expel Sweat, which effect yet it doth not produce, unless it hath first consumed the Morbous Acidity (as * *Hercules* of *Saxony*, a Physician of note, hath observed) for this Stone is considered by them (as many other Simples) to act upon the Body, as a Wedg-driven by a Beetle, not remembering, that, the Extraneous Sapor, being consumed by the Stone (or its like) the contraction of the Pores is enlarged, and then the whole Body transpires of it self, as old *Hippocrates* teaches: the truth of whose doctrine, is confirmed by a fly falling into the Eye, whose lids are presently with great violence contracted, not that the Fly contracts them, but the Sense abhors a Foreign Inmate; but as soon as the Fly is taken out, the Eye-lids are again gently relaxed.) I say, it is one sort of Acidity, which *Paracelsus* his *Libium* doth consume, in the Dropsy; another, which the Spiritual Salt of *Tartar* destroyes, in Hypochondriacal Melancholy; and all other Diseases of the Spléen: another, that *Ostiocolla* doth waste, in the rupture of Bones; another, that *Corals*, with their specifick Alcaly, destroy and absorb in the *Gonorrhoea*, &c. But the aforesaid Simples, do not imbibe

Commonly it is called by the general name of *Heat*.

The weight of a drachm was given to King *Edward*, see *Bionardus*.

* *Chap. of Pe-silent Feavors.*

I have shewed before by *Alcaly*, that the Seeds of things in the *Macrocosm*, are *Acid*, so in the *Microcosm*, as well in the Healthy, as Sick. Nature studiously Observes the same consent as this daily and common Praxis doth declare.

* In Tabula.

* De Vir. Medicin.

* Lib. de Arte.

imbibe (nor so much as enter into) the proper, innate, and manifest Acidity of the Stomach (as I have shewed) whereby it Concocts, and changes the food into an Acid Vital Juice, which is to be admired. Hence it appears, every Acidity, or *Aura* (call it as you please) expects, and willingly entertains its convenient Companion and Fellow (as I have erst shewed in the Earth of *Carinthia*, evacuated of *Vitriol*) wherewith it delights to be altered, absorbed, and transmuted, and one disturbs not the course or province of another: Hence Man hath obtained the Name of the *Microcosm*, and * *Hermes* says, *The things which are in the Superior, are also in Inferior Bodies.* These are the foundations of Physick, according to the nature of *Man*; as its inventors first found it out, and judg'd it, an *Art* worthy to be ascribed to God, and it hath been so accounted, as the * Old Man teaches; for, says he, in the cited place, *It is not Siccity, Humidity, Heat, nor Cold, &c. but Savors*, which he there reckons up, *These*, my * *Hippocrates* shews, to be in the Cavities and Ventricles, saying, *That Man's Body hath many Ventricles (or Savors) as they can witness, who are solicitous to know them (he means only Chymical Philosophers, for by and by, he subjoyns) of all the aforesaid things, there is none visible and conspicuous to the Eye: Wherefore they are called obscure by me, not that they remain always so; and do ever fly from our understanding, but, as much as is possible, they may be understood and known. For it is possible (to Chymical Hippocratical Philosopher) as far as the Nature of the Sick, doth assist in the consideration, and as far as the natures of the Enquirers, are fit for that purpose: For with much labour, and no small space of time, they are known and exhibited to the Eye. For those things which escape our bodily Eyes, are comprehended by our Followers, by the eyes of their minds, so far he.*

Many of these things, by the Authority of *Hippocrates*, I have clearly demonstrated to the Eye, as much as the brevity of a *Compendium* will allow, but not to the Intent, that every Hippocratist should imprudently practise or prostitute this Doctrine to, and before the Unskilful; Our *Master* vehemently forbids *That*, saying, *It seems best to*

De Vir. Medicin.

me,

me, that they who undertake to speak of this Art, should discourse only of those things, which are known to the Vulgar, not enquiring into any other, but the Diseases, to which they are usually Obnoxious: which is as much as to say, if thou record other things, besides the four Excrementitious Humours, to be the cause of Diseases, and does not pretend to expel them with their Concomitants and Attendants, the same way that others do; thou shalt be called a Fugitive, an Emperick, and a Paracelsian: Since therefore, our *Master* was afraid of Plebeian ignorants, an Hippocratist should often ruminare on that saying of the *Comedian*, *Quod scis, nescis.*

To make no further Digression, Out of what hath been spoken, we may conclude, how meet it is, that all *Alcalyes*, without *Acids*, should be empty and inanous bodies; for fixed *Alcaly*, saturated with fixed *Acid*, is made *Petrous*, as I have shewed in *Lime*; but when It undergoes a melting heat, then they pass into *Glass*.

The same fixed *Alcaly*, boiled to maturity with an *Occult Pingueous Acid*, the *Humid-way*, is made *Sope*.

So fixed *Alcaly*, mixed with *Acid Spirit of Salt*, is made *Common Salt*, having all the properties thereof: So also fixed *Alcaly*, with the *Acid of Vitriol*, is made *Vitriol*, which is called *Tartarum Vitriolatum*; and though *Writers* affirm, that the *Acid of Sulphur, per Campanam*, doth not differ, from the *Acid of Vitriol*, yet it is not true; but, as all *Acids* do retain and preserve the properties of their seed, even unto the very *Elements*, as I have shewed before in *Wine*, so doth this *Acid Liquor*; for when it corrodes a natural Body, as *Sand* (for Example) having not yet undergone the fire, then out of It, is sublimated natural *Sulphur*: Wherefore nothing in the world dies, but all things are transmigrated and changed, as * *Trismegistus* rightly determines: and *Lucretius* alio, *All things into their own bodies are dissolved, nothing by Nature is to naught resolved.* Fixed *Alcaly*, with the *Acid Spirit of Nitre*, is turned into *Frigid Nitre*, conceiving *Flame*, and is a *Remedy* for the *Quinsey*.

The same *Alcaly*, with the *Acid Spirit of Wine*, is made *Tartar of Wine*, as I have above largely shewn.

After

Speak, as the Many, Think as the Few. *Arist. 1. Top.*

Alcaly is a *Vacuum* in Nature.

No body at all doth perish, nor is made *That*, which it was not before.

Hipp. L. 1. de Diet.

* In *Pimandro*.

L. 2.

After this sort, says my Master *Hippocrates*, doth Nature also proceed, which turnes the Aliments, replenished with a Volatile Alcaly, with and by the Acidity of the Stomach, first of all into Chyle manifestly Acid, and in the subsequent Ventricles, the Alcaly is coagulated, according to the property of the Occult Acid, which the Cavities contain within themselves; So the Alcaly of the Excrements of the Belly, though it be an hundred times rectified, is troubled of its own accord, as I have shewed in its place: An Odorous smell is inseparable from the Alcaly of Urine; the Alcaly of the Sweat of a sound Man, doth not stink; so there is a different coagulation of the Stone, as I have shewn in its dissolution and concretion. That Acid is different, which hardens the Alcaly in the Bones; another, in the Blood; another, in the Veins; another, in the Hair; and another must necessarily be in the Nails (Reason it self dictates so much) for otherwise every thing would be generated of every thing; So also Soap made with Oyl, differs from That made with *Axungia*, and this again from that, made with Tallow or Suet. All the Muscles (says **Hippocrates*) have their proper Ventricle; intimating, that every Specifick Coagulation, doth also require a Specifick Coagulator, which though he be Occult, yet, by Mechanical necessity, he must needs be Acid; as I have evidenced in Oyl, Suet, Milk, &c. otherwise, nothing at all in the Universe would be Coagulated; For the things, which have been spoken (says my Doctor) none of them can be seen with the Eye (i. e.) none can understand my Writings, unless he be versed in this Chymical, and Salt-fusory Art.

Wherefore *Hippocrates* found out those things, which, by a grateful consent, are subject to the Empire of Art and Nature; On this Foot he places the unmovable Foundations of Learning; and from these he hath deduced all Mechanical Progresses; and Explications of Causes, so firmly, that if all Paper Books, with their Authors, were lost; yet by this Method, out of the Great Book of Nature, they may be all again retrieved.

Hence it appears, how many Fables have been ascribed to this worthy Man, which he never so much as dream'd

of,

The Ferments of the place which they call Mumail.

* I. de Arte.

De Arte.

This book of Nature is to be read, but Paper ones, are not to be rejected.

of, yea many things, published under his name, suit not with his Profound Wisdom, so that if he were alive again, he would be ashamed to own them.

The permixture and alteration, which I have demonstrated in fixed *Alcalyes* with *Acids*, the same also * my *Hippocrates* would have to be understood, of the Volatile *Alcalyes* of Animals, for, the Volatile Alcaly of any Animal whatsoever, being saturated with the Acid Spirit of *Vitriol*, assumes the nature of *Vitriol*; but, not having the Colcothar of Iron, it is precipitated, by juice of Galls, into a bottom of a Purple Colour, like to White *Vitriol*, of which above.

Out of what hath been spoken, 'tis as clear as Noon-day, that the Spirit, is the Vehicle and lodging place of the Soul, and the Bond joyning Soul and Body; which I shall also shew by the following Experiments.

For the same Volatile Alcaly, of what Animal soever, with Spirit of Nitre, is made natural Nitre, conceiving Flame, and is melted in the fire, like ordinary Nitre; The same Alcaly, I say, with Vinegar, is made *Tartar*, which is wholly Distilled into a Salt liquor, as I have shewed in *Mindererus* his Water; the same may be said of other Acid Juices; for as fixed *Alcalyes* are vacuous and empty bodies, so are also the Volatile ones of all Animals, whose preparations the Reformer indeed teaches, which yet is very inane and empty, as all *Alcalyes* are. Hence my *Hippocrates*, moved to a smiling laughter, pleasantly says, *They know not what they do, but they obey their destined fate*. Wherefore the Alcaly of *Vipers*, being a vacuous and empty body, is saturated by the Reformer (as empty) with great labour and cost, with the Acid Spirit of Salt, and what else, I pray, but Common Salt, can issue from it? Behold the Cheat and Imposture, which the Reformer hath at last found out, with so much labour, of which triumphing before the victory, he thus scribbles, *Whosoever thou art, never think there is any other way of Fixing*; having spoken this, by and by he recants, saying (with a low voice) *If yet there be any Man, who hath greater Experience in these Operations, I give him occasion, for the Publick good, that, what he hath Experimented herein, he would not suffer*

N

L. 1. of Diet.

L. 4. of Diet.

Pharm. f. 486.

Pharm. f. 486.

80

to die with him. Alas poor Man! why not? but go too. Let us comply with his desires, he hath made a fair Oration, and no doubt deserves a Statue from the Commonwealth of Physick, for having so politely distinguished the Acid from the Salt, for the benefit of Apothecaries.

Append. in Avi-madu. fol. 75.

CHAP. XXII.

A Childs Opinion Discovered.

In Append. i. 52.

Fire, both Internal and External, Explains the Book of Nature, as the ordinary professor of the Creator.

The Calcining of Gold, the dry way.

I Will briefly now run over the Acids, which the Reformer teaches, as contrary to Salts, which Doctrine yet, with many others, I find to be false, and full of Ignorance; as shall be demonstrated by Fire, keeping to the Terms usually received (for Fire is here the publick Professor and just Judge; Logick hath no such way of distinguishing, for that only handles true Sciences already found out, and propounds Methodically, and clearly and profitably to treat of what is to be known, in every knowable thing. But I have before distinguished the Tastes or Savors of Salts, as much as was necessary for the understanding of this present Compendium. Let there be made a Powder of Nitre, and Common Salt, Ana, four Ounces, and two Ounces of Allum, to which add Simple Water, as much as is sufficient for the solution of the Salts (which act not, undissolved) and you will obtain a Salt Liquor, to which add two Drachms at least, of Leaf-Gold, mingle the Gold with the Salts, and boil them in a glazen pot, to Siccity: towards the end, increase the fire, till it affords a smell like That of Aqua Fortis, so the saltness of the mixture erodes the Gold: Dissolve the white Mass in a pot, with Common Water, let the Solution rest in the Glass Vessel, till the Faces of the Salt do subside: when it is clear, pour it out by inclination; to this clear solution, instil by drops, some fixed resolved Alcaly Ex. Gra. Liquor of Tartar, which presently absorbs the

the more subtil Acid Spirits; and the Gold presently falls of a Purple colour: In this Operation, the Salt hinders not the Acid Spirits, as the Reformer teaches, but the Alcaly of Tartar, consuming the Acids, destroys the Composition.

Calcining of Gold the moist way.

The same way, but with great force, distilled water of Nitre and Allum, in which Common Salt hath been dissolved, dissolves Gold, for if the Salt were not dissolved in water, it would not corrode the Gold: Wherefore Salt doth not destroy the Acid Aqua Fortis, neither in the dry, nor moist way, but adds Vigor to it, like to Sal Armoniack; Hence Basilins, What is found in the Eagle, is also to be met with in me.

Hence it appears, that Gold is not dissolved, but by Salts, but why the Acid Spirit of Salt doth dissolve It, I have elsewhere shewed, viz. by corroding the Spirits, it returns to That, which it natively and originally was, viz. into Salt.

CHAP. XXIII.

Obscure things, made manifest.

I Will shew another Experiment, very pleasing to the Eye, manifesting, that Salts are not contrary to Acids.

Take three pound of dried Vitriol, two pound of Nitre, six ounces of the Flowers of Common Sulphur, and five pound and a half of Common Salt, and Powder of Bricks, as much as is sufficient (least the Salts should be melted with the Sulphur:) Let there be six pound of this last powder, mingle the small powders exactly, and distil the water, at least out of Sand, put Gold Money into this water, without rectification premised, and in a few hours hours in a warm place, you will see the water tinged with a Golden colour (by occasion of this Tin-

Tincture of Gold.

ature, It comes to my mind, that not without great labour, by the help of Fire, and much Diligence, a Volatile Alcaly (of which I have elsewhere spoken) ascended of a grateful smell, so rare and light, that it can scarce be perceived by the touch, sometimes of a grey, sometimes of a white colour, of a Salt taste, biting the Tongue, and so subtil, that, without the irritation by fire, in an open Vessel, of its own accord, it evaporates to Air; whereas of it self it remains constant in fire: I say, by the property of this Alcaly, Gold, Silver, Quick-silver, Chrystal, &c. are made truly potable, so that, it is not only impossible, they should return to their bodies; but moreover they are so freed from the bonds of Coagulation, that we may freely dally with them, &c. But these, and the like, being not proper for this place, I willingly pass them over.) Pour out the aforesaid water, and super-adde other, and again distil it in a hot place, till the water be sufficiently tinged; mix and shake the tinged waters together in another Phyal, and into that water put plates of Silver, first cuppelled, then the water tinged with a Golden colour, presently grows Black, and in a few moments, all the Silver is invisibly dissolved, and all falls into a black Calx, which the Skillful in the Art, without contradiction, call Gold: But observe, that water not tinged by Gold, dissolves not, no nor any way affects the Silver.

*Of the properties of Planes.

Hence * *Basilus de Argento, I have devoted my Soul, my Spirit, and my Body to my King.*

Wash the Gold-money, and you will find it something paler, but to have lost little or nothing of its weight: This Experiment is worthy of consideration, but when the aforesaid powders are distilled with a naked Fire, and open, more of the dust of Bricks being added; then it draws forth no Tincture, but wholly dissolves all the Gold: I say, this Experiment (though it seems useless, yet is pleasant, and of great consequence) doth not succeed without Salt: So that Salt doth not hurt these Acid Spirits.

Sulphur of Antimony.

So also simple *Aqua Fortis* of Nitre and Allum, or Vitriol, corrodes not, nor dissolves Crude *Antimony*; but add

add to this water, so much fused Salt (i.e.) clean and finely powdered, as it can dissolve, Superfuse This water on the *Antimony*, only grossly pounded, like the grains of *Millium*, and presently, with a gentle heat, it acts on the *Antimony*, and corrodes the *Regulus* of it; on which presently pour cold water, and you will see the *Sulphur* separated, which swims a-top of the water, like Pitch.

But mark, that at one operation, you should dissolve not above two drachms, or thereabouts, for in a greater quantity, the *Sulphur* is also corroded by the water, and turns to Faeces. Dulcify this *Sulphur* with cold water, and it will look like the Common, only a little greener. This separation also succeeds not without Salt; so that *Acids* are not hurt by It.

Of this *Sulphur*, adding two simples, you may make an Oyl, with which, if you annoint the Back-bone, Hand-wrists, soles of the Feet, one hour before the fit, you may cure all intermitting *Tertian* Agues and Feavors.

The *Minera* of *Antimony* from the *Raurian* Mountains, with red spots or Veins, so dissolved, melts Gold.

A Febrifuge Oyl.

This *Sulphur* is the Basis of the Artificial water, where-in if Silver be dissolved, it precipitates the greatest part of it, into a black Calx, which *Aqua Fortis* afterwards will not touch.

If Chrystal be cemented with the same *Sulphur*, as also Crude *Antimony*, marked with red Spots, mix'd with a little Orpiment and powdered, it acquires the colour of a Ruby, but take heed of the wind, for that will make it chink, and crack, or break.

Christial tinged like Ruby.

This is that *Sulphur* of *Antimony*; which * *Helmont* advises us, to extract, scarce different from the Common in sight, only it is a little more greenish; how much this *Sulphur* avails in the Dropsy called *Tympanitis*, They, who having used it, know, as well as I: yea, I firmly maintain, that * *Rulandus* his Balsam is elicited from this *Sulphur*: *Helmont* goes on, make, says he, *Cinnabar*, I know many do much disquiet themselves with this Operation, but I will now openly and clearly discover it. Melt this *Sulphur* of *Antimony* in an Iron spoon, with a gentle Fire, when the *Sulphur* is melted, of which let there

* *Tract. de Verbis, Herbis, & Lapidibus.* Remedy of *Tympanitis*.

* *Rulandus*'s Balsam of *Sulphur*.

there be E. C. an ounce and a half, add about six drachms of Mercury, a little over, or under, 'tis no great matter (for the Sulphur receives as much as it can mortify) mix them continually with an Iron Spatule, till they be cooled, reduce the Mass into Powder (which many fire or kindle with live coals, that the superfluous Sulphur may deflagrate) put this powder into a Retort of a large neck, (I say large, lest it be stopped by the Cinnabar ascending) and by degrees Distil it from Sand; then, that which is superfluous, either of the Mercury or Sulphur, runs down through the neck of the Retort; which gather up, then encrease the fire, that the Cupple may be hot, and the Cinnabar will be elevated; when all is cold break the Retort, reduce the Cinnabar to Powder, which you must seven times more sublimate *per se*, in a fit Glass Vessel, or Retort, and you shall have your intent. By the same way, Common Cinnabar is also made, but without repetition of the Sublimation.

Cinnabar of Antimony.

Common Cinnabar.

There must be but one Retort.

Errors sought after, are found out by Operation, not else.

Helmont here purposely concealed, that it must not be Common Mercury, but That taken from the very body of Antimony. To what purpose is this superfluous industry (Let me whisper this word to Our Chymists) when as the same Cinnabar is Sublimated, after Distillation of Butter of Antimony, unless Mercury of Antimony, be here required.

CHAP. XXIV.

Documents are Documents.

The Reformer is ignorant what Hermes thought of these Trifles.

Manifest. f. 801.

Hitherto in those Operations, which are all performed by Acids and Salts, it no where appears, that they destroy one another; now let us proceed to the Rhapsody of the Reformer, which he proudly calls *Maximissa Hermetica*, as we are told in his own Book, *Where the true preparation of Mercury Sublimatè and Corrosive is*, (as he says) *presented to us*. Good Wine needs no Bush, as the Poet says, why he adds, *True preparation to the Title,*

Title, I see not. I suspect, that after his accustomed manner, he hath a mind to cheat us with fair words; but let us do the best we can to prevent it.

Mercury (says he) is rightly sublimated with Salt and Vitriol ('tis a wonder he did not fear, lest the Salt should destroy the Acidness of the Vitriol) but because he found it so Writ by others, at length he adds, *That the Vitriol must be warily Calcined, lest it be deprived of its Acid Spirit.* He thinks he hath advised some great matter here, as also by telling us, *That the Sublimation must be twice, or thrice repeated, with new powders of Salt and Vitriol.* But why, and to what purpose, this repeated Sublimation with new Powders? for Mercury, being once saturated with the Acid Spirits, what needs any Reiteration of the labour? especially if it be true (as it is most true, in Nature) *That all things are governed by certain Numbers, Weights, and Measures, according to that of the Poet.*

*Est Modus in rebus, sunt certi denique fines,
Quos ultra citraque nequit consistere rectum.*

(i. e.) *A mean, and certain Limits, all things bound,
Beyond, or this side, which, the right's not found.*

So that the nature of Mercury, once saturated with Acid Spirits, hath absorbed and imbibed, as much as it can bear, and as much as it wants, from its first Sublimation, and though it be re-sublimated afterwards, an hundred times, either by it self, or with new powders, yet it stil remains the same Sublimated Mercury: So that, to reiterate the labour, is to make havock of the Powders, and to lose time.

This is that, which the wise Man says in the Proverbs, *False Weights and deceitful Ballances, are an abomination to the Lord.* Chap. 20. v. 10.

I know the way of Sublimating Mercury, is covered by many, because they fear, *That which is Sold up and down, is mix'd with Arsenick,* which, as a dangerous Drugg, ought not to be added to Mercury in its Subli-

Sublimation, by reason of subtil Poyson, which it breaths forth in Sublimating, and choaks the Operators: I can shew, that 'tis a subtil Poyson, by the danger I have experimently found in it, my self.

Arsenick.

For heretofore, when (by the persuasion of *Johannes Agricola*) I essay'd to sublimate *Arsenick* so often, that at length it might remain fixed in the bottom of the Vessel, for at that time (out of my eager desire after Knowledge) I feared neither Smoaks, Vapours, nor any other danger: After many Sublimations, when I opened the Vessel, I suck'd in a breath so sweet, so grateful and benign to the Palate, that I even admired it, as having never felt the like before; but after half an hour, I perceived my stomach to be contracted and to ache, with a convulsion of all my Members, I breathed with difficulty, I pissed Blood, with incredible Heat; suddenly after, I was taken with the *Collick*, and wholly cramped for the space of an hour and half; being recovered by Milk and Oyl, I was indifferent well, yet a slow *Feavor*, like a *Hectick*, stuck by me all the Winter, which I cured by Decoction of Vulnerary Herbs, and eating the tops or buds of Cole-worts and Colly-flowers, boiled tender in Water, and seasoned with juice of Oranges, Oyl, and a little Salt: yea I did so covet this meat, that I could scarce restrain my Appetite, till Supper and Meat-time: and by these Remedies, I grew perfectly well.

But in spite of the danger, there are some, who can burn pure Tinn into Powder, which, by no Vulgar Art can be again reduced to Tinn, as other Metals; yet with *Arsenick*, it is made *Scoria*, part of which, by a singular Skill, becomes pure Silver. *Sigismund Wan*, a Citizen of *Wondsted* in *Voitland*, knew and practised this Art of Separation, to his great benefit; for in the year 1464 he built and endowed a Famous Hospital there, which, as *Gasper Bruschius* relates, is this day to be seen with the Epitaph of the Citizen aforesaid. Now that Silver may be made out of Tinn, with *Arsenick*, * *Clavius* proves in his Apology against *Erastus*; to whom I refer you. So much for *Arsenick*; for the sake of the Curious.

I now return to *Mercury*, whence I digressed, which is sublimated in this proportion: Take

Take of *Mercury* or *Quick-silver* 280 pound (so much one bundle weighs, as it is brought out of *Hydria* in Sheepskins) of *Mercury* Sublimated, twenty pound; of Common Salt, and Salt-Peter, ana 200 l. of the reserved *Caput Mortuum*, fifty pound; of *Vitriol* Rubified 400 l. All these must be severally reduced to Powder, under a Mill-stone which is to grind them, turning round and standing upright.

The mixture is made after this sort; The Quick *Mercury* and the Sublimate, must first be mingled with a part of the Common Salt, and of the Salt-petre; and although the Salts be dry, yet, by this Mixture, they become moist; so the *Mercury*, in being mixed with the said Powders, dies: then add the other part of the Salts, proceeding to mix them with an Iron Instrument, till the *Mercury* appear no where, quick: This Mixture is very moist, to which if you have a mind to add Rubified *Vitriol* (which is very dry) it consumes the Humidity in a moment, and they become altogether as hard as stone: wherefore instead of the aforesaid *Vitriol*, you must add the *Caput Mortuum*, either reserved from the first Sublimation, or from *Aqua Fortis*, 'tis all one, so the Mixture becomes moderately dry, which then, you must agitate through a Sieve: afterwards you may conveniently mix the sifted Powder, with the Rubified *Vitriol*. Thus the Mixture is made, with which, fill sixteen great Glass Vessels (let the fourth part of them be empty) place them on Stillatories, and you will sublimate *Mercury* out of the Ashes (but not with an open fire, as the Reformer dreams) in four little Furnaces, each of which may hold four Vessels; set Limbecks to the Vessels, at least loosely, with their Receivers: Let the fire be slow for twenty four hours, in that time, the Salts will dissolve the *Mercury*, and in the Operation it smells like *Aqua Fortis*, which hurts the *Lungs*, yea it almost strangles those that suck it in (as the smell of the Vault at *Puteoli* near *Naples*, doth, a Dog) after twenty four hours the smell ceases, and then the *Mercury* begins to be Sublimated (gather up the *Aqua Fortis*, which is fortified by the other Powders, and serves for the precipitation of

The common
Sublimation of
Mercury.

Geber de Ar-
gent. c. 18. and
Basil. de Pro-
priet.
7 Metals De
four.

Tinn yields
Silver.

* 2 Vol. Theatri
Chym. fol. 39.

Mer-

Mercury) continue that heat, till you see the *Mercury* separated at top from its *Caput Mortuum*, in form of a Cake, which commonly happens about the fifth day, if you have not erred in the Operation. When all is cooled, by reason of the great weight of the Sublimate, the Glass Vessels will break of their own accord (you must gather up the pieces by themselves, for they have some Sublimate, which you may scrape off, wherewith, at another time, running *Mercury* may be mortified:) Take heed of the Ashes, lest it falls through the chinks upon the Cakes, which they curiously take off, with both hands, and lay aside (they call them loaves) of which every one, will weigh about Twenty five pound, or thereabouts, according to the capacity of the Vessel, which held more or less of the Mixture; So that of 280 l. of the live *Mercury*, and 20 l. of the Sublimate, you may gather 380 l. of the Sublimate.

Now the live *Mercury*, thus encreaseth in weight, Eighty pound, not from the Acidity of the Rubified Vitriol, as the * Reformer thinks, which he therefore says, *must be warily Calcined*, but only from the Common Salt; which I prove thus.

* The Reformer's Error.

Mercurius Dulcis Sublimated, of a Red Colour.

Let the same *Mercury* be Sublimated, with the same proportion of Nitre and Rubified Vitriol, without Common Salt, then the *Mercury* ascends Red, and acquires nothing of weight, or of the Corrosive.

Common *Mercury* precipitated.

So also, if the same *Mercury* be precipitated with *Aqua Fortis* from Nitre and Vitriol, then it waxes shining Red, and acquires no further weight: The cause is, because the Sulphureous Nitre, elevates the sulphur of Vitriol; which do joyntly act, at least upon their like (i. e.) upon the External Sulphur of the *Mercury*, and so it can encrease nothing at all in weight, nor assume a Corrosive Vertue.

CHAP. XXV.

Minerva Treated.

Now, That, Vulgar *Mercury*, hath a *Sulphur*, external and separable from the essence of *Mercury*, besides the testimonies of *Geber*, and other wise Men, Experience also shews (the surest School-Mistris, both here, and every where) by this Operation:

2 Part.
L 2. Sem.
Perfekt.

Put clean and pure *Mercury* into a Glass of a plain bottom and very narrow mouth: boil it in Sand, first with a slow and moderate, afterwards, with a stronger fire, to that degree, that *Mercury* may endeavour to ascend, which, if it happen by a simple motion, cause it to subside again. This way, without the addition of any thing, but External fire, it is precipitated shining Red, like That, which was precipitated with *Aqua Fortis*, out of Vitriol and Nitre; and it neither gets, nor loses in its weight, in as much as the small portion, if its proper *Sulphur* hath mortified and rubified it: as I have shewed in *Aqua Fortis* from (*Sulphureous*) Nitre. For it is the property of *Sulphur*, to rubify *Mercury*, as I have also demonstrated in the preparation of *Cinnabar*; which also gets nothing its weight; which our Chymists must attentively consider, for it is of concernment.

Sulphur rubifies Mercury.

Mingle this red Precipitate (either made *per se*, or otherwise, of whatsoever condition) with Common Salt, urge this *Compositum* with a moderate fire, and then it will be elevated into a Sublimate Corrosive: neither doth the Salt here hinder the Acid *Sulphurs*, yea, without Salt, it would never be made Sublimate Corrosive, out of red precipitate, neither would the *Mercury* encrease in its weight. So, That precipitate, which *Crollius* calls *Turbith Minerale*, in as much as it is made with Spirit of Vitriol or *Sulphur*, is not red; because little of the *Sulphur* of Vitriol is elevated, without Nitre, in the Distillation;

tion; but because of the affinity and symbol which it hath in acting, upon the Sulphur of *Mercury*, it grows Yellow, and hath acquired no weight, after the aluminous taste is washed away with hot water.

The strength and Vertues of all the aforesaid Precipitates are equal, they provoke Vomit, corrupt the Gums, and, taken often, do cause the Execrable *Fryalism*. Hence *Helmout*, As long as *Vulgar Mercury* can be revived, 'tis no good Man's Remedy. For as all Medicines, are Poyson in reference to us, and not to the Excrements; assaulting us, rather than Diseases: So also is the *Vulgar precipitate of Mercury*. Hence That of my * *Hippocrates*, No Physician can promise Health, by prescribing the assuming of *Laxatives*.

And although many affirm, That *Mercury precipitated per se*, without the addition of *Corrosive*, doth mightily provoke Sweat, and for that reason cures all Feavors, as well continual, as intermittent, and six or seven times given, wholly cures the *French-Pox*; yet it is not true, but, as I have said, by reason of its *Sulphur*, though it be diligently handled the common way, yet it remains the same *Mercury* still. And although *Sulphur*, with great ingenuity and Art, be separated from it, yet, not enduring a *Vacuum*, in a small space of time, it regains new, like the former, as our Master teacheth, *A-part*, it is sufficient neither for it self, nor any other: Nay, besides Experience, *Geber* confirms it, and other learned Men. Hence the Author of the Book called *Aureum Seculum*, Very elegantly; *Saturn*, his Grand-father, out of meer anger, again changeth it into what it was before; and therefore this Spirit hath obtained the name of *Multiformous* and of *Mercury*. Those that have passed through these painful labours, know this to be true. But when it is regenerated and resuscitated out of *Silver*, or any other perfect Metal, and also cleansed, as much as is necessary, and, with his requisite, precipitated to a Redness, it becomes a Medicine not to be despised; which provokes neither Stool nor Vomit, unless in an undiscrēt dose: yet, it is not the *Aurora* of the Philosophers, though, as it were, *Rain-bows*, *Peacocks-tails*, with sundry admirable

* Of Feavors,
c. 15. 5. 6.

* Of Purging
Medicines.

L. de Diet.

f. 50.

I am not ignorant, that
Mercury is a
perfect Metal.

mirable colours, appear in the sides of the Glass, and in the matter it self, after the same sort, as it happens in *Sulphureous Steel*, whiles it is under the hand of the Workman; neither let any Man believe, that this Precipitate is that *Panacea*, which * *Crollius* saw at *Michael Siendivovius's* (whose name he expressed in his Preface, with great Letters, here and there, in these words,

Apuđ Magnum aliquem, cui in aeternum bene sit, Cum primis egrsgium Helios Antharum, borEaLem, nunc in Christo quiescentem cujusmodi IENr:s Deniq; consu:Verunt latrare temporum currcVLIS:) because it is not by the first Universal matter, reduced to its first matter; But what the first matter of the Philosophers is, besides *Hippocrates*, *Ovid* also doth indigitate, *Tempus edax rerum*, (i. e.) the first matter in time doth consume, whatsoever is produced in or from it: Hence the Ancients Fabled, that *Saturn* did devour his own Sons, as the Venerable *Pythagoras* doth witness; *All Secrets* (says he) are in *Saturn* (i. e.) in the most Ancient and first Matter: Of which enough, at this time.

Wherefore, the External *Sulphur* in the *Mercury* is the cause of Vomit and Salivation, and not the Corrosive Spirits, with which it is Precipitated or Sublimated; which the inunction with *Quick-silver* it self proves, which is not perceived by the Taste, but the most Acid *Sulphur* of *Mercury*, as I have shewed, first pierceth the Skin, after the manner of Acids, Then it creeps to the Ventracles, or cavities of the Muscles, which in healthy Men are turgid and full of Spirit, for so they are called by *Hippocrates*; Then the second, or at least, the third day, Those who are anointed, either whole, or sick (for now tis all one, to the *Mercury*) begin to languish; the Tortor abides in the Anointing, until at length, in all the Ventracles it doth disorder, alienate, and destroy the Occult Acid and Alcali, or the faculties (as my *Hippocrates* speaks) which I have shewed to be, and to operate there, That venomous Acidity of the *Sulphur* of *Mercury*, absorbs the Alcali of the Ventracles, and makes its fellow, otherwise Occult, with most strong Poyson, more Acid, and manifest; So one faculty is extinguished, and the Acid, multiplied

Every like is
not the same.

* About the
middle of his
Sixth part.

* 'Tis a point of
Art, to read
it.

Metamorph
L. 15.

Sulphur of
Mercury, is
Poyson.

L. de Arte.

The Catholick
Hippocratical
Doctrine is
every where
alike.

tiplied by Poyson, goes on in working, and acts Retrograde: and, resolves, as Causticks do, all the Aliment into a putrid Mash: This, the Vital Vertue or Nature, (call it as you please) endeavouring to expel by fit passages, it partly dissipates it by Sweats, partly, by its purging faculty, it expels it by Stool, with great grippings; Whence it appears, why many who have been Cured by Salivation, after a long space of time, Relapse into their ancient Diseases, 'tis because the Malignant disposition is still left in the Body.

Hippocrates resolves this
Doubt for us.

Sulphur of
Mercury Acid.

This Occult, but Venemous Acidity of *Mercury* doth primarily then hurt the Teeth and Gums; for as all *Sulphur* hath an Occult Acid (as I have shewed before *per Campanum*) so *Mercury* hath an Occult Venemous Sulphur, which doth precipitate and rubify it with a gentle, but constant, Fire (like Common *Sulphur*) which, I have demonstrated above, not only by fire, in an Experiment, but also by the authority of *Geber*.

Now all Acids, especially Putrefactive ones, do offend the Teeth, and Gums (as the *Scurvy* shews) and dissolve the Nerves: then the Blood sowers there, and putrefies, becoming more stinking than a Jakes, with such a Contagion, that the Lips, by touching it, contract Ulcers, and the Cheeks ulcerate within; and this happens not only from its External Unction, but also the live *Mercury*, taken often, in a small quantity, by the mouth, performs the same thing, as Experience shews, and *Rondeletius* and *Platerus* have also observed. Of this sort are the Pills of live *Mercury* called *Barbarossa*: The old Verses of *Mathesius* suit herewith;

*Terram Mercurij, producta Metalla Veneno:
Esse ferunt, verum est, nil nisi virus, habet.*

*Metals produced with Poyson full, Men say,
Are Mercury's Soil, which Venom do display.*

Hence it appears, what we are to think of, that *Sulphur*, which, at this season, in the mouths of some Nobles

bles of this Court (Fear not your Teeth in the case) under the credulous pretence of a fine, sweet, and Vital Steam, or *Aura* gives forth a sad, filthy, truculent, and stinking Smell. In such cases my *Hippocrates* says, with a loud voice, *Unskilfulness is an evil Treasure*, &c.

* De Leg.

Hence we may see the reason, why Gold-guilders, and they which suck in the steam of *Mercury*, do often in progress of time, either tremble, or are cramped in their Joynts; but that I may not be too Prolix, I pass over these things in this place.

Wherefore I have observed, That *Mercury* regenerated out of Silver, or other perfect Metals, although boiled a whole year, with a different fire, in the above-named Phyal of a plain bottom, yet it can be precipitated *per se*, in no degree; and therefore this regenerated *Mercury*, must needs want that external *Sulphur*, as appears by Mechanical necessity; in the want of which *Sulphur*, it may move Sweat, and sweetly perform its Operations, Reason, and Experience confirming as much: But by great Judgement it being divided into its essential parts, and re-conjoyned with new and perfect *Sulphur*, Then it becomes the subject of all Wonder: as *H.C. Agrippa* says in his *Scale of Unity*, but because it is not my purpose now to treat of it, unless only as it serves for Vulgar use in Physick, I will keep my self within my bounds.

*Mercury Regenerated, an-
Alexipharmacum for the
French Disease.*

L. 2. Of Occult Philo-
sophy.

It appears then, that neither *Vitriol*, nor *Sulphur*, of what kind soever, do add either Corrosive Vertue or weight to *Mercury*; as the Reformer would make us believe, saying, *That therefore Vitriol must be warily Calcined, lest the Spirits should perish*. For *Mercury* in Sublimation wants Them not, but only its Humid *Sulphur*; which, as I have said, is elevated by the Spirit of *Nitre*; and they both conjoyned, do act at least on the external *Sulphur* of the *Mercury*. But if it be urged with a stronger fire, it arises into a red Powder, not Corrosive, which *Huserus* and *Crollus* believed to be the *Arcanum Corallinum* of *Paracelsus*, but they understood not his meaning, but were mistaken in their opinion; but when Common Salt is added to *Vitriol* and *Nitre*, then the *Mercury* is dissolved deeper, by reason of the Salt sapor, and the Sublimate,

Sublimate, grows white; becomes Corrosive, and encreaseth in Weight. And here also, doth not the Acid acquire strength by the Salt? so far is it from destroying it.

So also the Caustick water distilled from *Vitriol*, or *Allum* and *Sal-petre*, which is called *Aqua Fortis*, acts at least about *Sulphur*; and unless the Acid Sulphurous Spirits, are in part washed away; or are put to flight by the fire, they are Coagulated, with the *Mercury*, into an Aluminous body, Astringent, and Corrosive.

This Corrosive *Mercury*, our Reformer would have to be mixed in the Plaister of Frogs, with the Mercury of *Vigo*; An *Absurd invention*, says he, that *Mercury can be mortified by Spittle*: As if *Johan. de Vigo* knew not the Corroding of *Mercury*, who was the Inventor of that Vulgar Precipitate, from him now called *Vigo's Precipitate*. He, I say, made an Emplaister to mitigate the pains of the Joynts, arising from a Virulent Pox, periwading himself, that *Mercury* was the true Alexipharmick of this Disease, but he mingled the live Mercury with things, easing Pains, and sometimes with good success; wherefore he advised to mortify the Mercury with Spittle and Oyl of *Bayes*, which is done in a moment, and afterwards to mix it with the other Ingredients.

This Mortification of *Vigo*, the Reformer laughs at, and perverts that excellent Man's Text and meaning, adding Reproaches and Calumnies to boot; and in stead of quick Mercury, he teaches to add Corrosive, without any Ablution, or encreasing the fire to expel the Spirits; but whilest it is yet a Liquor, he enjoyns Fat and Oyl, to be super-added, as if the Corroding Acid, would die in the Fat.

Hence it appears, that the Reformer of the *Auspurg* Dispensatory, hath not so much as a spark of distinguishing Judgement. Surgeons, to consume Proud-flesh, mix the Precipitate Mercury of *Vigo*, which is commonly sweet in Taste, with Fats and Oyntments, not that the Corrosive Vertue may be destroyed, but that it may not fall off.

So then, if the precipitate of *Vigo*, being sweet, and insipid

Pharm. f. 681.
Plaister of
Frogs with
Mercury.

The Vulgar
judges of few
things by the
rule of Truth,
but of most
things, by O-
pinion.

insipid to the Taste, mixed with Oyntment, eats up the flesh, surely This Caustick and corroding one of the Reformer doth exulcerate, and in the place where it ought to assuage Pains, it raiseth new ones.

This is the Artifice, which our Reformer instructs us in, to whom I may well apply that of *Plautus*.

Ibo ad medicum: atq; ibi me Toxico mori dabo.

I will to the Physician bye,

That by his Poxson, I may dye.

But Sublimate Mercury doth revive, when its corroding faculty is taken from it: This, *Antimony* doth, and also *Alcalyes*. This *Antimony*, simple *Aqua Fortis* doth not dissolve, by reason of the *Sulphur* mix'd with it, as I have shewed above; but, Salt being added, it presently acts upon it, and separates its *Sulphur*, that it swims atop, like Pitch. This in the moist way.

So also in the dry way, mingle *Antimony* with Mercury sublimate, which I have demonstrated to be Salt, and presently the Saline Spirits desert the Mercury, and corrode the *Regulus* of *Antimony*; but when the Spirits are driven out of the Retort, they run down Saturated with the dissolved *Regulus*, in the form of Butter, which if it be washed with cold water, the powder of *Antimony* falls small, rare, light, and very white, unfitly called *Mercurius visa*. But when this Ablution is made with hot water, then it turns Yellowish, and is called *Pulvis Algerotti*.

But the same Butter, if it be dissolved in Spirit of *Nitre*, which again by reason of its similitude with *Sulphur*, doth again corrode Sulphurous and dissolved *Antimony*, and is abstracted by Cohobation, and afterwards applied to the Fire: then (after its manner) it remains constant or fixed; and begins to be called *Bezoar Minerale*, a Cure for great Diseases. But the Mercury, being freed from the Corrosive, representing Metalline Alcaly, is saturated

Butter of *Antimony*.

Merc. Visa.

Powder of *Algerotti*.

Bezoar Minerale.

Cinnabar of Antimony.

saturated by the Acidity of the Sulphur of Antimony, which is also Metalline, and they both constitute an Occult Salt thing, which by the increase of the fire, is elevated into Cinnabar; and this again, with a lighter Alcaly, is reducible into running Quick-silver, as I have shewed in its place.

So that, Gold is not dissolved, without Salt, in Acids, as neither is Antimony nor Mercury it self; wherefore Salt doth not destroy Acids, nor on the contrary. Laborious Minerva hath discovered This Mystery, which few hitherto have been able to attain unto.

In fine, Salt, if it were at any enmity, either Occult, or Open, with Acids, it would surely be made manifest in the Butter of Antimony alone, which is so sensible a thing, that if but one drop of water fall into it, presently the Acid Spirits do associate themselves with the water, and the dissolved Antimony, grows white; but cast common Salt, either natural or artificial, or other salt things, and that in quantity, into the said Butter, and it will not be moved nor troubled at all; so far is it from being destroyed thereby.

CHAP. XXVI.

Dicta cum Factis componit.

Words and Deeds compared.

I have shewed that Alcaly is in water, and now that Acidity is in fire, though by a rude Example, yet it may suffice for our Chymists.

BUt if any Acid be destroyed, that comes not to pass, by reason of the Salts, as I have said, but the Alcalizates, or those of affinity with them, and it is changed into another nature, according to the difference of the Acid; as for example, The Reformer teaches, how to prepare Crocus Martis, which he calls Aperitivus, with Acids, I approve his way in it. He also teaches to prepare another Crocus, which he calls Astringent, in Flame only; not considering, that the flame of

fire

fire is also Acid; so that This latter Crocus must needs be like the former, you may call it Astringent, or Aperitivus Crocus; according to the effect it works. All inflammable things communicate Acidity to the flame, as Wood, Shrubs, Herbs, &c. The Reformer brags that this inflammable Acidity, is the Acid spirit of Sal Armoniack, and in this place he plainly is ignorant of it.

It may seem to many, that I speak a Paradox, when I say, that the flame of the fire is Acid: I am so far from Recanting it, that I further affirm, Fire comes nearest to the nature of Salt, consisting of Alcaly and Acid; for which cause it is biting, sharp, acetous, subtilly cutting, piercing, pure, incorruptible, incombustible, and is that which preserves from Corruption. Now as in Salt, I have separated the Acid part, so I shall shew, by this Experiment following, that it is separable also in Flame.

Lead with Acid dry Wood is burnt into Minium, but 100% of Lead, after it is turned to Minium, makes 110%. I demand how the Minium gets 10% in weight? certainly nothing had been added to it, but the flame only: The flame therefore assumed a body in the Lead, and this body, which increased the Lead from the flame, is of an Acid taste, as the following experiment proves.

Distil, out of a Glass Retort, with an open fire, some of the self same Wood, with which you burnt the Lead, and there will extil a Liquor, of an Acid taste; which, out of the Retort in form and manner of flame, embraces the Lead, and is mixed with it, and fixed into Alcaly.

Melt again the Minium into Lead, and there will be only 100% as before, so that the ten pound gained, was neither Minium nor Lead, but the Acid expelled from the Wood. But This not being of the nature of Lead, is not Colliquated with it, and because it is not sufficient for it self singly, as Hippocrates says, in the reducing the Lead, it flies into Element, as I have shewed before concerning Salt of Tartar, Oyl, Vinegar, &c.

This artificial Alcaly out of Lead, being turned into Minium, with fire and vegetable Acid; or the same Lead

In Append.
f. 73.

Nature alike in every thing.

Properties of Fire and Salt.

Lead made Minium.

That Volatile Alcaly is distilled from Soot, is known to all.

Lead made *Litarge*.

Plaisters of Lead most Ancient, Prepared by Chymical Art.

Lead yields Colours, and Glass.

* In his Book of Ancient Medicine.

How Lead cools.

with Mineral Acid, made *Litarge*, if you boil it with Oyl and Fat, then the Alcaly acts upon the Occult Acid of the Fat, after the manner of the Alcalyes: and the Acid again upon the Alcaly, and so they are coagulated in a Neutral thing.

Thus is made the Emplaister, *Triapharmacum*, as also That of *Cerusse* and others of the like sort, as I have shewn in *Sope*, the cause of whose inspissation, was hitherto unknown to the Reformer, as appears by his Epistle to me, to wit, *That the Oyl of Tartar, with the Alcaly was inspissated like Pitch* (as Chap. 21.). And he writes thus to Apothecaries, That these are boiled, according to Art. But among Metals, there is none that doth more readily associate with fixed Acid than Lead: For according to the species of the Acid, it changes its form, as I have said of *Alcalyes*. The steam of Vinegar turns it into white *Ceruss*; *Acidity* in flame, into red *Minium*; by the Acid of *Sulphur*, fire being added, 'tis turned into black; with Acid Minerals impure and mix'd, 'tis turned into a double *Litarge*; with the Acid of yellow Clay, 'tis burnt into Glass of a box-like colour; with the Acid of black Clay, into a swarthy vitreous colour, as the Glass-men know; For which cause, Melters and Refiners of Metals do honour it very much, because it absorbs all sorts of Acids, and clears the Metal from all spots.

The Ancients have observed, that all inflammations in living creatures, arise from *Acidity* (* *Hippocrates* attesting the same; *In Man*, says he, *there is Acid, bitter, most Acid, and hundreds of other things, which according to their quantity and strength, have various faculties.*) For which cause they devised several Oynments and Plaisters of Lead; That they might take away that *Acidity*; and the oftner those foresaid Unguents are changed, the sooner is the Acid consumed, and the Distemper cured. This consumption of the Acid, in condescension to the capacities of the Vulgar, we call *refrigeration*, in as much as it mortifies the cause of Heat.

CHAP.

CHAP. XXVII.

A further Probation, that there is Acidity in Flame.

Reverberate whole Corals in an open fire, twelve ounces (for example) for six days and nights (the fire serves the Skilful for distilling Spirit of *Vitriol*) and you will find fifteen ounces (*i. e.*) three ounces encreased, and turned into a most fine powder; this encrease, is nothing else but the Acid from the flame, which dissolves the Corals, and is coagulated and fixed with them, after the manner of Acids, into Salt. If you poure distilled Vinegar on this Salt, it doth not send forth Bubbles, as it otherwise happens in Corals, not reverberated; for they are saturated with Acid, and it dissolves Them into a pellucid Semi-Acid Liquor, which though transparent, and colourless, yet it hath a latent Sanguineous Redness, which, the affusion of Spirit of *Vitriol*, in a moment makes manifest. 'Twas neither the Vinegar, nor the Spirit of *Vitriol*, which introduced this redness; for then, the Mixture would be always red, when the Magistery of Corals is prepared the common way: wherefore of necessity, this redness must be secretly Latent in the Coral, and by the help of Fire be produced to maturity: of which I shall now forbear to speak more, 'tis enough that, contrary to the sleepy Doctrine of the Reformer, I have shewed, that Acid hath not destroyed this Salt, and that, Tincture of Corals, abides constant in the fire, which you may by ingenuity separate, and it will commend and praise it self.

So, place the *Regulus of Antimony*, being elevated into Flowers; *E. C.* twelve ounces, on the floure, or hearth, of the Glass-mens Oven, or Furnace, in a large fit Earthen Vessel, well covered, lest the flying Ashes should fall into it, and remove it far from the Eye where the

Tincture of Corals.

This Tincture is the Rector or Archeus, as long lited as Coral it self, of great Vertue, not destroyed by fire it self, as I have shewed in Wine.

Antimony fixed by Acid, from fire.

the

the flame plays, that it be not melted; so let it stand eight days, afterwards draw the Vessel nearer to the Eye, every fifth day a little, until about the fiftieth day, then you will find the Flowers of the *Regulus* fixed into a small, light, and most white powder, and increased by two ounces, by the Acidity drawn from the fire, which pierced the Earthen Vessel, without hurting it, after the manner of Spirits.

This *Regulus*, was erst melted, with a gentle fire, now it resists (even Antimonial) Fusion, unless it be urged with quick blowing Bellows, then the Acid Spirits return, from the fire, to their Elements, and you will find twelve ounces of *Regulus*, as I before shewed in Lead.

In like manner, deal with *Crude Antimony*, and it will part with its Volatile Acid Spirits, and assume other more fixed ones from the fire, and is turned into a white powder, like *Antimonium Diaphoreticum*, of greater vertue, in Physick, then that which is burnt with *Nitre*: the reason is, that here, so much of the Sulphur doth not deslagrate with the *Nitre*, but it is here fixed, by its proper *Regulus*, by the fire, which this Mechanick shews: Boil *Antimony* in simple water, let it be mixed with three parts of *Nitre*, and by turns kindled, and calcined, in that Ebullition, the *Nitre* (from the Sulphur of *Antimony* being burnt to Alcaly) dissolves the Sulphur of the *Antimony*, which is now fixed (as the boiling or bubbling Alcaly of *Tartar* doth dissolve common Sulphur, for Milk, as *Crollius* hath it:) sprinkle Vinegar on this Solution, being filtrated, warm, (and you shall perceive the Odor of the Sulphur) which presently is drunk up by the Alcaly, and the Sulphur falls into a white, small, rare, light, and spongy Powder, which you must wash: A drachm of this, given with Vinegar, in the Plague is more worth than an ounce of that which is not boiled nor dissolved.

Hence it appears, That the Sulphur of *Antimony*, which elsewhere deslagrates with the *Nitre*, here is fixed by its proper *Regulus* by the Fire, in the above-named Vessel, and so becomes more perfect, so that there is Acidity in the flame of Fire, which I have shewed to be imbibed

Milk of Sulphur of Antimony, of great Vertue.

Fired Antipestifential Antimony.

imbibed by Corals, and Antimony, as well as Lead, and so by Iron it self, which with this, and all other Acids, is with fire turned into Rust. So that there is no difference, betwixt that *Crocus Martis*, which is made either with manifest, or Occult Acids; both of them are either binding or loosning.

Crocus Martis.

CHAP. XXVIII.

The ways and necessities of Precipitation discovered.

There are Varieties of Opinions amongst Writers, concerning the Properties and Operations of Iron, and how; and by what manner, it performs them in Man's body, * *Sennertus* gives us a Catalogue of them, but few of them have hit the Mark, by reason of their ignorance of *Hippocrates* his Doctrine. I will therefore shew how It adstrings and how it loosneth.

* L. 3. P. 2.
sect. 2. C. 7.
* L. 1. de Diet.

Iron doth manifestly bind, and consequently it strengthens the Stomach and neighbour parts. Therefore it is good in the Dysentery, Lientery, Diarrhæa, and all Laxative diseases, &c. But I hear some object, that Iron Medicaments provoke the Terms in Women, and restore the defects of the Liver, and Spleen, and so do rather Loosen than Bind? I answer (not as that Canonical Physician, who asserted, *That the stones of Crabbs; were a Mineral, and therefore an enemy to Nature*;) but my answer is from the works of Nature, in which I have demonstrated out of * *Hippocrates*, *That these things must needs so happen by Divine necessity*; To wit, that there is often observed to wander up and down in us, a certain dissolved Salt, the Generation whereof, I have shewed before in its place, It consisting of Acid and Alcaly Compounded, less agreeing among themselves, and unfit for Transpiration and Sweat. This, by reason of the inequality of the Sapors, doth not obey Purging Medicines,

* L. 1. de Diet.

cimes, as Experience shews: Call *this*, if you will, an Humour truly excrementitious, lodging either in the first, or in the last region of the Body, produced either by the Womb, Liver, Spleen, Reins, Sweet-bread, Mesentery, or Stomach; as to this point, 'tis all one. Iron then being taken, which as I have shewed Mechanically, doth easily imbibe all Acids, presently, That Noxious Liquid-Salt, or Excrementitious Humour, runs hastily to the Iron, and adheres to it, that it may dissolve it, and so that Saline Excrement, according to the kind of the Sapor, whiles it sticks to the Iron, and corrodes it, is coagulated (as we have seen it, with the Acid of *Vitriol* to be turned into *Vitriol*, with the Acid of Wine into *Rust: So also it happens in Copper, which, if Vinegar corrode, it becomes Verdigrise; if the same Copper be corroded by Spirit of *Vitriol*, it becomes *Vitriol of Venus*; Consonant to this Doctrine is, what I have formerly Ocularly demonstrated concerning *Alcalyes* and *Acids*) but since It cannot be assumed into Aliment, therefore it is purged by Stool, with the dissolved Iron, of a black colour; which colour ariseth, when the Acid Salt, corrodes the Iron, and the Alcaly precipitates it into Colcothar, as I have shewed above in its place.

But when Iron is drank, dissolved in an Acid Liquor, but grateful to the Stomach, The same Liquors being taken, and throughly admitted, the Iron presently, being unfit, as I said, for Aliment, is separated from the Acid, by the Vertue of the Alcaly in the Mixture; In which Segregation the aforesaid Salts or Humours flow to the Iron, and adhere to It, as we see it happens to Silver dissolved in *Aqua Fortis*, if thin Plates of Copper be cast into the Solution, then presently the Acidity of the *Aqua Fortis* deserts the Silver, and corrodes the Copper, and the Silver adheres to the Copper, as a compact Powder. Again, put a thin plate of Iron into the Solution, which is now greenish from the Copper, and the water presently leaves the Copper, and corrodes the Iron, and the Copper adheres to the Iron, whiles the *Vitriolate* water of *Ussaria* corrodes the Iron, then the Copper falls from the water into the place of the Iron, which contained the

Vitriol

* And becomes the Tincture of Mars of the Reformer in his Appendix, fol. 83.

It doth not ascend the Diaphragma.

As appears in Acid Fountains.

I speak not of him, that never saw any thing in his life, but striking Excrements.

Vitriol unripe, this red powder, melted in the fire, turns to Copper: This Precipitation, many learned Men (but ignorant of Hippocrates his Doctrine) have believed to be the transmutation of Iron into Copper: even so Mechanical reason and necessity also do Dictate, that it must be in Man's body, especially, since *Nature is alike in every think*, as the *Old man* speaks. For unless the excrementitious Humour were of a certain Semi-acid Nature and Taste, the Iron would not be dissolved in the body into a green or black mash, as we daily see, that it is, and I have also shewed in its place. And unless the Excrements be so tinged, Iron is unadvisedly given, for it finds not a fit Humour to dissolve it; and in that case, Iron is Astringent, though the *Aperitive Crocus Martis* of the Reformer had been taken by the Mouth. The same thing is to be understood of Acid Spirits, as of *Vitriol, Sulphur, Glass, and Salt*, for These, if they find not a wandering Alcaly in the body of Man, an enemy to Vitality, and therefore Morbous (which the Acid Spirit may receive into it self) they do more hurt than good, for then by their over much Acidity they infect the neighbour Aliment of the Stomach, and make it unfit for Nourishment. A Physician of Rome, a friend of mine, *Anno Dom. 1656*, in the time of the Plague, used Spirit of *Sulphur*, in quantity, for a Preservative, who thereupon became *Arthritical, and was afterwards restored by the Alcaly of Animals, as I have elsewhere shewed, concerning the *Fect-Gout*. For the Alcaly imbibes the Acid, wanderingly dispersed over the the body, which was the cause of Disease and Pain in the Ventricles, not being accustomed to things manifestly Acid; for so *Hippocrates teacheth. If any one prescribe Acid meats inconsiderately and without choice, they do no good.

On this principle of Precipitation, was the Golden Nail of the great Duke of Florence made; which Ferdinand the first of happy Memory, graced with this Testimony, which is to be seen with the Nail at Florence.

Mr. Leonard Turneisser in my sight and presence, turned an Iron Nail heated in the fire, and immersed in Oyl, into Gold; done at Rome the 20th. day of November after Dinner:

Q

Such

The use and abuse of Acids.

* The Remedy of Arthritis is by Alcalyes.

* Of Purging Medicines.

A Golden Nail.

Such Nails, I have also, in Sport, sometimes made, with my own hands, but such as deal in Metals the vulgar way, think it altogether impossible that Gold and Iron should Conglutinate; and therefore they firmly believe, that This Nail is really changed out of Iron into Gold, and that which confirms their belief, is, that Gold doth not adhere to Iron; yea Gold melted, corrodes It in a moment, and turns it into Rust*. But Gold is connected with Iron, by means of Precipitation, as I have said, on the same reason and ground, for which Iron precipitates Copper: Cut then an Iron Nail into two parts, moisten the end, at least with Spittle, and presently touch that part with Cupreous Vitriol, and in the very *punctum*, the extremity of the Iron, waxeth red, and hath now acquired the nature of Copper; Now Gold is easily associated to and with Copper; and so fit a Cuspe, or point made of Gold to this Cupreous Iron; and with Borax and Golden Solidature or Soder (which is made of *Copper money; a little Silver and Gold melted at the Eye is better) melt it after the accustomed manner, in a fitting Coal-fire, and then you shall have the Golden Nail so much spoken of. *Turneisser* tinged this Nail with *Ferrugo*, wherewith he hid the Gold, and so (without doubt offered it to that great Prince, to handle with his hands, which being so disguised, the Skillfullest person, that is, would have judged to be Iron. And then heating it by the fire, and dipping it in a certain Oyl (as the Testimonial says) and washing away the *Ferrugo*, the Gold appeared. This was the Artifice, if it be worthy of that name.

But let us return to Iron, which taken at Mouth, frees from Obstructions arising from the aforesaid Excrement, and so becomes Aperitive by accident, in as much as it absorbs that coagulating wandering Acidity, proscribed by Nature, yet of it self, it is still Astringent; wherefore it is *Aperitive* by a specifick and appropriate Vertue, but it *Binds* by a second quality.

C H A P.

* As Common Sulphur doth.

The passage from one Excrement to another, is impossible without a *Medicium*, as the Philosopher says. *6. Phys.*
* Grew of Gold.

Iron Opens and Binds.

C H A P. XXIX.

Nux Cassa.

Shell without Kernel.

I Have declared, that Copper is turned by Vinegar into *Aerugo*, or Verdigrease. This the Reformer advises us to Distil, I remember (says he) that I have made mention of a certain secret *Menstruum*, which hitherto the Canine envy of some Malignant and Ingrateful Fools hath caused me so keep secret, amongst my other Arcana's; but now leaving the revenge of all injuries wrongfully offered, by what hand soever, to God, being pressed on by a good conscience, and the benefit of the Publick, I am resolved to publish it, on which the greatest of Remedies do depend, as their main Pillar: What will our Princely Doctor now teach us? *Spirit of Venus*, and an *hidden Menstruum*, which for unworthy Mens sake (who can forbear laughing!) he determined to conceal. Oh unskillful Rudeness! who would ever have expected from him, such a great and liberal Contribution, for the publick good, unless he had told us so himself?

Appud. f. 72

A sad severity in Countenance, but not truth in his words, Ter. Andr.

O Curas hominum, O quantum est in rebus inane!

O curious Study and vain Care,

Of Men, that vain and empty are?

'Twas more than a hundred years since, that *Basilius Valentinus* published this Distillation of Vinegar (in a Book, which he calls, *A Manual Instruction to Physick*, Written in the Germane Tongue, and Reprinted at Frankfort by *Luke Iennis*, An. 1625. in Quarto) under the Title of *The true Solution of Pearls*. The Reformer borrows it from him, suppressing the Author's Name, for there it is word

Q 2

for

In Aq. Edilpt.
Pharm. Regia.
f. 170.

To what purpose these uncouth, costly, laborious, and nauseous Compositions, if Vinegar, which is grateful to all, doth the deed.

Turpe est Doctori, &c.

for word, and this he boasts, not only for an *Universal Solvent*; but (seigns it also to be his own Invention, and inscribes it, *Our Spirit of Venus*) for the *Liquor Alcahest*; So that, not without a fatal Prediction, *John Frederick Banz*, prefixed the Reformer's Name before the Dispensatory, with an Anagramme worthy of him, as may be there seen. But the Reformer adds without blushing; *This most excellent Spirit is not only of great vertue in Physick, as being highly Curative of Epileptick, Apoplectick, Hysterical, and Hypochondriacal Distempers, being duly and lawfully exhibited; but is as the Liquor Alcahest, and not as other Acid Spirits, who suffer and are destroyed by Solution, and so are turned into another Ens, &c.* I could wish *Basilius*, when he taught us how to distil this Vinegar, had been afraid of Impostors, as *Hippocrates*, *Paracelsus*, and others were. Then the Reformer had never obtruded This, for the *Liquor Alcahest*, nor had loaded it with so many Encomiums, thereby deluding the World. He advises us to buy this Vinegar at any rate, adding these Vain-glorious and Magnificent words; *Enjoy Courteous Reader, this Secret, and let me continue in thy good grace, for my faithful Communication of it.* In good time? draw near all ye inquisitive ones, behold a great Secret manifested never so much as dream'd of before? But Nature laughs to see such lyes held forth for truths: There are some, who, without any great labour, time, or expence, do distil a like and much more powerful Liquor out of Lees of Vinegar, into a great Receiver, which yet they proclaim not for *Alcahest*.

Let us therefore take notice of the Subject from which the Reformer distils this *Wonderful Solvent*, which, with a worthy Name, he appropriates to himself, and calls it *Our Spirit of Venus*.

It is *Aerugo* or *Verdigrase*, which is thus made, thin Copper plates are put into Mother of Wine, when it is fowre; this Acidity corroding the Copper, is coagulated with it into Salt, as it happens to every Acid by Corrosion, as I have Ocularly demonstrated in *Lead* and *Coral*: The Reformer mundifies this green Salt with Distilled Vinegar, from which surely nothing but Vinegar can be distilled,

distilled, as *Basilius* in the fore-cited place, doth ingeniously confess; as it happens to Spirit of *Vitriol* by corroding Copper, it becomes *Vitriol*; from which, if you distil it, you can extract nothing else but the same *Stagma* or Spirit of *Vitriol*, which you poured on it, according to the Old saying, *Nihil dat, quod in se, non habet*: Melt the remaining *Caput Mortuum* or *Fæces*, in a Pipkin, adding thereto a little *Nitre* and *Tartar*, then the Copper returns to Copper, as it was before it was changed with the Vinegar in *Verdigrase*. This is the Secret and mysterious business the Reformer out of his overflowing Liberality, is willing to communicate for the Publick good; and persuades us to buy at any rate, saying, *Enjoy, Reader, this Secret, &c.* Away with this Cheating, which even the Vulgar do deride, not believe? Men know well enough, that Secrets are not to be revealed, but in Parables, Allegories, Metaphors, and such like Disguisings; So *Hippocrates* advises, and both He and Venerable Antiquity doth the same: *Speak not* (says the Wiseman) *in the ears of a Fool, for he will despise the Instructions of thy mouth.* So *Johannes Picus* in his Book of the Dignity of Man, *Pythagoras*, *Plato*, *Boetius*, *Macrobius* in *Scipio's Dream*, *Cornelius Tacitus*, &c. All of them, with one Mouth, affirm that Secrets are not to be divulged, that so unworthy men may not be partakers of them.

But go to? may we not use Vinegar simply distilled with less labour and charge? since it is one and the same thing? Do not the Writers of the Elements of *Chymistry* teach us to prepare Salt of Pearls and Corals with Distilled Vinegar? and afterwards to wash it? which yet is found to be unprofitable, in as much as the *Acids* are coagulated with the Solution, as I have often shewed before.

But to contract all in a few words, *The Vinegar and Spirit of Venus* of our Reformer, are nothing but water impregnated with an Acid Volatile Salt, which, if it corrodes any thing, 'tis presently Coagulated, which afterwards by combustion is fixed into Alcaly.

Wherein now doth the Magistery of Corals and Pearls of the Reformer exceed That which the Rudiments teach? What Prerogative one hath above the other,

we

Secrets discovered, lose their esteem.

We may learn from Spirit of *Vitriol* and *Sulphur*, which precipitates both; the reason whereof is, that the more potent Acidity apprehends the Solution, and in it undergoes Coagulation, and therefore encreases in weight, neither can you fetch it back, but by a violent fire.

Append. f. 13.

That Experiment is fallacious, if Knowledge precede it not.

Is it so indeed? doth our Reformer so satisfy God, his Neighbour, and the Truth? as he affirms in his *Animadversions*? Are these the *Inventions* taken from true Reason and Experience, hitherto seen, and observed by none else, for the comfort of Mankind? As he boasts in the Preface of his *Appendix*.

Was *Horus* so to be deluded? to whom he promises in his Epistle Dedicatory, to discover what he knew not, to wit, to rectify the Genuine and usual method of compounding Medicines, and to free it from Errors, lest the People should be put to the loss of their Money and Health, but that they may live more happily. To wit, by proclaiming Vinegar for *Alcahest*.

He that speaketh the Truth, may do it without labour and trouble; and I wonder you sweat and labour so?

Dante.
In Append.
f. 13.

Are these the things, which leaving his necessary businesses he published to the People with so great labour, as his Epilogue speaks?

This Reformer being drunk with his own Vinegar, cants out Wonders, *Our Spirit of Venus* (says he) *Extracts an Adstringent Tincture from Filings of Steel*. News indeed! as if all Vinegar with Iron filed, did not grow Red? 'tis known * to do so to all Blacksmiths. In his *Mantissa Hermetica*, a little before he teaches, that he can prepare *Adstringent Crocus* most exactly by *Reverberation alone*, without the mixture of any other thing: Now, to procure Credit to his Vinegar, he grants both: What is this, but impatiently and foolishly to play the Trifler, yea to pretend to teach the contrarieties of Salts and Vinegar, and yet to know neither.

CHAP.

CHAP. XXX.

Exitus Acta probat.

The End crowns the Action.

Out of a desire of Knowledge, I red the *Pharmacopaa Regia*, Writ by our Reformer, out of a vain itch for Glory, but full of many Absurdities. He promises to Kings a *Narcotick Sulphur of Vitriol*, under the Title of *Eaudannum*; but it may be truly said, of it, The King escaped by the help of Fate, and not of the *Narcotick Sulphur of Vitriol*, which is no where found in the whole Book of Receipts: So also he promises to Queens a *Ludus Preparatus* to beget Milk, which yet he never saw or knew: Hence came the common Proverb, *Mentiris ut Medicus*. This *Sulphur* of his, and that *Ludus Preparatus*, change not their Soil, nor pass beyond the Seas; they like well the place of their Nativity, and love not to stir further, viz. then the brains of the Reformer. f. 849.

So in his splendid *Appendix* to his *Pharmacopaa Regia*, almost in all his *Compositions*, we have these Pompous words, *Magisterium Nostrum Solubile*. An Ostentation so vain, that it would raise laughter in *Heraclitus* himself, which yet is nothing else, but Pearls and Corals corroded with Vinegar, as is known to every Fresh-water Physician. But he himself undervalues and laughs at the long Receipts of Writers; but who ever saw or read longer than those in his *Pharmacopaa Regia*? who, more Inlegant ones? Take that *Compositum* for an example, which, by a specious Title, he calls *Pilula Regia*, where *Opium* produces all the effects which he promises. To what purpose then is the corroded Gold, which, being Simple, hath no affinity with *Opium*, the ground of the Pills; of these *Homer* sings,

In Append. to
Animad. f. 530.

f. 1230.

Pharmacopaa:

Pharmaca mixta salubria multa, & noxia multa.

Of mixed Druggs, some hurtful are, some good.

Hipp. I. Aph. I.

One matter alone cannot have two Species together; which our Chymists must diligently mark.

Truly the huddling together of *Simplis*, made by unskilful hands, do infatuate and destroy Princes, and causes the nick of the Cure-time, which in a moment passes away, to be spent in uncertain conjectures. I shall add but this one thing. I advise you to avoid Receipt-mongers as much as Juglers, who do boast of their Prodigious Compositions, and so Huckster and make Merchandize of our Diseases, and as it were, cast lots for our Lives: I say it is impossible, or at least very difficult, to determine any thing certainly, unless only Putatively and Conjecturally; as I have shewed in the Nettle only. But as often as *simple* things do not effect what was desired, then it is that they want *Composition*, as I have clearly shewed in Vulnerary Potions, in Tinctures and Inks; and I will yet further evidence by this one example: Take two parts or pugils of Juice of Sage, of Vitriol of *Mars* one part or pugil, both of these mixed, do suddenly grow black, for the Occult Alcaly of the Sage doth absorb the Acid of the Vitriol; In an hour the Acid, as it is a Mineral, doth conquer the feeble Alcaly of the Vegetable, and the *Compositum* waxes green: To which add further, three parts of Vitriol, then it assumes not a black colour (as might in reason be thought) but the Alcaly then consumes at least the subtle Acid as turns the Vitriol into *Ocre*, as it happens to it, when the Spirit by little and little decays; but whither do I digress, seeing I know that what cannot be changed and altered, is to be born?

Appud. f. 48.

But the Reformer doth perpetually commend such Compositions; saying, *That both the Sick and Physicians too, would be in an happy case, if such Medicines which are truly Royal, were at hand, and yet of so small a price, that they may be used by the poor, &c.*

Now to you therefore, O ye Ingenious Pharmacopians, do I direct my speech, I beseech you to cast up the account, and to judge (not of many unprofitable and laborious

laborious Compositions, which if they were all at hand and in readines, the whole City of *Auspurg* would scarce contain them, but only of the distilling of this Vinegar from Verdigrease for corroding Coral, for if you reckon up the Vessels and Instruments of Art requisite for the purpose, with the Time which is to be spent in it, where will there a poor man be found that can be at such expence? but if this and such like artificial Compositions be dispensed and sold for a small price,

Tunc labor in damno est, crescit mortalis egestas,

Then our Labour procures Loss,

And Poverty becomes our Cross.

But if I should longer insist on all the gross and Erroneous Opinions of our Reformer which are scattered here and there, I might swell a Volume, which may be plainly seen in his first Syrup. * This, as others, was invented by the Ancients, that it might be Administred to every individual person, and so be in readines and at hand in Shops; but seeing many persons can hardly endure the smells, especially of *Spike*, without belching and turning of the Stomach, yea they resist Digestion, as appears in Meats seasoned with Spice; who do destroy the ferment of the Stomach; Hence the Ancients commend *simple* Food as most wholesome. For this cause, even for this Syrup, they chose *Pontick Wormwood* as less Odorous, and boiled it in old Wine, together with *Spike*, that the Odor, together with the Spirit of Wine (to which it is easily associated) might wholly be expelled and gone; which, the addition of Juice of *Quinces* shews; for unless This had been the Intention of the Ancients, instead of this Syrup, they had used *Quince-Wine* and *Wormwood-Wine*, as we may * see in *Dioscorides*. They preserved the remainder with Sugar from an hoary Vaneu, and thickned it into a Syrup.

So also sundry sorts of Wines, mixed together and drunk, as is usual in Feasts and Banquets, do not only create trouble and labour to the *Rector* in Man (which I shewed above, *Chap. 15.* out of

R

* Hippo-

* Of *Wormwood*, *Pharmac.* f. 17.

Simple Food most profitable; the heaping together of Saps is Pesticiferous. *Plin.* l. 11. c. 53. 54.

* L. 5. c. 49.

* Of the Humours.

Gio. Boccat.
Nov. 7. Feb. 2.
observed this
also.

Hippocrates, hath his seat in the mouth of the Stomach) to unite them, but moreover do easily Inebriate Men, and by tender Persons are sometimes violently cast out by Vomit; but when the Juices of the same Grapes (though Multiformous and Various) are united together by *Fermentation*, then from and by diverse *Rectors*, one wholesome drink is made, not offending the Stomach; even as *Treacle* is made out of diverse *simples*, co-united by *Fermentation*, over which, one only *Rector* doth Predominate: Hence It is commended by *Avicen*, as of wonderful Vertue, as I have noted in my Preface.

But since it is none of my Intent to discover Pebbles in the Sea-fibre (as the Proverb is) where there is such an infinite number of them, especially not being delighted with this kind of Writing, it is against my *Genius* to insist any longer on these Trifles, and therefore I will now withdraw my Pen and Hand.

This is the Stress of the Matter, The Reformer came to act his Part on the Stage before he knew *That Nature did all alike in every thing.*

Now for a Conclusion, a word or two to our Friends in their ears; the *Acid* doth inform the *Alcaly*; with These, the ancient Foundations of Old Physick and of the Viperine Salt, do absolutely agree in a perpetual Concord and an immutable Similitude, (as I have shewed to those that understand me aright) from the decree of Nature it self, and out of the Doctrine of my *Hippocrates*; by the most Harmonious and Mechanick Reason, and the highest necessity.)

My pretended Friend endeavouring heretofore to learn this consent of *Nature* and *Art* by examples, and not being able to do it, he rages like a mad Dog, and bites all that come near him; preferring himself far before others, as appears throughout all his Writings; So every Bird likes his own note best, neither is any thing more unjust than an unskilful Man, (as *Terence* speakes) *Who thinks nothing well done, but what he does himself.*

FINIS.

AN



A N I N D E X

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contained in

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F I N I S.

CLAVIS

To the Ancient Hippocratical

PHYSICK

OR

MEDICINE,

Made by Manual Experience in the very

Fountains of

NATURE.

WHEREBY,

Through Fire and Water, in a Method unheard
of before, the Occult Mysteries of *Nature* and
Art are Unlocked and clearly Explained by a
Compendious way of

OPERATION.

Senec. Epist.

*A man can never more torment the Envious, than by applying
ones self to Vertue and Glory.*

L O N D O N,

Printed by *Tho. James*, and are to be Sold by
Nath. Crouch in *Exchange-Alley* over against the
Royal Exchange in *Corn-Hill*, 1677.

•••••

It is an Uncivil thing (says H. Khunrat) to judge of the whole of a Book, by one part of it only, unless the whole Book be first Read over, and thoroughly weighed.

•••••

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... of ... and ...
... in ...
... in ...

To the Serene and Mighty Prince, the Lord
CHRISTIANUS ALBERTUS

By the Grace of God,
Heir of Norway, Duke of Sleswick, and
Holsatia, Stormar, and Dithmarsh,
Earl of Oldenburg and *Delmenborst,*
His very good Lord.

IT was the custome of the First Philosophers (Most Serene and Mighty Prince) that whatsoever Secrets of Things, or Mysteries of Nature, they found out, they would immediately impose Divine Names on them; and so, as much as they could, hide them from the Vulgar; or else they would relate them under disguised Words, Forreign and unusual Terms, Allegories, *Aenigma's*, and Metaphorical Speeches, either because they feared the offence of the Unskilful Multitude, or else being perswaded, that those Abstruse things would meet with no approbation, if they were easily understood.

Hippocrates of *Coos*, treading in the same steps, that Divine and Venerable Old-man, and deservedly Chief in this most Famous Art (in whole Praises the Ancients, and all Neotericks have sufficiently Expatiated) shews the hidden Foundation of this Noble Science, in these words. *If*

A a there

There be no thing Divine in Diseases, the knowledge and fore-sight also of That is to be sought after, if a Man would approve himself a good and admirable Physician. But what that Divine Thing was, he no where clearly discovered, nay, he Studiously and of purpose concealed it, expressly affirming, that nothing ought to be spoken or published in this Art, save what was known to *Plebeians*. On which account, *Physick* was heretofore esteemed *Sacred*, and the gift of God, so that all the Ancients were of opinion, that It could hardly be attained unto by Humane Understandings, because the Foundations thereof seemed so abstruse, hidden, and admirable, that They were not to be found out by the strength of Nature; And although, heretofore; and in all Ages, Men of great account for acuteness of Wit, and Skill in *Physick*, have Illustrated Its Doctrine, yet there is nothing extant in their Writings in clear and express words, neither can any thing be culled out from thence, but what is sullied with Obscurity: They all endeavouring as much as they could, more, to eclipse and darken It: *Neoterick Physicians* who succeeded them, in Writing, Disputing, and desiring to increase this Art, have false to pieces amongst themselves, and contemning that *Divine* thing in Diseases, rail at one another, and are divided into several Sects; neither doth the Division cease to this very day: For one desires to be styled a *Chymist* or *Methodist*, another a *Galenist*, a third a *Dogmatist* or *Canonist*, so that this most Noble Ancient Hippocratical Medicine, which is but One, is now, not only rent into many Sects, but is also overcharged with an infinite number of Books; by which a lover of, and enquirer

quirer after Truth, is not only confounded, but must needs be over-welmed: There being such a vast Ocean of Them, and so great a variety of Writers, subtilly spinning out their Arguments *pro* and *con*.

In the mean time, I was always of opinion that That before-mentioned short Sentence of *Hippocrates* was to be deeply weighed, and the rather, because that Famous Man, whom Antiquity did almost reverence as a Deity, comprehended that great Supellex and Furniture of Things which he had in his mind, in short and concise Aphorismes and Speeches. Excited therefore by my respect and love to Him, I began to Investigate what that *Divine* thing was; for without the Plenary knowledge of It, the Art of Cureing Diseases would always be Mutilous, and only Inchoative, never fully and absolutely compleat in all its parts.

Some there are who do accuse those men of Impudence, and do also Contumeliously reproach them, who do their utmost to restore and underprop Sciences (delivered indeed by the Ancients, but now almost worn out by age, and Adulterated besides) or else who do endeavour to add to them, or illustrate them: moreover they labour to Degrade such persons from the first Knowledge of things, and so to dis-inherit them from their possession of ancient Learning; by whose Calumnies the Enquirers after Truth, are deterred and led out of the right way.

If the ancient Philosophers had taken this course to reproach the Labours and Studies of Those that went before them, they had never pierced into the inward knowledge of Nature, but the Truth in many Sciences would as yet have been buried

in

in Obscurity, and very few would have attained to any light in the Secrets of Nature.

But since Those Philosophers were pleased with another way and manner of Study, not being deterred or taken off from their honest Labour by the tongues of Revilers, but rather more earnestly applying themselves to their Disquisitions and Studies; so that almost in every age, some one or other Art and Science was hatched or else retrieved, and from small beginnings, promoted to great encrease.

Semblably, why may not I more clearly open the sense of *Hippocrates*? That so the Ancient and Noble Science of *Physick*, and Method of *Cures* may receive an advancement? why may it not be lawful for me to Contemplate that *divine*, abstruse and admirable Thing, as well in Diseases as Remedies? and to restore It from Darknes to Light? Let the Tongues of Slanderers be silent, let them not blame me, that being but a *Puny*, I first of all bear the Lamp to all that seek for Truth, in this Argument. Let all such Flies and Cantharides be packing, for as the One pitches on the flourishing Corn, and the Other fly into the sweetest Oyntments; so these foolish and sloathful Calumniators cease not to detract from the labours and manners of other men, perswading themselves that they shall catch much Honour and Glory, by fishing for it in the disgracing of others.

Avaunt such Thorny Medickes; Let them continually go a begging, and spend their time in collecting raw Receipts, reformed neither by Reason, Method, nor Judgement; which, *Hippocrates* disapproves and proscribes in the very entrance into

into this Art, as unsafe, because not understood. *Experiment*, says he upon this account, is *fallacious*: Neither let them Object to me, this my *Institution*, as a new and unprofitable piece, whereas indeed It is most Ancient, and found most true by solid Experience, not that I am so vain and insolent, as to boast my self to be the *Author* of It, I only profess my self to be its Interpreter and Explainer.

These things I determined to do in a Book by it self, and therefore I pre-emitted my *Hippocrates Chymicus*, which Book seem ed necessary for the demonstration of the Subsequent Doctrine by known Examples. But now, seeing Malign Ignorance reigns in Our Art, I think it better to change my Resolution, and to reduce into this *Compendium*, what and how much of *Divinity* is in Ancient Medicine, as also in Natural Philosophy, and in all things; All which shall be discussed, for the sake of the Prudent, in this Little Book.

I determined, Mighty Prince, and my gracious Lord, to Dedicate this my grand Endeavour to You, not with an intent to Blazon the *Genealogy* of Yours and Your Ancestors most August House, that be far from me, for I know that all Adulation doth displease Your Highness; but because You are a Favourer of hidden Sciences, and of all admirable Things, and especially a Patron of the Muses: which evidently appears, not only by that flourishing Academy which you have lately erected, but furthermore by those great Largeesses and Stipends, wherewith you have endowed its choice Members, and learned Professors, out of Your incredible Clemency and Favour.

Year. To which may be added Your Highnesses
 singular Courtesy, Bounty, and Benevolence, ex-
 tended towards Me in particular, your poor Cli-
 ent, the last year; and also that unspeakable Benefi-
 cence, which Your Father, of happy Memory,
 a few years since, shewed towards me, which
 you by a rare Example have also doubled and out-
 done: Which consideration alone had been suffi-
 cient to have obliged me to make this Dedication
 to Your Self, and so to hang up this little Table
 on the publick Altar of Immortality, not only
 that my Writings may hereby speak to the whole
 World, but that I might manifest the symbol of
 a grateful mind, and might testify and profess my
 observance of You.

Be pleased therefore, *Great Sir*, favourably to
 accept of that admired *Divine Thing of Hippocra-
 tes*, anciently adorned with so many Trophies, now
 consecrated to Your *Mighty Name*, and let it find
 a place there, whither the Messengers of a grate-
 ful mind are wont to be admitted; which, as I
 supplicate with that humility which becomes me,
 So I also beseech Almighty God from the bottom of
 my heart, long to preserve Your Highness in safe-
 ty and prosperity; so prays

VENICE the Ides of
 November, 1668.

Your Highnesses most
 devoted.

TACHENIUS.

THE

to the Reader.

tongue devise mischief, like a sharp Razor, and love evil
 more than good, and so rashly accuse and condemn others,
 according to the Psalmists words. But how easily their in-
 credible stupidity and ignorance may be, and is, obviated by
 me, by means of this Ancient Hippocratical Medicine,
 there are no better witnesses then those Noble and Worthy
 Persons amongst whom I live, and am daily conversant
 with. And as the Rock breaks and repels the surging
 waves which assault it (it self, remaining unmoveable)
 so it becomes me patiently to hear, and at the same time
 to contemn and despise the reproaches and non-sensical objecti-
 ons of unskilful ones, without any perturbation of mind,
 and without any bitterness and wrath.

For on the 28th day of August, 1668, having received
 a Book, though Licensed and Approved, yet full of ri-
 diculousness and folly; a few days after (my health requi-
 ring it) I went on a sudden to Millaine, to that Illustrious
 Person, The Lord Marquess Fiorenza, a Noble Senator
 of that City, and I compleated this Hippocratical Do-
 ctine in my Chariot on the way; yea, I had published it
 compleat, before the last of the Calends of November, the
 same year (I mean as compleat as the nature of the ar-
 gument required) unless the censure of the Inquisitors had
 retarded my purpose; which I think fit, gentle Reader, to
 acquaint thee with. Favour me therefore, if thou art in
 thy right mind, and remember Hippocrates his Advice,
 which is, not to divulge or make known any thing, but what
 is within the Ken and Cognizance of Rusticks and Plebei-
 ans. Farewell.

Otto

B b

[This and the next leaf
 should immediately precede
 Cc (p 2)]

Otto Tachenius

HIS

KEY

To the Ancient

HIPPOCRATICAL LEARNING.

CHAP. I.

Acid and Alcaly, the most Ancient Principles of Things, what they are?



Q know things is to know them by their Causes, as *Aristotle* Teaches in the first of his *Physicks*. Now the Causes are Matter, Form, and Efficient; Matter is that, of which a thing is made, for in Nature there is no thing which is not made of some pre-existent and subject matter; Form, which gives being or *esse* to the thing, and by which the thing receives its name, is it self invisible; the Efficient Cause is that, which moves the matter to its proper end.

Hippocrates reduces all these three Causes into two necessary and sufficient Principles, calling them *Fire*, and *Water*: *Raimund* calls them *Entia Realia*; *Basilius* *Fire and Water*; *Pagles*, and in another place, *Gladiatores*; others stile them *Lis* and *Concordia*; *Attraction*, and *Repulsion*; *Rarefaction*

Otto Tachenius,

The Principles
of Hippocrates,
Acid and Alca-
ly.

action and Condensation; Male and Female, &c. But I, for the clearer knowledge and explanation of them, do call those two Principles of Hippocrates, *Acid and Alcaly*, because all things in the Universe are made up of these two Universal Principles, as I shall gradually shew by Experience, (so is also, that one only Medicine or Physick of the Ancients) To which yet a third doth inseparably adhere: Hence arose *Sal, Sulphur and Mercury*, the Three Principles of some Philosophers, and rightly so, as will more clearly appear in the progress. These two, either perpetually burn in Love one towards another, or else are at perpetual variance, are multiplied, and one is contrary to the other; so that the death of one is the life of the other, and that which one produces another destroys; that so from this another more noble thing may again arise.

Hence it is, that Hippocrates with good Reason affirms, That these two Elements *Fire and Water*, or *Acid and Alcaly*, can do all things, and that all things are in them. From the *Acid* do proceed two Masculine Qualities, to wit, *Hot and Dry*, from the *Alcaly*, as many Female ones, *viz. Cold and Moist*, all flowing forth for the generation of mixed bodies, for which reason they do concur and are commixed. The two greater Lights do preside over those two as Principle Elements. *The Sun*, is the Author of the Fire of Nature; and *the Moon*, the Mistris of Humids. *Matter or Hyle* is therefore called the Principle of all things, because all things in an invisible manner, are generated of *Fire and Water*. From those two is made up the innate *Catalid* of all things, which Hippocrates says, is very much in them, as they increase; the matter will be most clear when we shall speake not only to the ears, but to the eyes also.

C H A P.

THE PREFACE TO THE COURTEOUS READER And Lover of the Ancient Hippocratical MEDICINE.

I N the Inquist after the hidden Causes of Things, how prone Men are to erre and to be mistaken, without the help of True Experiments, it easily appears by that common, and in this age, Epidemical Complaint (which I myself do also think not altogether groundless) concerning the inconsiderate edition and multitude of New Books; partly, because the rash publication of the Writings of Sciolists and vain Persons, is of it self odious, partly also, because such a multiplicity of raw Pamphlets doth prejudice even our common Studies, and takes off the minds of many from Reading the Books of the Ancients, which are full fraught with accurate Wisdom and Instruction: whence probably it may come to pass, that the Studies of the Ancients, in enquiring after Truth, may be less esteemed and regarded by us. And if any one demand, why do I then publish this present Tract? A piece Composed with no Maturity of Judgment, but thrust forth in great haste and temerity; and consequently, in no wise to be compared, in point of Usefulness, with the Monument of the Ancients. To him I answer, There are two Causes, which moved me again to put Pen to Paper, and to emit to publick view this Piece of Ancient Medicine, First, in the Year 1666, I Printed the necessary Opinions of the Old Philosophers, under the Title of Hippocrates Chymicus, and there shewed by clear Arguments deduced from Experience, that Fire and Water

in

The Author's Preface

in *offense, roots, and property*, ought to be esteemed the *Irre-mordial Principles of all Things* (since the *Divine-Old Man Hippocrates* in his first Book of *Diaet* treats of the same, after the manner of the *Pythagoreans*, wittily enough, yet most obscurely, perhaps fearing the ridiculous censure and inept confutation of such as the *Austrian and Norinberg Doctors* of *Physick*, and their *foul mouthed companions*, who are craftily busied with their *Rustick Muse*, only about the *barks and outside of things*) because in finding out the *secret and hidden Causes of things*, These appear to be more powerful, then all probable *Conjectures and Vulgnr Placits* of *Philosophers*; and I did it, for no other end and purpose, but out of a desire to know the *Truth*, which every honest man should cordially embrace; so *Aristotle* Teaches in the first Book of his *Ethickes*, Chap. 4. It is better, says he, yea, it is our Duty, so *Truth* may be secured, to alter and cancel our own *Opinions and Decrees*. Now whosoever shall Read and rightly Understand the Books of the *Ancients*, will undeniably confess, that I have as well in my *Hippocrates Chymicus*, as in this little Book, spoken the *Truth*, and that I have discovered *Natural Principles and Rare Mysteries* in a clear *Vein of Speech*.

In demonstrating of these things, I have observed the order of *Geometricians*, who from the least point and most easy foundations, do gradually ascend to matters most great and difficult, by which an ingenious mind at length climbs even above the *Stars*: So also, The *Ancient Hippocratical Medicine* and the *Method of my Science*, in a convenient order, first, shew things less rare, yea, things most commonly known, and ascending from them by degrees, It exhibits things more choice and excellent. So *Hermes* from an *Egg*, *Hippocrates* from *Arts*, *Morienus* from a *Garment*, *Basilius* from *Ale*, *Cosmopolita* from *Colours*, &c. at length in an admirable manner; as well in the *Great as Less World* (for there is the same Reason in both) have unlocked the *Closets and Secrets of Nature*, that so the *Principles, Reasons, and Causes of Things* may be clearly seen, as it were in a *Looking-glass*.

By this my private, plain, and safe method, many Learned Men (whom I shall not name for fear of exposing them to the

to the Reader.

the ridiculous Censure of the *Deans and their Fellows*) being addicted to the Study of this *Ancient Philosophy*, have confessed that they have reaped much benefit; for in this my way, they have found that saying of *Pythagoras*, *Nature is in every thing alike*, to carry with it not a counterfeit and disguised, but a sincere and infallible *Truth*.

But since it is an old Calamity amongst Men, that *Vertue* is always oppressed by violence, but *Vice and Falshood*, like *frith and scum*, swims a-top in the impure pot of this *World*; so also some have endeavoured to defame my *Hippocrates Chymicus*, which is supported by *Ancient Authority, Experience and Reason*, and to dispoil it of its *Vertue and Truth*, by mutilating words, and perverting *Sentences*; that so they might not only cast dirt in the Face of *Ancient Medicine*, but also be found falsaries and committers of the crime of *Defamation against Law and Right*.

To prevent this wile, and to apply some remedy to this crafty machination, it was altogether necessary for me to meditate and resolve upon a new Edition of the *Ancient Truth*; for I began to think with my self, that *Young Students* might reap much more benefit from my *Doctrin*, if what had been maliciously changed, perverted and castrated, might come forth more entire and corrected; so that this is the second cause why I again set forth this part of *Ancient Medicine*, which I have Adorned and Confirmed with many excellent *Experiments and Reasons*, drawn from the *Ancient Fountains of Nature*; And I have moreover so clearly explained the causes of things, that for the future no man in his right wits can reasonably impugne my *Principal Foundations of the Truth*. So that *Students*, who love the *Truth* (of whom I hope there are many) may be much assisted by this *Itagoge and Manuduction*.

There is no doubt but virulent envy, the inseparable companion of *Vertue*, will object it to me as a crime (as it did heretofore, first, because I shewed the sincere way of sublimating of *Mercury*; which Calumny was heard by me not without laughter, but that offence is to be pardoned to such *Jejun* Interpreters of *Nature*, and their Repentance to be hoped for: and secondly, because in the 28

The Author's Preface

Chapter of my Hippocrates Chymicus, I taught the way of constituting Gold and Iron) I say, it will be imputed to me that I now discover and bring to light, things hitherto secret and concealed. But do you not, for this, rashly, and without thoroughly weighing my cause, condemn the guiltless, for it becomes a Judge to hear the Reasons on both sides of the Parties, betwixt whom he is to give Sentence: If it seem a fault that I have exhibited the Truth of Hippocratical Medicine, hitherto unknown to all of you, nakedly before you, yet be not presently enraged, nor cast forth reproachful speeches against me; but first of all consider; whether it having been sullied with false receipts and impostures, comes not now forth, nearer to the clear Truth, then remoter from it? and next, whether its lustre be not more increased than diminished? By means whereof, perhaps in a fitter season, she her self will give thanks to her Fosterers and Refiners, neither will she deny them her Patronage against the Crafts and Frauds of Impostors, nor withdraw her defence from them against the fierce darts of ignorance, least the former, like wild beasts, envying at another mans good, and the latter enraged and hood-winked by it own blindness, should any longer contumeliously and petulantly break in upon the pleasant Gardens and promising Crop of this Ancient Hippocratical Medicine; and so tread down and lay waste the praise-worthy Labours of such Wise Men as have gone before us.

'Tis in vain for them to terrify me with their bug-bears, I scorn all their endeavours; for I have chosen Truth for my faithful and powerful Protectress, which shall now come forth and appear in open view, not as fools do in licentiousness of revenge, repelling force by force, but with the rod of reason and modesty, it shall smite and scourge such foolish detractors, that they may repent of their simplicity and folly, and hereafter be ashamed to snarl at, or bite this Ancient Hippocratical Medicine with their livid and impure mouths and teeth. It is thy part, Courteous Reader, to stop the mouths of such Barrators, furiously railing against me, and to bridle their lying and reproachful tongues, lest they should glory in their own wickedness, and all the day long their heart should meditate unrighteousness, and their tongue

CHAP. II.

Acid, the most Ancient Principle, as being Spiritual, is not subjected to the Sensure or Judgement of the Senses.

MY Hippocrates Chymicus, in the 10th and 18th Chapter, shews in Wine and Tartar, that the Fire of Hippocrates, the formal Principle of things, can be separated by no Analytick Destruction, nor by any Ingenuity of Art. This the Prince of the Academicks calls *Forma*. The Ancients (as also the sacred Philosopher) calls it *Light*, and *Sulphur* from its Similitude, because that (like *Sulphur*) it manifests it self to be both occultly *Acid*, and also pinguous; to This they gave the first place, styling it the *Vital and Masculine Spirit*, because in it, the seeds of all things are contained (though imperceptibly as to our senses:) for we must confess that all things do consist of insensible principles, as *Lucretius* speaks *Lib 2.* and all things have their original from it, and there is nothing produced in the whole world, but by it, it hath its seat in the Air; because the Wind carries it in its belly; and the Father of it, says *Hermes* in *Parva Schedula*, is the *Sun*, whence the lofty witted *Lullius* in *Testament. Chap. 67.* We, says he, with many others, call it the *Child of the Sun*, for first it was generated through the influence of the Sun, by Nature, without the help of Science or Art: And therefore *Aristotle* called the *Sun* the Father, and the *Earth* the Mother of all Vegetables; because the Sun impregnates the Earth with its vivifying heat; which afterwards is turned into natural heat, and this is multiplied by the help and assistance of the heat of Fire, &c. Hereupon afterwards, it was styled by the Philosophers themselves, *The Son of Fire*; as appears by *Bernard de Tresne* in his third part, who calls *Gold* most

LXX.

A Child of the Son.

The Son of Fire

pure Fire So that if Gold be Fire, and Fire the Child of the Sun; and This, the Vital Spirit, which the Wind carries in its Womb, as *Hermes* witnesses; then without doubt these three must be Brethren and all Children of the Sun.

And as the Sun in the Firmament of Heaven, is judged by Wise Men, to be incorruptible, constant, and perpetual, and by its Author is endowed with so many Embellishments, that Himself is said to have placed his *Tabernacle* in it; for which cause it is called the *Form of Forms*, or the *Acid of Acids* (though it be not acknowledged for such by the Vulgar, as neither is Gold) or the *Universal Form*, which in the work of generation infuses all Natural Forms, and the seeds of all things into disposed matter; for every individual thing hath hidden in it a spark of this *Light* of Nature, or *Acid*, whose Beams do Occultly influence the Seed with an Active and Moving Vertue.

Gold a fixed Acid.

So also Gold, being the Off-spring of the Heavenly Sun, is incorruptible, constant, and perpetual; of an entire Form, or a perfect Acid, and fixed, though, as I said before, it be not owned as such by the ignorant Vulgar: For unless it were a fixed *Acid*, how could the saying of Philosophers be verified and fulfilled: *That which is perpetual makes things perpetual, and that which is fixed makes things fixed.* And therefore in the beginning *Light* was created over the Universe and contracted into this Body, being endowed with a vivifying Vertue and secret Fæcundity; I call it an entire or compleat *Acid* fixed and constant, which yet as *Raimund* saith, will make the empty Brain of one who hath seen nothing in Philosophy, nor is ever like to see, to be altogether sottish and stupid, Yet in my *Hippocrates Chymicus*, I have demonstrated the *Acidity* of Gold, by two familiar Examples, which I shall now again recite out of my late *Hippocrates*, for a solid confirmation of the Truth, and the shame of all *Zoilasses* and *Detractors*; for if you dip the end of an Iron Rod in Gold melted or put to fusion, the Iron in a moment will be turned into *Scoria*, or rust, as if it were

were burnt with kindled *Sulphur*; now unless Gold were Occultly *Acid* and pinguous: as common *Sulphur* is, it would never corrode Iron. Those superficial and vain Writers, who are enemies to the Doctrine of *Hippocrates*, cannot comprehend this fixed *Acid*, who had rather seem wise, than be so; much good may their vain applause do them: I envy them not, for they know no other *Acid*, but that which they dream to distill from Copper, which they falsely call *Spirit of Venus*; because, out of sloth, they deny that there is a fixed *Acid* in Nature; as if That in Copper were Volatile.

Crochus Martis

Secondly, The purest Gold is dissolved in *Aqua Regia*, instill *Alcaly* of *Tartar* into the Solution, which will drink up the *Acid* Spirits, even of the Gold it self (my *Hippocrates Chymicus*, Chap. 7. shews the Reason, viz. Because the *Alcaly* of *Tartar* embraces the Nature, even of Metals themselves) and the Gold so drunk up, falls into a Powder of a Yellow Colour. *Crollus* teacheth this Preparation in his *Cordial*; so doth *Beguinus*, under its proper Title *Cerannocryson*: In this slight Preparation, Gold hath acquired a Fulminating or Thundering force, because its *Sulphur*, being of its own Nature, acetous (to use the words of *Sendivogius*) is associated with Artificial *Nitre*, which association is made in the *Alcaly* of *Tartar*, in the very moment wherein it is poured into the *Aqua Regia*, containing the dissolved Gold. The manner how this is to be done, is laid down in *Hippocrates Chymicus*, Chap. 7. (for those things which have been spoken elsewhere, and rightly by others, I will not unnecessarily repeat;) so that Gold, unless it were *Acid* and *Pinguous*, as common *Sulphur* is, would never perform Sulphurous Actions with *Nitre*, as common *Sulphur* doth, with the same *Nitre* for Gunpowder.

Aurum Fulmi-
ans,

Gold is *Sul-*
phur.

If then the Sun, according to *Hermes*, be the Father of that Vital Spirit, which dwells in the Air, and Gold and Fire are its Brethren, the Sons must necessarily partake of the quality, dispositions and properties of the Parent; so that it must needs follow by

Fire Acid.

Reason

Reason and Authority (Experience also a stipulating thereunto) that the Vital Spirit of ours , the Child of the Sun , as also Gold and Fire are Acid and Pinguous ; wherefore Acid and Pinguous is a most Ancient Principle , the Life and Fountain of all things : Writers give It several Names , as Fire , Sun , Gold , Spirit , Sulphur , Form , Humid , Calid , Dry , and many other Appellations , all which are Synonymous , signifying the same thing , but in different respects diversified into several Names : But I both here and elsewhere , call it *Acid*.

This *Acid* doth occultly lurk in all Seeds , because of its self it is a most peaceable and quiet thing , in regard Nature hath implanted more of *Alcaly* than of *Acid* in every *Compositum* (except Sulphurs) and therefore it moves not unless it be excited , as we see plainly in Dough of Bread ; which being excited by a very little Acid Ferment , and by Heat , is moved ; and from that Heat and Motion the Acid is multiplied ; and unless it were bridled and restrained by a heat , exceeding the inward (*i. e.*) by Artificial Fire , it would proceed to Vitality and produce Worms. Hence it appears , That *Natural* Fire , is quite another thing then *Artificial* ; and that these Two differ much from one another : for the Natural or Soft Fire , according to *Hippocrates* (as I have shewed in Dough) doth Impregnate , Cherish ; Infuse Strength , and doth seemably perform all things in its *Lesser World* , which the Sun , its Parent , doth in the *Greater World* : Hence we may observe , That the proud Name of *Microcosme* , doth not belong onely to *Man* , for every Seed , every Worm , every Member , says *Hippocrates* , hath its Ventricle , and may be therefore called a *Microcosme* . But *Artificial* Fire is an enemy to all Generation , it lives upon Prey and Rapine , it subsists by others Ruins , being the Destroyer of Life , and Enemy of Nature .

Wherefore from the Sun , as from a Fountain , Natural , Acid , and Vital Light do flow forth ; which , in reality are both one , only distinguished by their Office .

Natur^l Fire
Acid.

A *Microcosme*
what.

see ; for it is the Office of the *Acid* , to pierce into the inwards of Nature , whereas *Light* doth only discover the externals of things however the Beams of the Sun do operate both : So that the Sun is the first Natural Organ , by whose Access and Recess all the Operations of Nature are variously governed , intended and remitted . Hence the Ingenious *Cosmopolita* , If there were not a Vegetable power in Sulphur (that is a Pinguous Acid , and Child of the Sun) Water would never be Coagulated into Herbs . If therefore the Acid , flowing from the Sun , be infused into Matter (as for Example , *Mineral*) presently it receives the determination of the Nature and the Vertue of the *Mineral* .

The like may be said of other Animals and Vegetables too , as *Lully* speaks , and because this Natural Acidity is coupled with all Matter in the World , it hath therefore the Name of *Mercury* given it by the Wise . And though the Eyes of the Vulgar do daily behold this multiplication , and also incorporation of the Natural Acid ; yet they do not understandingly consider it . Take the Mine of *Salt-petre* at *Padua* , for an Example , which is now exhausted , but in Five or Seven years time , will be filled again , for the Earth is its Nurse , as *Hermes* testifies ; whence it is ; That this *Spirit* assumes a Body in it , and becomes inflammable *Nitre* .

But I have a greater thing to speak off , There 's an Island in the *Tuscane* Sea , commonly called *Little Elbe* , containing twenty *Italian* Miles in compass , very Rich in Iron , from which , that Metal hath been dug out for many ages , and is so to this day ; so that not onely the Mountains there , but two Islands also must needs have been dug through and exhausted ; yet nevertheless Iron once dug forth in twenty years , renews again , and now more and better than formerly , because the *Alcaly* , or Mother of the *Mineral* there , is again exsaturated from the Vital Fountain ; and takes the determination of Metal , so becoming Iron . Also the evacuated Mine of *Vitriol* in *Carinhia* , first being exposed to the free and open Air , and afterwards covered for some years , is again replenished ; so that *Calid* most acutely

The Mother of
Nitre.

Elbe the Mother
of Iron.

Mother of Vi-
triol.

acutely Teaches, That the Roots of things are in the
Air.

If these things are so, as Experience proves them to be True, why should not the Acid flowing down from the Sun into the Matter of a Flint, be multiplied in It, and be hardned into the fixation, constancy, and siccity of the Flint? Since every individual hath treasured up in it a spark of the Nature of Light, by whose Beams the Body will be multiplied, as my Hippocrates Chymicus shews, Chap. 3. and afterwards, when the Flint by Artificial Fire is turned into Lime, or Calx, its Acid doth not therefore perish, which, since it is fixed by External Fire in Vegetables, as I shall shew anon, why may it not be so also in a Flint? So that it is a sottish thing to deny, that there is Acid in Lime: but these are vain Arguments and Subjects, forged in empty Brains: wherefore leaving such false Conjectures, I turn my self to the Lovers of Truth.

The Mother of Flint: fixed and constant in the Fire.

Fixed Acid in a Flint.

CHAP. III.

Alcaly, what it is? and how it is made, both by Nature, and by Art? and whence it had that name?

AS in the former Chapter I have shewed out of Hermes, and by Experience, That the Sun is the Father of Acidity, now in this Chapter I will also demonstrate out of the same Hermes and the same Experience, That the Moon is the mother of Alcaly; and as the Acid doth not discover it self but to the Natural Philosopher, so also Alcaly comes not forth to view or light, unless it be detained by the Acid, which she loves: And first, I will alledge the Operations of Nature, and afterwards will Mechanically demonstrate how Art doth ape Them in her Imitations.

Thales,

Thales, Heraclitus, Hesiod, Hermes, as well as Hippocrates, have affirmed; That Water is the first matter of all things; The Writer of Genesis seems to be also of the same mind: For all water is of a feminine nature, because it contains and cherishes in it self the Seeds of things, and clothes it self with various figures. In the Macrocosm 'tis made sometimes Wine, sometimes Vinegar, sometimes Aqua Ardens, Caustick, Oyl, &c. In the Microcosm, 'tis sometimes Choler, sometimes Milk, Sweat, Blood, Urine, &c. The root of all these is water, and that cold, which from the beginning was endued with a tenuious Acid or Light, that so it might be fitter to receive the form of mixed Bodies; for so, Fire is easily mixed with Fire, Light with Light, Water with Water; for unless it had been endued with this slender Light from the beginning, the Vital Spirit had never been able to assume a body in it: For our better understanding, I now call that little body Alcaly, Experience so directing me, See Hippoc. Chymicus chap. 19. The way which Nature useth in preparing that Alcaly, is taught us by that Noble Polonian, the Ingenious Cosmopolita, in these clear and express words; When Rain falls, says he, it takes from the Air, that Vertue of Life (which in the Chapter foregoing, I have shewed to be the Acid Spirit) and conjoyns it with the Salt-nitre of the Earth, because the Salt-nitre of the Earth, is like calcined Tartar, by its Siccity, drawing the Air to it self, which Air in it is resolved into water. Such a force of Attraction hath the Salt-nitre of the Earth, which also was Air, and is conjoyned with the fatness of the Earth; and by how much the more plentifully the Sun beams do then affect it, so much the greater quantity of Salt-nitre is made, and by consequence a plentifulter crop of Corn is produced; and this is done day by day. Thus far He, whose single Testimony, culled out from many others, is a sufficient authority for me to affirm, That the Acid Vital Spirit in the fatness of the Earth, by the Sun-beams, is fixed into Alcaly, which again covets to be saturated with the Acid Vital Spirit from the Air into Salt, which there is called Nitre of the Earth; the reason thereof will more clearly appear in the progress, Hence it is, that he

Alcaly in Water.

Alcaly the Child of the Sun.

The Child of
the Sun loves
his Sister Alcaly.

says, in another place, *That this Spirit hath a Sister (Alcaly) which it loves, and is again lov'd by it, for it is to it as a Mother.* What can be more clearly held forth for the preparation of Alcaly, out of the Acid Vital Spirit by the Operation of Nature? I add, That if this Spirit be shot down out of the Air upon the Earth by Rain, then it must necessarily fall down also on the Water, and the same Sun-beams, which by Reverberation do fix it on the Earth into Salt-nitre of the Earth, do in like manner fix it in the Water, if not into Salt-nitre, yet at least into Natural Alcaly; with which all waters do abound, except such as are distilled from Cephalick Herbs: the reason whereof you may see in *Hippocrates Chymicus*, chap. 19. and in some places they fix it into Sea-Salt, other where into Vitriol, and sometimes into Mineral, according to the disposition of its Mother; as I have also shewed out of *Lully*, in the fore-going Chapter.

Alcaly in Water.

Regeneration
of Plants proceeds
from Hippocratical
Learning.

Upon this foundation proceeds the spiritual representation of Plants, concerning which, see *Hippoc. Chym.* chap. 20. If any one doubt of, or desire to know its Inventor, let him consult and weigh this Ancient True Philosophy, and the sincere Studier of Natures Secrets, maugre the Brawls of Scolding Detractors, will soon obtain his desire.

As concerning the Ignorant, either Allowers or Detractors, who write without any sure foundation, I am not solicitous about them; for I know that Calumny (which is not in a Man's own power to avoid) leaves a guilt on him that casts it; He, against whom it is directed, being innocent and faultless: Nay, nothing is more pleasing to an Honest-man, then to undergo Reproaches for love of Vertue; for it is undergone in this case, with Incredible Pleasure and Alacrity, and being never long-lived, It again returns of its own accord without any labour to its Author: But to return,

Alcaly in the
Earth.

That *Alcaly* is found in the Earth, Experience confirms by the Extraction of it, because a *Volatile Alcaly* is drawn and sublimated out of Earth, which hath not yet attained any constancy; whence, not enduring to be solitary and alone, it strives to avolate into the Air.

So,

So, That nourishing *Alcaly* is made out of Water, *Paracelsus* proves by the accretion of a Flint in a Phyal-glass; for water is the Liquor and Root of all things, as *Hippocrates* witnesseth in his Books of Diet: *Fire*, says he, *moves all things, but Water nourishes all things.* Hence *Lactantius*, *Water is all things*: *Democritus* also was not ignorant of the Vertues of Water, who therefore affirmed that Truth was hid or immersed in a Well: So *Hermes*, *Water is susceptible and producible of Nutriment in Men and other things, and without Water, Nature operates not*: See *Hippoc. Chym. chap. 19.*

Alcaly in Water.

Water doth
Nourish.

For confirmation of my Assertion, let us hear the Noble *Cosmopolita*; *Nature*, says he, *knows how to produce fruits in the Earth, out of Water, and from the Air to supply them with life*: Which is as much as to say, unless its sister (*i. e.*) *Alcaly*, were in water, which this Spirit loves, it would not subsist of it self, because it cannot be alone, as *Hippocrates* informes us; and by consequence it would produce nothing, but return into its own Soyl and Countrey.

Hence it is that *Hippocrates* again says, *De Naturâ pueri*, many things do happen out of a few, because all things produced on the Earth, do Extract a more copious vertue from the Earth, than they brought with them from their Parents or Originals: 'Tis the same thing which *Cosmopolita* said before for the generation of *Alcaly*, to which he adds Water, coagulated by the force of Vegetable Sulphur into Herbs; where it is to be observed, That unless this Spirit or Sulphur (call it as you please) did find something in Water, which it loved, assuredly it would never enter into it, and would coagulate nothing; for if Water, by the force of Vegetable Sulphur, be coagulated into Herbs; the same Water by the vertue of Mineral Sulphur, must be coagulated into Minerals: and in like manner the same water by the help of Animal Sulphur into Animals: whence of necessity it must be Nutritive, if it ought to undergo Coagulation elsewhere.

So that Common Water is that Catholick and Universal Wine, which Animals, Vegetables and Minerals do drink, each of them after their own peculiar manner.

A Catholick
Wine.

D d

And

And therefore to deny that *Alcaly* is in Water, is to fight against the gravest Authors, against Reason, and against Experience. And they which in like sort deny Water to nourish, gain nothing but universal Scorn for their labour; but let us hear *Hippocrates* speaking in his First Book of Diet, against those who deny water to Nourish, and to be Coagulated by the vertue of *Sulphur* into Minerals, Vegetables, and Animals, yea into Humane Bodies themselves, seeing Nature acts every where alike. *In those*, says he, *where Fire is overcome by the presence of Water, some call such persons Sottish, others Amazed Ones, Stupids or Dolts; which Temper is a certain duller species of Madnes: Such persons do Weep and Wail, when no man troubles or strikes them; they fear things not to be feared, and are sadned at things not at all belonging to them, and do imagine such things as Wisemen would never do.*

Wherefore it is good to Purge such troubled Brains with Hellebore, provided Anticyra have enough to do the Feat: Thus speaks *Hippocrates*, against those who deny that Water doth Nourish.

Hitherto I have demonstrated out of the Shop of Wise Nature, how the *Child of the Sun*, being Reverberated by the Sun-beams, is fixed into *Alcaly*, and how That *Alcaly* doth again incessantly Attract the *Child of the Sun*, and so they are both condensed together. To this Natural Operation, I will now subjoyn That which is Artificial, that it may appear how Venerable Antiquity did endeavour to imitate Nature as near as was possible.

Art therefore takes Vegetables of all sorts, Wood, Shrubs, Chips, Loppings, Leaves, &c. all green and fresh (whose moisture here is instead of Rain:) if it be Wood, young Shrubs, or Loppings, which are made use of, They may be burnt in the open Air, or in a Chimney, and so without flaming out, be reduced to Ashes, lest that which we seek for, should return by the motion into Air, or its own Country. If they be Herbs full of Juice, they may be burnt to Ashes in a fired and lighted furnace (Fire here is instead of the Sun Beams, which reverberates the Acid of Vegetables into *Alcaly*) which, afterwards are agitated with a quick

quick flame in a reverberating Furnace, fit for this purpose, till they begin to threaten fusion; a sure Argument that the Acid is shut up in the *Alcaly*, and then they are called *Alcalizate* or *Pot-ashes*; out of these Ashes, by means of Common Water Salt, is elicited by Lixivation; then the Water is exhale, till the Siccity remains, which is called, *Fixed Artificial Sal Alcaly*: This Salt, having almost lost its form, remains for the greatest part a *Vacuum*; and therefore being impatient of inanition, it again desires to be saturated with the Acid into Salt, that it may fulfil the course of Nature; as I have shewed before out of *Cosmopolita*. And as Nature doth incessantly and daily infuse an Occult Vital Acid out of the Air into the *Alcaly* made by her, both of which do afterwards (the heat of the Sun concocting them) gradually rise up into Corn and Fruit; so also, Art, in imitation of Nature, doth impregnate her prepared *Alcaly*, lest it should wax barren, with an Occult Acid; as for Example, Oyl, Fatness, &c. and by a continual heat doth by little and little digest them, till it asurge into Sope of a Salt taste; or else it mixes it with things more fixed, either White Sand, or Powder of Flints; which mixture, being agitated in a stronger Fire (*viz.* of Fusion) rises up to Glass, which must needs be of a Salt taste, because it is made of the Acid of Flint and Fixed *Alcaly*; yea, *Alcaly* saturated with so much Acid, as to make it sufficient for it self, is turned into *Salt*; and if the *Alcaly* be not saturated with Acid enough to dissolve or slack the Flint, then the *Alcaly* overcomes the Acid, and the Glass attracts Humidity from the Air, by means of the empty and thirsty *Alcaly*, and so chinks and is broken. Hence *Zoar* says, That *Glass* may be made out of any Herb, *viz.* when it is *Alcalized*, as my *Hippocrates* shews, Chap. 4th. and 5th.

These things being understood, we are again furnished with Arguments against Those who deny, That there is a Fixed Acid in Nature; and as, when the *Alcaly* exceeds the Acid, the Glass chinks, and contracts

Artificial Alcaly.

Alcaly with Oyl is made Sope.

Alcaly with Flint is made Glass.

Fix'd Acid.

flaws, so becoming useless; so also (as I have shewed above out of *Hippocrates*) those persons in whose Brains Water exceeds the Fire, do become so stupid and dull, that by reason of their darkning humidity, they can perceive no Fixed Acid in Nature.

Destruction of
Glas.

Now *Glas* is destroyed by the same Fixed *Alcaly* of which it is compounded and made; a Position contrary to Those who deny, *That there is no Alcaly like to Nitre*; then which, nothing can be spoken more absurd.

Glas made Li-
quor.

But tis no wonder, If slight Doctors produce light Arguments, Therefore let more parts of *Alcaly* than of *Glas* be melted together into one lump, which, being exposed to the Air, is wholly resolved into Liquor; for out of what *Glas* is made, into *That*, and by *That*, it must needs again be resolved; as *Aristotle* rightly Teaches. Pour *Mineral Acid* drop by drop on this Liquor, until the hissing noise cease, and the *Alcaly* be saturated into a Salt taste or sapor, and the powder of *Flints* sinks to the bottom. Such *Endimions*, who think themselves never secure, sometimes think that this powder, taken by the Mouth, doth generate Milk; and sometimes they imagine it, though taken the same way, to be a very pernicious thing.

Our Ancestors tell us the way of making this powder, *viz.* That Red hot *Glas* should be quenched in the Ashes of *Bean-Stalks*; which speech, though it be not improper, yet it is laughed at by the *enslaved and mancipiated vent*; because they do not first teach how to make a Lie for the quenching or extinction of *Glas*: as if *Rhacia* had not expressly taught us, *That the Sayings and Writings of Philosophers are always to be understood according to the possibility of Nature, and not according to the simple sound of the Words*; for to take notice of every minute thing, to such as are Skillful in an Art, would be too long and tedious. Now the Word *Quench*, doth necessarily presuppose *Liquor*, as clearly appears out of *Rhasis*: but my Answer is this, *That the Sayings of Philosophers are hardly understood by those, who like vain persons, seek for praise in Critical Glosses, having*

been

been never enformed in the Operations of Nature, but have spent their time in collecting Receipts here and there, and Those not well understood: And this may be the cause, why it is not given to *Plebeians* and *Vulgariis*, to distinguish Things; as will more clearly appear hereafter.

After that Art in imitation of Nature, hath extracted *Alcaly* out of *Vegetables*, it presently judges, that *Alcaly* must also necessarily lie hid in the *Mineral Family*; especially *since Nature is alike in all things*: wherefore It begins to burn and calcine *Flints*, with a naked Fire, until part of the Aliment be wasted (as it did in the Family of *Vegetables*;) but not being able, by simple Water, to extract *Alcaly* out of them, when they are calcined, because the Fixed Acid perished not in the calcination, but again apprehended or catch'd hold of its Sister, *viz.* Fixed *Alcaly*; and so both of them were concreted into a rocky substance: therefore she begins to mingle *Lime* with three parts of the *Alcaly* of *Vegetables*, that so the Acid of the *Flint*, with two parts of *Alcaly*, might assume a Neutral Nature, and by the help of the third part of *Vegetable Alcaly*, one part of the *Alcaly* of *Flint* might be elicited; for like hath an easy ingress into like, as *Hippocrates* teaches, *de locis in homine*; and so, that most powerful *Alcaly* for making of *Sope*, hath been extracted out of the Family of *Minerals*, as is more largely declared in my *Hippocrates Chymicum*, Chap. 3. and 4.

Moreover, the word *Alcaly*, is not new or lately vain gloriously introduced by Me; but it was invented heretofore by *Philosophers* and *Mysterious Sagés*, for the distinction not only of Things, but of Salts, working in a way contrary to *Acids*. For *Alphidius*, an Ancient *Philosopher*, in his Book Entituled, *Aurora Consurgens*; Chap. 12. of *Mineral Things*, saith, *As Sal Alcaly is extracted from unslaked Lime, or Pot-ashes, or from Calcined Tartar it self, by means of a convenient moisture, until nothing remains of sharpness; so also our Salt, &c.* The same thing is affirmed by *Senior*, a grave *Philosopher* and *Studier* of this Ancient Science, *De tribus lina.*

Flint is made
Alcaly.

Alcaly of Cal-
cin'd Flint.

Alcaly for
Sope.

Alcaly what it
is.

luna imaginibus. These things, with what I have before alledged out of the ingenious *Sendivogius*; may suffice to prove, That Salt of Tartar, of unflaked Lime, and of Pot-ashes, and such as are of the like Nature, are rightly called *Alcalys* by the skilful; and are indeed such (and not merely Salts, as some sottish Doctors do insipidly affirm :) For as the Natural Alcaly of *Sendivogius* attracts to its self, out of the Air, a Spirit Occultly Acid to our senses (let it suffice to have hinted this once for all) is impregnated by it, and they both asurge into Crops of Corn and Fruit; so also these Artificial Alcalys, being empty, are impregnated with all sorts of Acids, as the Artificer pleases; and when they are saturated, they take their determination from the Acid, according to the property and nature of the innate Calid, as I shall anon shew mechanically: So that it is not sufficient to dream, that Alcaly of Tartar is purely Salt, but it becomes us to lay down the clear and demonstrable grounds of this Doctrine, otherwise it will obtain no credit in the School of Truth, but will be proscribed and hissed out, as a wicked and illusive thing.

Let me now produce a Clause out of *Botanicks*, concerning the Herb *Kaly*; for they call the Salt of this Herb *Alcaly*, and commend it for Vitrification; neither did I ever read that Sea-salt, or Pit-salt, were ever used for making of *Glass* or *Sope*; because they have been found by experience to be saturated and impregnated with Acid, and not empty; so that, They can imbibe nothing, but their own proper Acid; yea, they difficultly let go or part with their own Acid: and unless the Alcaly did absume in it self the Fixed Acid part of the Flint, *Glass* could never be made; which is proved by the supernatant fatness, which is no longer Alcaly, but called *Fel vitri*, which is unfit for Vitrification; for *This* being saturated with Fixed Acid, from the Flint, by reason of its Saltness, represents the nature and appearance of Trencher Salt, and therefore is onely good to be given to Horses and Cattel to sharpen their Stomachs to their Fodder, where Salt is very dear.

Fel Vitri.

dear. And so, the Salts, which absorb the Acid, are called *Alcalys* by the Ancient Philosophers (and such they are) to distinguish them from that common Trencher Salt which we eat: In like manner, I shall also call them *Alcalys*, having Authority, Reason, and Experience on my side (let *Momus's* bark never so much;) wherefore in a Flint, constant in the Fire, and fixed, there dwells Alcaly and Acid, a *Lesson*, which the *Deans* and their *Fellows* never yet Learned; but I shall demonstratively shew that the Acid in the Flint is made *Glass*, and again, that out of the Alcaly of the same Flint is made *Sope*; and both those Principles by Alcaly alone, are divided into two diverse substances, very necessary for Humane use; and unless there were *Hals* and *Cheo* (*i. e.*) melting of Salt, whence *Alchymy* hath its name, men must necessarily want both *Sope* and *Glass*; see the Preface to my *Hippocrates Chymicus*.

Wherefore the Acid of Flint, which of it self is of difficult Fusion, doth animate the vacuous Alcaly, which is of easy Fusion (for unless the Alcaly were vacuous, it could not imbibe the Acid of Flint) and both These by colliquation, turn into a dark Mass, which by reason of *Fermentation*, of its own Nature casts forth, a Salt froth, which being separated, is called by the Skilful *Fel vitri*. The Mass by little and little is clarified into transparent *Glass*, so that, That which *erst* was a *Vegetable*, is now by the Spirit, or Soul of the Flint, turned into a *Mineral*, and a rocky or petrous disposition and nature (*i. e.*) *Glass*: which consideration is of great weight, For the Soul of the Flint goes forth and enters into the Alcaly (as the *Pythagorians* speak) or the Vegetable Soul goes forth and re-assumes the Mineral Nature, and the Vegetable is animated with a Rocky Indoles, so that for the future, no Fire or Acid Liquor can overcome or hurt it; whence *Raimund* whispers to his followers, *Take away its Soul, and restore it to it again*: and though the operation of which he speaks, is not properly concerning vitrification, yet it is of no less value, since Nature in every thing is alike as I shall shew in this Book, to the Prudent and Lo-

Flint and Alcaly are fermented into *Glass*.

ers of Truth : as for the prophane Vulgar, which neither is, nor will be capable of the Study of this Ancient Medicine, I matter them not; I study to please but a few, for that which pleases the many, is not without suspicion; and it is the Advice of *Pythagoras*, to follow the fewest, if walking in a right path.

Alcaly a Female.

So that *Alcaly* is as the Female, in respect of the *Acid* (the Child or Male of the Sun) and is its Sister, which it loves, and is reciprocally loved by it, as *Cosmopolita* speaks; moreover, it is as the *Moon*, which is impregnated with Light and Vertue by the Child of the Sun, whence the *Moon* is the Mother, as *Hermes*, and after him, other Interpreters of Natures Reccesles and Secrets have phrased her; for they call their *Alcaly Luna*. So that the Anonymous Revealer of Natures Mysteries, says rightly, *The heat of the Female answers to the Terrestrial heat, whilst it putrifies, cherishes and prepares the seed; but the Fire implanted in the seed, being the Child of the Sun, disposes the Matter, and informes it, so disposed.*

If then the *Alcaly* receives, putrefies and cherishes the *Acid* (the Child of the Sun, that This again may arise into a new and clarified Body (as I have shewed in *Glass*) it must necessarily perform the Office of a *Mother*, and so be vacuous; if otherwise, it must be impregnated by the Child of the Sun, as *Hermes* and Experience witness. Hence *Hippocrates*, in his first Book of *Diat*, sighing at and lamenting the ignorance of Those, who amongst their fellows boast themselves *Wise, Men*, says he, *know not how to consider and inferre obscure things out of such as are manifest.* Therefore to distinguish It from the *Acid* of Common Salt, it is called *Alcaly*, not only by Philosophers, but also by Mechanical *Glass Men* and *Sope-boilers*. If therefore *Alcaly* be vacuous, and *Acid* an imbiber, as I have shewed, How, and by what reason, can the *Alcaly* of *Tartar* be proclaimed to be purely Salt? and how can it be approved for such? Surely so to affirm, is meerly a monstrous thing, and an Old Wives Tale, full of filthy ignorance; invented and approved only by shallow heads,

Alcaly of Tartar.

heads, but exploded and derided by the intelligent and learned. Beware therefore, O ye lovers of Truth, of such couzening Chapmen, the matter is far otherwise then those boasters do vain-gloriously pretend. To *Me* they can do no harm, but I write this for the sake of young and unwary beginners, that they may not give up themselves to false Doctrines, which would lead them out of the way; but that they may know for the future whom to avoid, I conclude therefore, with *Hippocrates*, That all things in the world are constituted of *Fire* and *Water*, or of *Acid* and *Alcaly*; of these Two Instruments, all things in the *Universe* are made up (as also is the Ancient *Physick* of our fore-fathers) in which yet a Third is inseparably included; which is therefore hinted to us, under the name of *Sal Philosophorum*: whence They called all bodies compleatly mixed of *Acid* and *Alcaly* (*viz.* when the Fire did not overcome the Water, nor on the contrary) *Salt*. Hence arose that saying, *In the Sun and in Salt, are all Natures Productions*: yea, all the Grace, Ornament, Delight and Contentation of Humane Life could not be expressed in a fitter word, and therefore delightful Elegancies, which offend none, are called *Sales*, nay, the appellation of *Graces* is also given to it. Hence *St. Paul*, *Col. 4. Let your speech be always savory, seasoned with Salt, administering grace, &c.* And the Scripture, not without Reason, often takes *Salt* for an Emblem of *Wisdom*, intimating thereby, that the fundamental Knowledge of the Nature of *Salt*, and of its composition of the Two Instruments of Nature, is of great Moment. If therefore determinated Common Saline Matter, *viz.* *Alcaly*, being informed by the *Acid* or Child of the Sun, as well in Scripture as in Moral Philosophy, be called *Salt*, and the denomination of *Salt* be given to it alone, why should any defraud the highest Masculine, being innocent, and which may be likened to the Sun, and rob it of its proper Name: Receive therefore from me the *Salt of Wisdom*, and beseech the Lord to give you all, the Spirit of discerning, for no age is too late to learn Truth and good Manners. Let Old Age blush, which

Sal Philosophorum.

cannot amend it self, yet scorns to learn; for my part I am willing to insinuate and to be complaisant (as *Cesar* was) that Men may attain to a better Understanding. Harken therefore attentively, and give ear to the difference betwixt vacuous *Sal Alcaly* and *Common Salt*, which Wise Men, by reason of its perfect mixture, have compared with the *Sun*.

CHAP. IV.

Trenchar-Salt, or the Salt which we eat, how much it differs from Vitriifying and Saponary Alcaly?

Salt a known thing.

The Praise and Renown of Trenchar-Salt is spread over the whole world; so that in Apologizing for it, I undertake as it were the defence of the Sun, against a swarm of Flies, endeavoring to eclipse its Light: Salt, because it is so necessary an Element for Mortals, that Mans Life cannot be sustained without it, therefore Nature exhibited it to us, brought to full perfection, and requires not from us (as in our other Acquitt) any Ustion, but only that we dry it from its aqueous Humidity; whether it be Sea Salt or Salt from Pits. Principles, equally poised, do concur to its mixture, which is made in Natures Shop; so that venerable Antiquity hath determined, *All Natures Perfections to be in the Sun and Salt*; and it is called by *Helmont*, and that on good ground, the *Chief of Salts*, and is the Armoniack amongst them all; yet notwithstanding it is praised from the Countrey, whence it comes, as *D. ascaridis* hath it: See *Hippocrates Chymicus*, Chap. 2.

Alcaly unknown to most.

But the Fame of Alcaly hath not yet reached to all People, because Essentially and Corporally it appears not in Nature, unless it be made by Art and Ustion, as well in the Animal as Vegetable and Mineral Kingdoms;

doms; yet with this difference; that some Minerals, not equally mixed, contain more of Alcaly than Acid, Sulphur, Gold, and Meat-Salt being excepted, which have more of Acid, as I have shewed. Hence it is, that the Ancients have writ, that this *Virgin* hath three Fathers, *viz.* Nature, Fire, and the Philosopher: but here we must Note, that no man by the art of Ustion, in any one of Natures Kingdoms, can prepare any Alcaly absolutely Pure (*i. e.*) deprived of all mixture of the Acid whatsoever; he that seeks to do it, will lose his labour. Whence *Cosmopolita*, *Burn*, says he, *Sulphur from incombustible Sulphur, and from its Soul*, whose Grain and Ferment, indeed *Mercury* hath in it, as much as is sufficient for it self; but make, that it may be sufficient for other things too.

Artificial Alcaly never Pure, or destitute of any Form.

Enough now hath been spoken for the convincing of Those that deny the principles of this Ancient Art, *viz.* That *Mercury* hath no Sulphur separable from it: 'Tis altogether vain, what some Masters and Writers of Vanity have thought (says *Geber*) for I have seen that It doth emanate from it, &c. Experience also confirms the same.

Common Salt is of a Salt-acid taste (*i. e.*) the Acid is prevalent in it; therefore it is incorruptible (if the Salt have lost his favour, wherewith shall it be seasoned?) Hence being moderately mixed with Meat, it conciliates a grateful taste to them, and excites Appetite.

Sal-Alcaly is contrary to a Salt-Acid taste; hence if it be mixed, though but moderately, with Meats, it gives them an unfavoury taste, and blunts the Appetite.

Common Salt, by reason of its Acidity, preserves Flesh and Fish a long time from Putrefaction, and draws out, and attracts from them the Volatile Alcaly, which by a Retort is again easily separated, as *Hippoc. Chymic.* teaches Chap. 14.

On the contrary, *Sal-Alcaly* doth consume the Acid, and promotes Putrefaction. Common Salt doth imbibe nothing of Acid, and therefore being dryed from its Aqueous Humidity, and cast into Butter of Antimony, it disturbs it not; *Sal Alcaly* being dryed, and cast into the

same Butter of Antimony, is so far from not disturbing it, that in an instant it quite destroys it; because it drinks up the Acid Spirits, and the *Antimony* falls into a white Powder.

Common Salt being mixed with the Quadruple of *Bols Armonick*, and distilled with an open Fire, yields an Acid Liquor.

Sal Alcaly mixed and distilled with the like quantity of *Bols* with an open Fire, yields a bitterish Liquor, by reason of the *Bols*, Insipid and Aqueous *per se*, as *Hippoc. Chymic.* shews Chap. 10.

In this place I desire the equal Reader to take notice, That the Process concerning the making *Volatile Salt of Tartar*, inserted into the last Edition of the *Reformer*; I had almost said *Deformed Auspurg's* Dispensatory, f. 247, was stolen out from my above-named 10th. Chapter of *Hippocrates Chymicus*: And after they had stript it of things unknown to them (as I can shew) what further? they mutilate the Text, then load it with Calumnies, pervert Sentences, and prove manifest Falsaries. *God Almighty* curb such Plagiary, Falsified, Stolen, and Deformed Labours, which darken the minds of the Studious. In that fore-cited 10th. Chapter, I did Experimentally Demonstrate, That all things did consist of *Fire and Water*, and that Water was the Basis and Root, not only of Sweet and Insipid, but also of Igneous Vertues, and of Caustick things, as of *Aqua Fortis*, *Alcalyes*, *Salts*, *Oyls*, *Vinegars*, *Hot Waters*, and of all things, in which the Acrimony of Fire doth prevail. I say, Water, and that cold, is the root of all those things; for Nature impresses the Vertues of Her things upon a moist Element; Wherefore Moisture is the first Subject of Nature, upon which Her first Labour is spent, as I have shewed in the Third Chapter of this Book, and hereafter will make clear by plain and evident Examples. I say, for this end my *Hippocrates Chymicus* in the fore-cited place, reduced many things; as also *Alcaly of Tartar* by Solution and Coagulation, into Simple Elementary Water, of no Taste or Smell; but Fire, and the Child of the Sun (for whose sake the Dance is made in that Operation) returns to its own

Country,

A false Process
of Volatile Salt
of Tartar.

Country, and that for this Cause, *That Man may not find out the work that God doth*, Eccles. chap. 3. v. 2. See also *Hippoc. Chymicus* Chap. 18. These Surreptitious Doctors have not only stoll out this my Labour, Sweat, and Travel, to advance their own Praises, but have also essayed to reproach the Author with infinite Calumnies, and to suppress the Truth; yea, they boast that this Simple Elementary Water is *Volatile Salt of Tartar* in these Rhodomontado words:

And by this means at length, Courteous Reader, *thou mayst be sure*, *That the Vertues of Salt of Tartar have pass'd through the Lembick*, and *That, thou hast, in succinct words, received a great Secret, destined to thy own and neighbours Health, which use happily.*

Consider, Friendly Reader, whether any thing could be more plausibly devised by their *Mightinesses*? What? to rob an Author, and afterwards to Defame Him? and then to depress and detract from the clear Truth? and that they may procure Fame to themselves amongst their Companions, with a lofty Brow to Venditate most *Simple Water* for *Volatile Salt of Tartar*, not only to the prejudice of ones Neighbour, but to the reproach of Physick itself; which would certainly be the Noblest of all Arts, unless it were thus treated by such ignorant Brains which are far more vacuous and emptie than *Alcaly*. Loe, this is the cause why now it is reputed the *vil:st* and meanest of Arts by the Vulgar. What Candid Person, Ingenious Reader, can be pleased with such Actions, or gull'd with Prescriptions stuffed with manifest Vanities, under the pretence of Physick? Heretofore, he that taught Falsities was accounted Infamous and a *Knave*: Hence *Cicero* speaks, *Pro Roscio, A man may easily be deceived by a Knave*. Their Brain is pre-possessed with so many Absurdities, that they have lost their Remembrance, and have forgot, That Water drawn from *Alcaly of Tartar* is most Simple; neither are any of those Vertues radicated in it, contained therein, which *Raimund*, *Basilus*, *Hollandus*, *H. Imont* and others Ascribe to *Volatil: Salt of Tartar*. Doth this Water which you have so Distilled from *Alcaly of Tartar*, dissolve a Metal, or at least the Stones of *Crabbs*, by a true Solution?

tion? Can only four drops of this your Distilled Water, taken by the Mouth, augment the Vital Spirit when it is weak, with incredible Vigour? To which I add, that Volatile Alcaly may be made, not only from Tartar, but from all Cephalick Herbs, which contain Alcaly in their Ashes (i. e.) without Clavellation. So a Friend of mine extracted Volatile Alcaly out of Lillye Convallye, which was very Restorative: Yea, I my Self have prepared the same (of no less Efficacy in dissolving) from the outward Rinds of Walnuts. But, Basilius, Hollandus, Helmont, and others do extoll Alcaly of Tartar, because it easily is conjoynd to and makes a Coalition with Fire of its own nature: Yet these ridiculous Masters do ungratefully rail upon Helmont too, as well as other Learned Men, fallly accusing Him, for not discovering the way of Preparing this Salt: But what need have your Masterships of Helmont's help? Since ye your selves are sure that the Vertues of Salt of Tartar have passed through the Lembeck, and that you have obtained a great Secret? Why do you reproach a Man who hath faithfully shewed you the right way? as I have done in my Hippoc. Chymic. in three places, and also in this Tract; clearly discovering the Preparation of this Alcaly; which, if you do not understand, yet do not Revile, but rather blame your own ignorance, and afterwards apply Cupping-Glasses, and a sharpe Suppository, lest your envious Bowels should burst asunder.

But nothing is more ridiculous than that which is whispered into the ears of his Followers in the same Text, I am induced by this motive to reveal this to thee, lest I should seem to be enviously affected against many Writers of our Age. Plautus would say to such a man *Aplauda es nequior*, Neither is that less Jocular or Ridiculous, which (in the above-cited place) they demand, viz. that the curious Investigations of Learned Men, for which they have taken pains, should be openly and plainly discovered to such Masters of Vanity, who know not how to distinguish Water from Salt? as if it were not sufficient that *Quid pro quo* were often enough prescribed to poor Patients, but that they themselves must likewise have an occasion administered to Adulterate and Defame the Inventions of Phi-

Phi-

Philosophers? Do they not know that Hippocrates forbids it in express words, and allows us to divulge only those things which are known to Plebeians? For they do not understand the force and meaning of my words: Take this my Reduction of Alcaly of Tartar into Water, for an Example, they presently, among the Unskilful, Vaunt This to be Volatile Alcaly; and do moreover commend it for a Cordial with their vain yet swelling words. By These, and the like Fables, studious Young-men are imposed upon, under pretence of Truth, because they are Licensed and Approved by the Lofty Magnifique Deans and Professors of Physick: Innocent Youth is easily persuaded that Truth lyes in the bottom of such Trifles, not knowing any more than their Masters how to discern Truth from Falshood. But what effect such and the like things can have in an Art, is manifest by daily Experience; so that it is grown, and not without cause, a common Proverb, *Mentiris ut Medicus*: Which therefore of all the Philosophers, would take pains to instruct such an Indocile, Quarelsome, and Sluggish Rout? he cannot do it without doing great Wrong to himself, and contracting an indelible stain of Infamy to his Credit. Leaving therefore these processes, which come not forth upon the Stage without the laughter of Learned Men; I convert my speech to the Studiers of Truth, and do affirm, That the Ancient Science of Physick doth not consist in compiling of Processes and Receipts here and there surreptitiously taken up, and perhaps also but ill understood (of which Persons the Proverb speaks true,

To know,
what?

Cum Charta cadit, tota Scientia vadit.

*He that for their Knowledge looks,
Finds it not i'th'r Head, but Books.)*

But in the true Understanding and Knowledge of Things by their Causes, as Aristotle hath rightly taught, *1. 1. Physic.* For he that knows Things by their Causes, is not only said to have Experience, but to know and comprehend Them perfectly. This

is the Foundation of the Ancient Physick; and although, all Receipts with their Excribers, Subscribers, and Approvers, were utterly lost and perished, yet this Ancient Science would remain unmoveable; whose foundation I have faithfully discovered in my *Hippoc. Chymicus*, by familiar and common Words and Examples; but such putative and empty *Doctors*, by reason of the blindness of their minds, cannot reach to it (I call it blindness, seeing all Knowledge is Light, and Ignorance, Darknes) as being long since excluded from the Knowledge of the Truth: Enough now concerning this *disguised Elementary Water*. There are many such like trifles packed together in the fore-named *Dispensatory*, which do not only cast a blot upon Noble Physick, but do also redound to the Ruin of our Neighbour; *Things ill got, because not understood, will be as badly spent*. But these things requiring a Volume by themselves; I shall forbear further speaking of them at present, and return whence I digressed, Common Salt doth not wash out filth, therefore Sope cannot be made of it. Hence it was, that *Nausicca* the Daughter of King *Alcinous*, washed her Linnen out of a Fountain in the Sea-shore, as *Homer* notes, 6. *Odys.* which *Aristotle* rightly refers to the perfect mixture of this Salt, for seeing it hath no vacuity in it (as Alcaly hath) it can receive no filth into it self.

Sal Alcaly is vacuous, and by consequence imbibes filth, and Sope is made of it; because it absorbs the Occult Acid in the Oyl and Fat, which by a slow Concoction are converted together into Sope, of a Salt taste, as my *Hippoc. Chymicus* hath it.

Common Salt fortifies and strengthens living Flesh, it cures the Scab, Mangy, and other Diseases of the Skin, as the Sea-fishers can witness; yea being mixed with Oyl, it cures Scalds.

Sal Alcaly doth mortify and putrefy living Flesh, as Potential Cauterics do witness; and the History also shews, that it putrefyed a whole living Man in a moment, as it is mentioned in *Hippocrates Chymicus*, Chap. 4.

Com-

Common Salt with Sand, passes not over into *Glass*, because it is saturated with Acid.

Sal Alcaly, with Sand, is melted into *Glass*, because being destitute of Acid, it receives into its Bowels the Acid of Flint, and by Fusion, becomes of a Rocky Nature; as I shewed before.

Common Salt, makes Nitre impure, *Sal Alcaly*, cleanses Nitre from all impurity, as my *Hippoc. Chymicus* teaches, Chap. 8.

So we Read in *Holy Scripture*, every Sacrifice should be seasoned with Salt, but no mention at all is made of *Alcaly* there.

So that it is manifest, from the Circumstances above-mentioned, That Meat Salt, or Common Salt; the Child of the Sun, and the Chiefest of all Salts, differs very much from Inane and Vacuous *Alcaly*; which therefore I have set one against another, that it may appear to the Learned and Curious, that there is not a grain of Salt in those great Bodies of Innovators, who contend, That *Sal Alcaly* is a *Salsum*, and so do ignorantly persuade their unskilful followers: For there are no more Salts in the Universe, than Acid and *Alcaly*; Acids are infinite, all which have one only *Alcaly* for their foundation, in which they subsist, and are incorporated, as I shall Ocularly demonstrate in the 6th. Chapter: So that all Salts, and all Things which are in the World, may, by an easy method, be referred to Acid and *Alcaly*; therefore it will not be a mis, yea pleasant and acceptable, before I proceed, to subjoyn the Preparation of Medicinable Salts.

F F

C H A P.

CHAP. V.

The Preparation of Medicinable Salts.

HAVING shewed before, That there is nothing in the Universe, but Acid and Alcaly, of which Two, Nature composes all her works; to which yet a Third doth also inseparably adhere, as by degrees will be manifested: I shall now proceed to confirm my Proposition of Medicinable Salts; and to shew, what they are; because I have not found Their Nature hitherto described by any Man, and therefore I think it worth my Labour, to transfer the True way of their Preparation, out of my *Hippoc. Chymicus* Chap. 21. to this place, which will likewise declare their Essence, and Nature. Most Wise Nature, in the 3. Chap. shews us the way, how her Spirit of the Air is coagulated and fixed, to wit, by Fire and Water (*i. e.*) by the Sun Beams and by Rain, for unless they both concur, the Spirit returns to its Original; which *They* find to be True, who endeavour to prepare Salts out of *dry* Simples, for, in *drying*, the greatest part doth exhale; and by how much the dryer they are left, the less quantity of Salt is procured from them; least of all, yea nothing, from rotten Sticks and Wood; which though with great Care you reduce into Ashes, yet you can elicit no Salt from them; but on the contrary, the fresher and newer they are burnt, a greater quantity of Salt, will be extracted there-from. Therefore, for the Preparation of Salts, our principle Care and Study should be, That the Herbs be fresh (see Chap. 3.) for then, in concretion the innate Acid apprehends the Alcaly, and the Alcaly absorbs, or sucks up the Acid, and they are both fixed according to the property of the concrete; but from that part (which flies away with the flame,

Rotten Wood
hath no Salt in
its Ashes.

and

and, not being sufficiently bound in by the Acid, goes to Soot) you may easily extract Volatile Alcaly.

Let Green Wormwood be the Example, Take This, green as it is, and burn it in a Chimney or open Place (but Fumitory, or such like Juicy Herbs, may be cast Green and Fresh, into a Red Hot Furnace, and the Mouth-hole be shut, that it catch its Flame :) flaming out is to be hindered as much as we can, for it is sufficient that it be turned into Ashes, though but black; which Ashes are further to be Calcin'd in a large Earthen Pot, and low, or upon a large Iron Plate, of a lifted up edge; Coals being kindled under, in the Wind Furnace, to the end that the little Door may be opened or shut, as there is need: The Ashes are always to be stirred with an Iron Spatule, till they be very white. Note that the process made this way is and must be more Sweet and Benigne, than that mentioned, Chap. 3. in the Preparation of Alcaly; for There the Ashes are stirred and agitated with a quick flame, which are therefore called, *Clavellated*, or *Pot-ashes*; but *here* the Fire must not touch the Ashes, but they must be spread on a large Iron, or Earthen Plate, or Table, which must not enter the mouth of the Furnace (see the Contents of my *Hippoc. Chymicus*, in the above-cited Chapter.) Lay the Ashes on a Linnen Acuminated Bag, or, if there be few of them, on Acuminated Paper, and pour Common Water on them, which, running through them, being pregnant with Salt, is called a *Lixivium*, or Lye; Coagulate this strained Lye, with a quick Ebullition, in a Frying Pan, not greased in the Kitchen, and make it up into a Mass, which, when it begins to thicken like Honey, you must continually move with a *Spatule*, and it will be dried up into a Grey Powder, which you must presently lay in a Pot not Glazed, with a Cover, (the little Door of the Wind-Furnace being stopped) and cover them with Small Coals, mixed with the Powder of the same Coals; leisurely heat it, unto Brinity; not making it Red Hot, or melting it; when all is cooled, put the Salt into a Glass Vessel, and dissolve it in a sufficient quantity

tity of Water, stirring it between whites, with a Wooden Stick, till the whole be dissolved; afterwards let it rest for two or three dayes, when it is clear, pour it forth from the Lees, without much stirring, and in a Leaden or Glass Vessel placed in Sand, suffer the Water to exhale without bubbles, till a Saline Cuticle appear: Then remove the Vessel; and the next morning gather up the Splendent Grains of Salt; which are to be washed with clear Water, with a quick motion, and dried; put the remaining Eye again into Sand, that the Water may exhale, as before, unto the Cuticle. Both these Salts are to be kept together joyntly in one Vessel: It is to be observed, that Salts this way sweetly prepared, do resemble the *Crasis* of their Concretes, the rest of the *Lixivium* being of an Urine-like taste and stinking smell, is to be left for washing of Glasses. This is the easie and natural way to prepare Salts of Vegetables, which do never melt of themselves, neither are of an ungrateful taste; for they are compounded of their proper Acid and Alcaly by Concretion: A pound of These Ashes yields almost four Ounces of the purest Salt, but four Pound of the Ashes of dry Herbs will scarce afford one Ounce of Salt.

CHAP. V I.

That the Seminal Vertue of all things is Acid, and that Acids lead Alcalyes ad Lubitum, and that every Acid Liquor is a Solution of Acid-Salt in Elementary Water.

I Have shewed before that Water would be coagulated by the force of *Vegetable Sulphur*, into That, of whose Determination *Sulphur* was: It is the property of *Sulphur* to be Occultly Acid and Pinguous, as I have shewed in Chap. 2. which in *Vegetables* is always Volatile.

Take

Take therefore either Wood, or Meal (whose Spirit these Magnifick Ridiculous Masters do proclaim and approve for *Acid Spirit* of *Sal Armoniack*) or any simple *Vegetable*; whatever it be; yea, or the very grains of *Kermes*, and Distil through a Retort the Pinguous Acid Liquor, which is called, and is, *Sulphur* of the Grains of *Kermes*; or any other *Vegetable* (which their Masterships hitherto were ignorant of) upon this Liquor pour *Alcaly* of *Tartar* (which answers to Water, the Fire being taken away, as my *Hippoc. Chymic.* teaches Chap. 10.) till the *Streptus* cease; Strain this *Compositum* through Paper, and dry it up by degrees into the consistency of *Honey*, and the *Tartar* of the Grains of *Kermes*, or, as some call it, *Tartar of Kermes*. The *essential Salt*, will concrete in it when it is cold: But if you desire to turn it into Pure Salt, heat it in a Pot not Glazed, scarce to Brunity, only that the exceeding Pinguousness may desfragrate; or else put it into a Retort, and distil the Oyl from the empty Cappel: Dissolve the black Mash with Common Water; let the Solution rest for three days, till it be clear, then poure it out leisurely, and in a Glass Vessel placed in Sand, Exsiccate it to the *Cuticle*, and the next morning you may collect a Salt of the same Vertue, that the Acid, which you poured on the Alcaly, was off; so that the *Alcaly* is brought to the will and pleasure of the *Alcaly*.

As the Acid Liquor distilled from the Grains, doth Impregnate the Alcaly with its Vertue, which from thence receives its determination, so that it may be called, and is *Salt of grains of Kermes*; So also poure distilled Vinegar on the same Alcaly, as much as it can imbibe (*i. e.*) to Saturity; which you may know when the *Streptus* ceaseth, and the smell of Vinegar breaths out: Coagulate the Impregnated *Alcaly* to Siccity, and though the Vinegar was distilled and the *Alcaly* of *Tartar* most Pure, yet the *Coagulum* is very Impure, Sordid, and Black, by reason of the Pinguousness of the Vinegar; which being separated, doth therefore catch or conceive Flame: Dissolve this black Mass in clear Water; let as much as is dissolved, rest for three days, then separate through Paper, the Pure from the Impure; dry the Pure again, as before, and

Regenerated
Tartar of
Wine.

Alcaly of Tar-
tar made
Salt of *Kermes*.

Alcaly of Tar-
tar made Tar-
tar of Wine.

Alcaly of Tar-
tar made Com-
mon Salt.

Alcaly regene-
rated into Ni-
tre.

Alcaly regene-
rated into Al-
lume.

and you shall have *Regenerated Tartar*; Distil this out of a Retort, as we do *Tartar of Wine*, and it will afford an Oyl, more or less Fetid (according to the quality of the Wine, of which the Vinegar was made;) and a bitterish Liquor, such as Common *Tartar* is wont to yield. The *Faces*, or *Caput Mortuum*, unless by the vehemency of the Fire it be turned to Glass, you must again dissolve in clear Water, and strain and coagulate it into true *Alcaly of Tartar*, as if it were left of the Common; So that the same *Alcaly of Tartar* being Impregnated with *Acid Sulphur* from the Grains of *Kermes*, follows the nature thereof, and becomes *Salt of grains of Kermes*; and the same *Alcaly* Impregnated with Vinegar, imitates the nature of the Vinegar, and performs that which *Tartar of Wine* doth; like as a Woman, who being Married to a Man, loses her Father's Name, and takes that of her Husband: For Nature is alike in all things, as *Pythagoras*, and after him, *Hippocrates* have taught. But I have a greater thing in my mind; yet before I come to it, I must repeat some Experiments out of my *Hippocrates Chymicus*. Distil therefore out of a Retort, with an open Fire, Common Salt with four parts of *Bole Armonick*; all of them first reduced into a fine Powder (it will succeed more happily if they be mixed and blended together, for then they will easily fall through the Sieve) poure the Acid Liquor which comes forth, on the Pure *Alcaly of Tartar*, till the *Streptus* cease, and the *Alcaly* be Impregnated; Exhale this Mixture in a Glass Vessel, with a gentle heat, or else at the Sun, until the Film or Cuticle concrete a-top, and the next morning, when all is cooled, you shall have splendid grains of Common Salt; So that the spirit of Salt in the *Alcaly of Tartar* returns into true *Common Salt*.

As you have done with *Common Salt*, so in like manner do with *Nitre*, whose spirit in the *Alcaly of Tartar* becomes true *Nitre*, conceiving Flame, and is a Remedy for the *Quinzey*; see *Hippoc. Chym.* Chap. 21. So also an *Acid Spirit* is elicited from Allum, with which let the *Alcaly of Tartar* be so far impregnated, as above-said, till the hissing cease; which Liquor in a soft Fire is coagulated into Allum; so that the Acid Spirit, not only of all

ly of all Vegetables, but of all middle sort of Minerals, re-assumes a body in the *Alcaly*, and becomes the same thing, from whence the Acid Spirit was drawn forth. But the Acid of Sulphur, becomes not Sulphur in the *Alcaly*, because it hath lost its terreous pinguousness by the Flame; but it is sublimated into True Sulphur, with Sand or Flints ground to Powder, for it finds in them That to which it may associate it self and overcome it, as *Hippoc. Chymicus* shews, Chap. 21.

These Experiments do evince the Truth of That, which is laid down in the 1. Chapter, viz. That the Spirit of the World, or Child of the Sun, is Acid and Pinguous; and that this Pinguousness or Sulphur doth participate of a third, which, as I have shewed in the said first Chapter, doth inseparably adhere to Fire and Water; which I will now more clearly demonstrate in Vitriol, and in the Anatomie thereof; wherefore it is vain, ignorant, and against all Truth, what they scribble, viz. that Acids do not prevail over Alcalys, nor draw them hither and thither, as they please.

To convince such vain Talkers, distill the Spirit out of dried Vitriol, the common way, which is Acid Sulphureous, which you must rectify, or distill once more, out of a Retort, placed in an empty Coppel; on which pour on leisurely, so much of the *Alcaly of Tartar*, till the hissing and ebullition cease, (for if you pour it in hastily, they will both grow hot, by reason of the fiery Nature in both Subjects :) exhale the superfluous, insipid, and Aqueous Humour, till you see the appearance of a growing Cuticle. (Here you must observe, that if both the *Alcaly* and the Acid were not first sufficiently diluted, before their Conjunction, at their very first Meeting and Coalition, the White Powder of *Vitriolated Tartar* will fall, and there will be no Chrystalline Grains produced :) Then remove the Vessel from the heat, and set it in a cold place, and in the morning you shall find Shining Grains arising and resembling the form of Vitriol, because the Acid Spirit hath drawn the *Alcaly* to its own pleasure (i. e.) into the form of Vitriol. This White Vitriol, they call *Vitriolate*

Spirit of Vitriol.

Alcaly regenerated into Vitriol.

tristate Tartar, but I call it *Regenerated Vitriol*, whatsoever the ignorant multitude do murmur to the contrary: for the Acid of Flint in the Alcaly is regenerated into a Pellucid, Frangible, Rocky Substance, which afterwards neither Fire, nor any Acid Liquor can destroy; as I have shewed in its place concerning Flint; and shall shew hereafter, concerning Coral.

The Occult Acid of Oyl, in the Alcaly, is regenerated into Pinguous Salt Sope.

The Acid of Grains of *Kermes* in the same Alcaly, becomes the Son of *Kermes (i. e.) Salt*.

The Acid of *Common Salt* in the same *Alcaly* becomes a *Salt* of the same Nature.

The *Acid* of *Nitre* in *Alcaly*, becomes True *Nitre*, conceiving Flame, and is a remedy for the Quinzey. The *Acid* of *Allum* in *Alcaly*, becomes True *Allum*; The *Acid* of *Wine* in *Alcaly* becomes *Tartar*, and all the other *Acids*, are regenerated in *Alcaly* their Mother: Why should not then the *Acid* of *Vitriol*, regenerated in *Alcaly*, be called *regenerated Vitriol*? Is it because it is not blackned with Gauls, as *Vitriol* of Iron is; or because it cannot be distilled as *Common Vitriol* may, as some foolishly give forth; but why will you fantastically put a force upon *Nature* from those Accidents which are not common to all *Vitriol*? Surely that Wise *Mistriss* doth little esteem not only the contumelies of venomous Tongues, but she doth as much undervalue the old doting Fables of Wordy Doctors, who refuse to learn. Attend therefore diligently, that you may be informed, That, as I have shewed a little before of *Acids*; They bring *Alcalyes* to their will, so it must needs happen here: For when Natural Acid hath by chance corroded immature Iron, then they are both coagulated into *Vitriol* of Iron; which being mingled with Juice of Galls, yields a black colour, by reason of the Iron, and not by reason of the Acid. And when the same Natural Acid hath by chance corroded immature Copper, then they are both coagulated into *Vitriol* of Copper; which, though mixed with Juice of Galls, grows not black; yet it is, and is also called both by the Skill-

Measuring the Wisdom of Nature by their own folly.

ful and Unskillful, *Vitriol*. That Natural Acid drawn forth by Distillation, when it hath corroded Iron, is coagulated again into *Vitriol* of Iron, of a green colour.

The same Acid when it hath corroded Copper, they are both coagulated into *Vitriol* of an * Azure colour.

* *caelestini*.

So the same Acid, when it hath corroded Alcaly of Tartar, they are both coagulated into *Vitriol* of a White colour, which is nothing else but *regenerated Vitriol*, as my *Hippocrates* shews Chap. 17. Which Book I would wish you to read over before you rail against the Works of Nature.

But why your *Common Vitriolate Tartar* cannot be distilled, I will now clearly demonstrate; That Natural Acidity, which hath corroded Iron, being Healthful, Grateful, and Precious, is sought after by many, but found by few; I say, This is attempted to be extracted out of the corroded and immature Metal, by Art, and the help of Fire in Distillation; but seeing it cannot never be alone (as *Hip. de Diet.* hath taught) it easily carries off with it its like (i. e.) the Immature and Volatile Metalline *Sulphur*, because the wind carries both in its womb, and it becomes *Common Spirit* of *Vitriol*, Austere and Corrosive, by reason of the inseparable immature Metalline *Sulphur* mixed with it.

Why *Vitriolate Tartar*, made the *Common way*, is not *Distillable*?

This *Common* and sourish Liquor of *Vitriol*, however rectified, yet contains in it the Sulphureous Liquamen of the Metal, upon this ground that it can never be alone, as in the progress will clearly appear. If this Spirit, or Liquor, be poured on Alcaly of Tartar, until the noise cease, The Alcaly is impregnated, but not with a Natural, but a Metalline Acid, the Austere of the immature Metalline *Sulphur*, having the dominion; and so a Son is begotten, which must needs resemble the properties of his Father (i. e.) be fixed and constant in the Fire. Lo, here your *Doctors* may see the reason why your *Vitriolate Tartar* cannot be Distilled? For in that instant of Coition, when the more powerful is embraced by the *Alcaly*, The third, because it is weak, is strangled and slain; as will appear by little and little to the Reader. This is That, which the barren approvers, with those which went before them, were hitherto ignorant of.

Alcaly made
Regenerated
Vitriol.

I do call (together with the company of Ancient Philosophers) This Son of Metalline Sulphur, *Regenerated Vitriol*, because it hath laid down its Iron, or Earthly Body, and shines again, re-produced in a brighter form.

Wherefore the soul of the imperfect Metal, hid in the sowre Acid Spirit, forms to it self a Fixed Body in the *Alcaly of Tartar*; Whence it clearly appears, That the Spirit is the *Vehicl*; of the Soul, and the *Vinculum*, binding Soul and Body together; which in the subsequent Discourse will more evidently appear to the Studious Lovers of the Truth.

Spirit of Vi-
triol two-fold.

Let us now hear *Basilins Valentinus*, speaking of this Two-fold Spirit of *Vitriol* (not to mention mine own Experience) in His Book called, *Repetitio Lapidis Magni*, in these words, *And that you may understand Vitriol*; says he, *you must know that it hath two Spirits, a White and a Red; the White is white Sulphur, the Red is red Sulphur; He that hath Ears to hear, let him hear; And let him diligently mark and forget it not, for it is a difficult saying, and every word is of great weight; the White Spirit of Vitriol is Acid, amiabl*;, *very grateful to the Stomach, like Nectar to the Bowels, and profitable for Universal Concoction; but the Red is much more Acid, and more weighty than the White, and therefore requires a longer time to be extracted by Distillation.* Hitherto *Basilus*. He that desires more, let him consult the cited place, the words are of great weight, and for good reason cited and transcribed here.

If therefore the composition of *Vitriol* be of the Natural Acid, amiable, and of a sweet smell, like Nectar to the Inwards; in which no sensible biting is perceived by the Tongue, but a spiritual and grateful Acidity (Let *Basilus*, Acid Waters, and Experience, be all witnesses) and of Immature Sulphureous Metal, which Two cannot possibly be severed by Distillation; for the Natural Acidity, which is highly Volatile, ascends not without its Companion, the Acid Sulphur of the immature Metal, because it cannot be alone, as I have shewn out of *Hippocrates*, and have also learned by experience; it remains therefore that it must be catch'd by crafty hands, and that in a fit time too, when it is asleep.

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There are many private ways, which the Studiers of Natures Secrets may take to procure this grateful and much sought for *Acid*, which though many, yet all conduce to one end, as *Geber* rightly observes; yet This way is not to be despised, though the ignorant do contumeliously charge it to procure vomiting, and raise many other Symptoms. Ah unhappy Patients! what Ministers of Nature have you got? I speak not to deaf ones, as being uncapable, but to you who love the Truth, I devote and offer this my work.

Dissolve then *Vitriol of Iron* (I say of Iron, which hath no smell of Copper; if This cannot be had, prepare That as Nature her self shews the way, *Hippoc. Chymic. Chap. 28.* For That which is Artificial, of the Distilled Acid of Vitriol and Iron, will not serve here; see *Hippoc. Chymic. Chap. 17.*) The *Roman* is the best; Instill into this clear Solution, the purest *Alcaly of Tartar*, which presently attracts and consumes the Natural Acid; The Acid and Alcaly do not wax hot in this Conjunction, as before in the Common Preparation of *Vitriolate Tartar*; because the Fire, or the Sulphur of the Immature Metal covets the Fire, and for the greatest part is separated from the Natural Spirit, as by degrees I shall Mechanically demonstrate *ad oculum*. If this Composition seem to thee too thick, so that the Immature Metal cannot fall down, dilute it with Water, and it will the sooner fall. Let it not be tedious to thee, to find the Moment of Saturation, which after the first Filtration will easily follow; or if the Alcaly do overcome the Acid, it produces no other inconvenience, then the loss of time in digestion, That the Immature Metal may subside (see *Hippoc. Chymicus Chap. 10.*) Exhale leisurely, unto the Cuticle, the clear Liquor placed in a Bath of Dew in a Glass Vessel (being acuminated under or in the bottom, to the end, that if there be any of the Immature Metal, it may be separated in the heat at the bottom) and when 'tis cold, you shall find *Splendent Chrystals*, which do neither heat nor turn the stomach, as *Common Vitriolate Tartar* doth; for they have not the Sowre and Corrosive Sulphureous Liqua-

Tartar Vitriolate of great
virtue.

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men of the Immature Metal, and therefore are much to be prized in Physick. Lo here the Rudiments out of the Hippocratical and Pythagorical School, which are enough for the Ingenious; neither is it lawful to discover All plainly; These and many other Things are to be reserved for *Our followers*: Concerning the Vertues of this *Vitriolate Tartar*, see *Crollius*, and you will act securely: I say no more, for it shews it self to be a most powerful *Hercules*.

'Tis true indeed, That one Ounce of this *Vitriolate Tartar*, requires at the beginning about three Ounces of Alcaly, because first it mortifies the Immature Sulphur of the Metal, and afterwards draws forth the Natural Acid. An Example of which Operation I have given Chap. 3. concerning the *Lixivium* of Sope-boilers, *viz.* where Vegetable Alcaly doth first mortifie the Acid of the Calcined Flint, which is unfit for the Lye, and doth concrete it into a rocky substance, *for contraries are Coagulated by contraries*; and afterward the same Vegetable Alcaly doth elicit and draw forth from the Calcined Flint a most powerful Alcaly, *because like is dissolved, drawn, and joyned to its like*; The same Action is also performed in this our *regenerated Vitriol* (or *Vitriolate Tartar*, call it as you please) yet with this difference, That the *Alcaly of Tartar* is turned with the Immature Metal into its *Coagulum*; and afterwards it absorbs the Natural Acid; which difference is to be observed, because it is useful. See also *Hippac. Chymicus* Chap. 3. and 4. where the Example of Sope is not without Cause propounded; nor is it to be thought useles, as heedless people think. This *our Vitriolate Tartar* is not constant in the Fire, but for the half *Volatile*, according to the property of the *Father* which begat it, whereas on the contrary the *Common Tartar* remains constant in the Fire, by reason of the Metalline Sulphur, which the Alcaly had imbibed, and therefore it is not *Volatile* or *Distillable*, because it hath not got the Metalline Soul; which perseveres in Fire, as I have above likewise shewed.

If therefore Spirit of *Common Vitriol* be informed with the *Soul* of Copper or Iron, 'tis no wonder if being poured

Contraries co-
agulated by
Contraries.

Artificial Vi-
triol of Mars
and Venus.

poured on these Two perfect Metals, it dissolves Them, and with Them, make a counterfeit shew of *Vitriol*; for, like is easily joyned to like, fire to fire, water to water Spirit of *Vitriol*, being distilled, delights in Sulphur; and in its like in *Mars* and *Venus*, it is pleas'd with it, it pierceth into their Bowels, it dissolveth both Metals. and again assumes a body, and with Them, resembles *Natural Vitriol*. But having no Dominion over Them, it cannot perfect the said Metals; because it hath no more than is sufficient for its own sustentation; for if you again separate the Acid from the said Metals, by Distillation, the same Spirit of *Vitriol* will return as you poured it on, neither perfecter nor better, and the remaining *Caput Mortuum* is melted into the same Copper, that it was, before it was dissolved, or into *Crocus Martis*, if it had dissolved the Iron without any alteration; neither doth it come forth better, or worse then other *Crocus's*, however prepared, as I have shewed, and shall further shew; *for Nature is the same in every thing*, as both *Pythagoras* and *Hippocrates* have taught.

If therefore Spirit of *Vitriol* make an impression on Copper, by means of Sulphur (as I have shewed) and yet can take away nothing of the Vertue of the Copper, either by Maceration, or Solution, Coagulation and Distillation; much less can other Acids, of what kind soever? It is both admirable and pleasant throughly to search into this Matter, for it is of great concernment, as to the Common-wealth of Medicine, so also to all *Virtuosi*, and to the Numerous, the Famous, and in our times, the Flourishing Company of *Apothecaries*. Make therefore *Erugo*, or *Verdigrease*, of thin Plates of Copper with Recent Grapes, thin Webs of Linnen or Silk being interposed, adding thereto whatsoever pleases you, in the rude way of operation, *Vinegar*, *Urine*, (of Women doubtless, otherwise it would not bear the Name of *Venus*,) *Allum*, and *Nitre*. The *Deans* of the *Austrian* and *Norimber* Colledge, with the other *Approvers*, do affirm, That this miscellany doth not, in time wax sower, yea that the Acid vapour of the ingredients cannot pass through the thin web to the body of the

Erugo made
of Plates of
Copper and
Grapes.

the Copper to corrode it, but if this can savour (I will not say of Truth), but of Probability, let the Skillful judge: How *Ærugo* is made, *Dioscorides* Teaches rightly, and without fraud, Five Masterless Theeves and Robbers, fighting under the gross Banner of Ignorance, do assault a frail Female, (let modest youth take notice, that this chaste bashful Female is clad with a thin Vail, that she may not appear naked in the sight of Five such Souldiers) who for a long time makes a stout resistance; but seeing *Hercules* himself cannot long withstand *Two*, she at last is made a prey, and with one of the Robbers (*i. e.*) *Vinegar*, as I shall shew, she is turned into biting *Ærugo*, imitating the nature of the Acid. This Matter is called by our Ancestors *Green Ærugo*, but it hath not been called by the Name of *Vitriol*, because it hath not the properties of *Vitriol*; and therefore they called it *Ærugo*, to intimate that the *Five Robbers* altogether had not the force or power to extract the least Vertue from the Copper, or of altering it in the least point, but only of corroding its Corporeity; for they have no dominion over It, neither do they return the richer from It: And though there be many that do boast of such a thing, yet their boasting is vain; for it is established by the Decree of the great Creator, that the *more noble* should not degenerate into the *less noble*, or the *better*, into the *worse*, and so pass into the servile form of a *slave*.

Wherefore *Copper* (or if you will, *Venus*) is now turned into *Verdigrease* biting and rough, and is dissolved in Distilled *Vinegar* (out of which it was made) and again is Congealed into *Verdigreese*, the Fæces being rejected, &c. This purged *Ærugo* or eroded *Brass*, is distilled with an open Fire out of a plated Retort, and afterwards is rectified out of Sand. Lo here, Thou Mystes of Nature, This is that *Spirit of Venus*, and a secret *menstruum*, as *Alcahest* (see *Hippoc. Chymic. Chap. 29.*) which the Deans and Doctors of the *Austrian* and *Norinberg* Physick, with their Fellows, do adore for the *Son of Venus*, of whom *Epictetus* sayes well, *Many are word-wise, not deed-wise*. The procacity and filthy licentiousness

Copper is not destroyed by Acid Liquors or Vapors.

Spirit of Venus made.

tioufness that *Venus* is accused of by the many, but vain clamours of false witnessers, *viz.* that It admits of Five Lovers in one Act, hath drawn Philosophers not only to the admiration, but even to the unbelief thereof; unless they had also known, That in the Court of Accusation, a multitude of Witnesses is many times loathsome, and suspected by the Judges; especially since they are not ignorant, that in Nature *Love* is so far from admitting Five, that it endures not a Third; whence it is, That they rather give sentence aginst the Accusers, and say, That as *Venus* upon Examination, notwithstanding the false Imputations of her Accusers, is found *chaste* and *constant* to one Male; so it may likewise happen, that any man may grow Famous from such Accusations, as many have done, who were otherwise unknown. 'Tis known to be True, That indeed *Venus* is Lascivious, and that she admits every Male, (that is all, Acids as well Occult as Manifest, as *Vinegar*, *Oyl*, *Suet*, *Sugar*, *Honey*, &c. I say, they all wax green with Copper) without any difference into her Imbraces; so that all Males are hot in *Love* (*i. e.*) wax green) with Her. But (witness *Alcally*, the Mother of Natural Things) She is never ravished with the delight of any of them, to a *deliquium*, but only with her own Brother. But that this discourse may appear more clear, we will fetch the Doctrine of it a little higher, *viz.* That the Acid of every Vegetable, drawn forth either by Fermentation or Distillation, or Expression, whether it be Occult or Manifest, if it be poured on the *Alcally of Tartar*, doth inform the same *Alcally*, with the *Soul* of That, from whence it was taken; and it is made a Salt of the same Acid Nature, as I have shewed in the beginning of this Chapter, by the Graines of *Kermes* (in which the Deans with their Fellows deny, that there is any Acid (*i. e.*) any Seminal Vertue) and by *Meal* (out of which They boast they can distill *Acid Spirit* of *Sal Armoniack*: see also *Hippoc. Chymic. Chap. 2.* and the end of *Chap. 17.*

So also *Vinegar* of *Wine*, distilled and cast upon *Alcally of Tartar*; to satiety, is Coagulated into *Tartar*, and that of the same Nature with the *Wine* from whence the

Copper grows green from all Acids.

Artificial Tartar.

the Vinegar was taken. This Tartar, if it be distilled out of a Retort, with Fire of Sand, or an open Fire, there comes forth a fat Oyl and bitterish Liquor, as in the Distillation of *Common Tartar*.

Artificial Salt.

I have also shewed the same thing, in the beginning of this Chapter, concerning Nitre, concerning Salt, concerning Allum, and also concerning Vitriol; for all Acid Liquor joynd with Alcaly, doth impregnate it with the *Soul* of that Body from which it was reduced, and forms a Body to it self *ad Lubitum* (i.e.) like its own proper Nature.

Spirit of Venus reduced to an Examen.

Let us see now, for a Tryal of the Verity and Glory of *Noble Physick* whether That Vinegar Distilled from Verdigrease (which they do so solicitously endeavour to keep from the Examen of Learned Men) be the *Legitimate Son of Venus*, or no?

I have shewed, That *Acid* is the one only Spirit of the World, and the Child of the Sun, which is not found naked upon the earth, but refusing to be alone, It assumes Matter, wherewith it dwells, encreaseth, regerminates, and is multiplied, sometimes as the Artificer pleases, for his proper ends. This when it falls on the seed of Copper (that I may so speak) it cloaths it self with the Nature of Copper in a long and laborious work; Therefore it is not separable from Copper it self, unless by the total destruction of the Copper, as the example of *Salt of Tartar* in my *Hippoc. Chymic.* Chap 10. doth shew; for carrying in it, the least Odor of a Metalline Nature, it cannot descend to the Nature of Vegetables, And the same Spirit falling upon the Seed of a Vine, Clothes it self there with the indoles of the Vine, and in like manner cannot ascend to the Nature of Minerals; as I have demonstrated out of *Lully*, and by Experience: yea it is not separated from the Disposition or Indoles of the Vine, unless, being dissolved or loosned from its Body by Nature and Art, it return to the Element of Air, whence it came, as *Hippoc. Chymic.* in the fore-cited 10. and 18. Chapters shews. The same is also to be understood of Salt, of Vitriol, of Nitre, and of all the Things in the World; for this cause, because Art cannot create Seeds; He

he that boasts he can do it, *Cosmopolita* proves him to be a *Deceiver*; so that every Spirit, either Occultly or Manifestly Acid, hath but one only *Soul* within it, with which, it being inseparably joynd, doth constitute the Form of That Body, in which it determines to dwell; from which, when it is extracted, and again insilled upon a new Alcaly; and is absorbed by it, it takes upon it the like Body, wherewith it was cloathed before, or from whence it was first extracted, but that Body somewhat clearer; an Infallible Argument, That a Spirit either Occultly or Manifestly Acid, is the Vehicle of the Soul, and the Bond uniting Soul and Body together: And unless the Spirit of all Things in the Universe were Acid, it could not invisibly carry in its Belly or Womb the *Anima* or *Soul* of the Body; as *Hermes* and Experience Teach.

Let us now return to the *Child new born*, which the Sworn Servant of *Venus* have lately begun to nominate and to commend for the *Son* or *Spirit of Venus*, peremptorily also affirming, That, *This hath drawn mighty Vertues, from his Mother or Copper*, but they consider not, that the Vertues of Things, as also the force of Purgatives, do consist in their *Soul*; which I have shewed in the first Chapter, to be a *Child of the Sun*, and to be inseparably joynd to the Spirit of that Thing, both which do constitute that Eximious Vertue, which is in Copper: which Spirit ought again to manifest it self in Alcaly, if it did flow in an Acid form. as I have experimentally shewed to the Eye, concerning other Spirits, and concerning Alcaly of Tartar. Let us now proceed to Experience, and to make Trial of this Acid, and Rectified Spirit of *Venus*, saturated to Sufficiency, with Alcaly of Tartar, as I have formerly taught concerning Salt, Vinegar, and Distilled Nitre; (i.e.) Thus, Pour so much of This Spirit on the Alcaly of Tartar, till the hissing cease (near upon equal parts) suffer the abounding, or exceeding Flegme to exhale, or if you will, distill it carefully to Siccity (distill that Flegm from an high Glass in *Balneo*, and there will come forth *Aqua Ardens*, see *Hippoc. Chymic.* Chap. 18.)

The Vertue of Purgatives whence?

Spirit of Venus in Alcaly made Tartar.

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and you shall find *regenerated Tartar* of the same Nature, Condition and Property, that That was, which was above generated from Vinegar of Wine, for it is the very same; for if it hid any thing of the Nitre, the Allum, or the Copper hid in it, as they ignorantly give forth, they would all be manifested in the Alcaly of Tartar; as I have Mechanically shewed above. But it must needs be, th at This Spirit can have no other Instruments but distilled Vinegar, since it can only make a Body of Tartar for it self: Whence this Spirit hath been presently known by Philosophers, not for the Immortal Son of *Venus*, or as *Alcahest*, but for the True Genuine Brother of *Vinegar of Wine*; and that not Spurious neither, as my Revilers and Reproachers have published to the World, but the Legitimate Son of the Vine, which hereafter will count it an impious thing to be reviled by unskilful Masters; Therefore in this regeneration, He was willing again to discover himself to the Curious, and to the Lovers of Truth, for the *True and Natural Brother* of *Vinegar of Wine* (*i. e.*) for *Distilled Vinegar*. Now that nothing may be wanting to this Enquiry, but all doubt taken away, *viz.* that This Spirit, which they dream to be the *Child of Venus*, hath acquired no Constancy, no Immortality, or excellent Vertues from the Copper, nor that it is, as *Alcahest*, as the Deans with their Fellows do cant, you may learn by this Experiment. Take this *regenerated Tartar* (to wit, from the Imaginary Spirit of *Venus*, and the Alcaly of Tartar) distill It out of a Retort, as you did before, and there will extil an Oyl of a loathsome smell, together with a bitterish Water; as I have shewed a little before from *regenerated Tartar*, out of simply *Distilled Vinegar*: Out of what hath been spoken, it appears, that whatsoever is distilled from the Alcaly of Tartar, which is impregnated with *Distilled Vinegar* (*i. e.*) the *bitterish Water*, *Aqua Ardens*, and the Oyl, *taking Flame*, the same thing is distilled from Alcaly of Tartar, impregnated with fained Spirit of *Venus*, to wit, *bitterish Water*, *Aqua Ardens*, and Oyl-*taking Flame*: and so, That *Spirit of Venus*, since it hath all the Properties and Operatiuous of *Vinegar*, is nothing

Spirit of *Venus* which is as *Alcahest*, is known to be *Vinegar*.

Spirit of *Venus* is *Distilled Vinegar*.

nothing else, nor never will be, than *distilled Vinegar*, Witness *Aristotle* and Experience. But leaving this puny, vain, and futile Society, to please themselves in their foolish Detrectings; I convert my Speech to you, O ye famous Lights of the World, That you may judge of the Truth herein, not that I would trouble you, to vindicate it from the fained and rash Contumelies of such clamorous Reproachers, since it appears out of *Pliny*, That when Frogs croak more than ordinary, it is a sign of a Tempest ensuing: supposing then, but not granting, that one drop of Acid contains only the 8200 part of the Eximious Vertue of Copper, I say, this so small part, ought yet under the heat of Fermentation, to extend it self, and to regenerate, if not in Vegetable Alcaly, yet at least in Metalline, as the order of Fermentation elsewhere shews; so that it would turn, though not much, yet a small quantity of the Metalline Alcaly, into Copper, no otherwise, then the Vertue of Acid Vegetables, and the mid-sort of Minerals doth transmute Alcaly of Tartar into a Salt of its own proper Nature, as I have before said and proved; but as the *Antecedent* and their Premises are false and favour of gross ignorance, so is the *Consequence*. Again, supposing, but not granting, That Vinegar did carry off with it, such eximious Vertues from Copper (as they unlearnedly and without truth affirm) yet I could never find, either amongst Philosophers or Physicians, that It was assumed within the Body, but whatsoever was got from the Copper was always used outwardly for Chirurgical Operations. And although mighty Vertues might be drawn forth and distilled out of Copper by Vinegar, which I have shewed to be impossible, why is not the same Eximious Vertue drawn forth, with less labour, out of immature Copper, since it is easier to go one Mile, than two? Why should my *regenerated Virriol*; prepared from Crude *Vitriol of Mars*, procure monstrous Vomits and Suffocations, if you draw forth such Eximious Vertues from mature Copper by Vinegar; to which you subjoyn these lofty, but most false words, *This most praise-worthy Spirit, is not only of great use in Physick; seeing it highly Cures and Relieves*

This fained, yet praised, Spirit of *Venus*, is but a counterfeit *Paracea* and *Alcahest*.

lieves the Epilpsy, Appolexy, Histerical and Hypochondriacal Listerpers, but is as the Liquor Alcahest, and not as other Acid Spirits, which by Solution do suffer and are destroyed, and so turned into another ens: See Hippoc. Chy. m.c. Chap. 29.

Now let the Reader, who loves the Truth, judge, whether any thing could have been devised more sottish, than to affirm That the regenerated Vitriol of Philosophers educed from an Immature Mine of Iron, is pernicious and deadly, when we see, that every year some Myriads of Men do drink, even in great quantity, Acid Waters, saturated with Immature Iron and Natural Spirit, and that with great benefit and advantage; and also That the great Imaginary Vertue, extracted with Vinegar out of Mature Copper (if there were any such) is a Panacea. I may very aptly apply hither, That of Plautus, nothing can be more foolishly, sottishly, or falsely spoken.

It remains that we bring That most praised Spirit of Venus, which they say is as Alcahest, by dissolving some Body unto an Examen.

Now Alcahest is described by Helmont to be an Eximious Liquor, (a) to be got by the Art or Labour of Sophia (b) which doth not only resolve every visibl Body into its first Matter, (c) but is moreover Immortal and Incorruptable (d) it putrefies Nature, and takes away all Diseases (e) but it is not given to putative and empty Doctors, but to well Lined and rich Understanding (f) So Helmont: Now let the equal Reader Judge, whether this praised Vinegar of these Prateing and Wordy Doctors, which is Distilled from Copper be alike in Vertue to Alcahest? Truly, if this their foolish Assertion were profoundly examined, and laid before the Eyes of the Readers, it would move Nauseousness and Indignation; and therefore I shall discover their Vanity by Experience alone.

Dissolve then at least one Drachm of Red Powdered Corral, in This Vinegar; which they proclaim to be the praised Spirit of Venus; dry the Solution in a Bath: In like manner dissolve another Drachm of pounded Corals

Alcahest what?
(a) Pharm. 14
(b) Imag.
Ferm. S. 8.
(c) Verb. explic.
(d) Arcana
Paraph.
(e) Potest.
Medic. S. 4.
(f) Arboravivata in sine.

Spirit of Venus
dissolves Coral.

Corals, in Vinegar simply Distilled, which likewise Exsiccate in Balneo: Diligently gather up those Powders, and weigh them severally in a Ballance, and you shall find the dissolved and dryed Corals to be increased half a Drachm, as well by the Spirit of Venus (which They count as Alcahest) as by the Vinegar Vulgarly Distilled: So that the Corals have imbibed as much Acid Salt from the counterfeit Spirit of Venus, as from the Distilled Vinegar. Whence it again appears, That This shews it self to be Vinegar; because it is indeed, and not the Liquor Alcahest; as the lofty Doctors would impose upon rude and ignorant people.

Again, They urge, That this praised Spirit of Venus, doth dissolve Pearls without bubbles, and leaves the cortices untouched. Truly this may seem a wonder to Men altogether unskilful in the Art of Physick, and who never learned the Rudiments thereof; but methinks it should seem a trivial and sleight thing to the Deans, and the rest of the Approvrs. For what ordinary, or mean Physician can be ignorant, that Vinegar simply Distilled, doth perform the same thing (though in a longer tract of time) if you cast whole Pearls into It; and therefore your spirit of Venus which you account as Alcahest, will not cease to be distilled Vinegar.

But why the skins, or pellicles of Pearls are not dissolved by either of the Vinegars, the reason is, Their fatness and unitive glew, the seat of the Child of the Sun, which is proper and familiar to all Crustaceous Creatures, to Fishes, and the Membranes of Animals; The counterfeit Son of Venus, however extolled by vain Approvrs, doth never touch this Glew in stones of Crabbs, Pearls, &c. it hath no access to them, it is Leprous in comparison of them, and therefore is not admitted to the Princely-Seat unknown to Ideots.

But why Vinegar doth corrode the Medulla of Pearls, of the afore-said stones and Corals, &c. The cause is, That Nature hath put least part of Acid into most things (as I have shewed in the second Chapter) which least part, unless it be multiplied by Art or Nature, is easily suppressed by the more powerful; I will give an Example in the

Vinegar dissolves Coral.

Spirit of Venus is Vinegar, not Alcahest.

Spirit of Venus is distilled Vinegar.

the afore-said dissolved and dried Corals, in which there is the least portion of Natural Acid, which being oppressed by the counterfeit *Spirit of Venus* is made subject to It; hence they are increased in weight.

Again, dissolve these dried Corals in some water, either Distilled, or common clear water; let the Solution rest, that the Turbid may subside (which they improperly call *Fases*) which nevertheless you must separate, and drop into the clear Solution a little of the spirit of *Vitriol* of *Sulphur*, which overcoming the counterfeit *Spirit of Venus*, not by its Acidity, but the Nobleness of its Soul, cast out the *Vinegar* (which they call *Spirit of Venus*) from its seat and place, and doth assume the possession of the Region of the Spirit of *Vitriol*, and with the Corals represents the form of curdled Milk; but the *Counterfeit Spirit of Venus* being now expelled by the more Noble, is diluted and sticks to the supernatant water, and is mingled with it.

Wash both these Coagulums as much as you may, and dry them severally in brown Paper, and you shall have *Magistery of Corals*, equal in weight, as well from the counterfeit Spirit of *Venus*, as from the *Vinegar* simply distilled, because it is the same.

But take that water so washed from the Corals, in which, as I have said, the counterfeit Spirit of *Venus*, or some simple distilled *Vinegar* was diluted (if you have otherwise warily poured on the *Spirit of Vitriol*, for if you have carelessly, and without judgment poured on more than the Coral will imbibe, it will not swim atop; but I suppose the affusion was skilfully made) and instill into it Alcaly of *Tartar*, till the Motion of *Ebullition* cease; exhale the abounding Water in a Glass Vessel placed in Sand, and you shall find *regenerated Tartar*, as I have shewed above, from the *Counterfeit Spirit of Venus*, or *Vinegar*; simply distilled, imbibed in Alcaly of *Tartar*, for it is the same, by this infallible Argument, That in the Corals dissolved and dried in a Bath, there remained only half a Drachm of Acid Salt from the *feigned Spirit of Venus*. That Acid Salt being separated from the Corals, by Spirit of *Vitriol*, cannot be alone; where-

Spirit of Venus
is distilled *Vinegar*.

wherefore it guards it self again in Elementary Water, as in his Mothers lap, and diffuses it self in her; and becomes again *Counterfeit Spirit of Venus*. And unless Elementary water did contain Occult Alcaly in its belly, Acid Salt could not inhabit in it; because that alone it is not sufficient for it self: as *Hippocrates* hath taught us, *De Diata*. Simple distilled *Vinegar* performs also the same thing; so that it now appears, even to the most unskilful in Physick, that this most celebrated *Spirit of Venus*, here and every where, is nothing else, and savours of nothing else, but *Distilled Vinegar*, whatsoever Bugbears its Adorers would fright us with. And although *Crollius*, *Bequinius*, and other Writers of the Elements of *Chymistry*, in express words do call it, *Solvent Vinegar*, from whom the process of this *Vinegar* is stoln word for word, as my *Hippoc. Chym.* shews Chap. 29. Yet This poyson of Ignorance hath infected, not only *Austria*, but almost all upper *Germany*; witness these unskilful Approvers and their foolish *Partizans with their Rythmes*. It would be no wonder, if, as the *Romans* of old, so *Magistrates* now, would eject out of their Cities and Common-wealths, such *Harlotry Collegiates*, and such a Nest of *Bablers*, who do scribe of things unknown, even to themselves, to their Neighbours hurt. *Low Germany* is yet free from this Contagion, so is *Italy* and *France*, and for the future, I hope by this Antidote they will be preserved.

Now, Why *Vinegar* distilled from *Verdigrease*, in a small quantity, doth more powerfully dissolve Corals, than That which is distilled the vulgar way? I have shewed the reason before, viz. that it happens, because *Vinegar* distilled the common way, is as yet diluted with much Water; but the Elementary Water is evaporated from That, which is distilled from *Aerugo*, by gradual Exhalation, no otherwise than in the distillation of Green and Humid *Vitriol*, for then the Acid Salt being long in the Liquor, would be very weak; but when the humid (which they call *Phlzm*) hath by degrees exhale and evaporated before distillation, the Acid Salt must needs be more powerful and strong in a lesser quantity of water; for Light by how much more contracted, by so much the more

Vinegar from
Aerugo, why
more Acid
than Simple?

more efficacious. This distilled Spirit of *Vitriol*, if it again corrode any thing, either Iron, or Copper, and be coagulated with it, and again be re-distilled from it, the Liquor indeed returns Acid of the same nature, but much more subtle, because that in all Coagulation, every Salt or Saline Spirit loses of its *Radical Humid* (what that is, I shall shew anon) when of necessity it must lay down its *Earth* (the Vulgar call it its *Fax*) and so the *Lumen* must be more contracted. But from the repeated Coagulation and Distillation; It returns more watery; and at last returns to Elements; as I have Mechanically shewed in Alcaly of *Tartar* (for Example) in my *Hippoc. Chymic.* Chap. 10.

After the same manner and fashion, *Counterfeit Spirit of Venus*, by repeated Solution, Coagulation, and Distillation, re-passes into Elements; for as often as it dissolves Corals, or any other thing (I began with Corals and will end with Them) and is afterwards Coagulated and Exsiccated with the same Corals, so often it lays down its *Earth* or *Alcaly*, and as much Earth as it lays down, so much Acid Salt the Corals do drink up, because *this cannot be alone*, and the *Vinegar* becomes so much the more Aqueous, and by repeated labour, at last returns to Element (*i. e.*) into Insipid Water; but the Earth and Acid Salt gave weight to the Corals, which also pass out of them by repeated Distillation, and go to their own Country, after the same manner as I have shewed concerning Wine in *Hippoc. Chymic.* chap. 18.

Now that *Vinegar* or Spirit of *Vitriol*, poured on Copper, and re-distilled, do return Acid; but from the Alcaly of *Tartar*, Insipid and Aqueous, the reason is, because Alcaly being a *Vacuum*, saturated it self with Acid Salt which dwelt in the Aqueous Liquor; whence the Acid Salt converts and transmutes the Alcaly into its own nature. But Copper is not a *Vacuum*, for the *Acid*, or Form of Copper doth overcome its *Alcaly*, and therefore it doth not absorb Acid Salts; and though they act, and are busy about *It*, and do erode its body; yet they can make no impression of any of their Form or Vertues, nor can they destroy It, because Copper hath obtained a

Why Vinegar returns Acid from Copper, and not from Alcaly.

constant Soul from Nature, or to speak in *Plantus's* Phrase it hath Acid in its breast.

Again, They demand why *Vinegar* is re-distilled from Copper, even as it was poured on, but from Lead Insipid? Although I am almost ashamed to handle This, or the like Childish Question, yet being moved with commiseration towards those unskilful and sluggish Doctors, hoping that this my present answer may be for their future amendment, I shall willingly repeat my former answer; I told you that *Copper* hath a prevailing Acid, whence it is that it resists not only *Vinegar*, and the *Counterfeit Spirit of Venus*, but also all Acid Minerals; but *Lead* hath obtained but a very little particle of It by Nature, and therefore it imbibes every Acid, in hopes of Perfection (that I may so speak) as I have shewed in *Alcalyes*. This is the cause why *Lead* is similitudinarily called by Philosophers, *The first matter of Metals*, or the *Alcaly* of Metals, in respect of other Metals, which are more or less richer in Acid. Gold is most Acid, and therefore most perfect, as I have shewed in the 2. Chapter. See how easily I have extricated my self out of these great Difficulties!

Some of *Ours* may wonder why I spend time in a matter so plain, for *Basilus Valentinus* an Age ago hath taught us how to prepare this *Vinegar* out of *Aerugo*, in iuventute, and he called it not by the name of *Spirit of Venus*, but *Vinegar* (for he knew well (so do not the *Deans* and their Fellows) that it was established by the decree of the Supreme Creator, That the more excellent Nature, should not degenerate into the worse) which is proved by the remaining *Fax* or *Caput Mortuum* left in the Retort, after the distillation of this *Vinegar*, which, with *Borax*, by an easie Fusion returns into *Copper*; an evident Argument That *Copper* lost none of its Substance, or excellent Vertue (as they say:) See more in my *Hippocrates Chymicus*, chap. 29.

For conclusion of this Chapter, I repeat, That whatsoever the World hath, is better preserved, and multiplied by the Acid Spirit, either Occult or Manifest, to which it owes its *All*; And That the Soul dwells in the

Why from Lead insipid?

Spirit of Venus is Vinegar.

Acid, and is inseparably bound to it; and that the Body, or Alcaly, is informed according to the property of the Acid Spirit. If therefore Nature be alike in every thing, and Art doth imitate Nature, as *Pythagoras*, *Hippocrates*, and Experience teach, it must needs follow, That when the Acid Spirit of *Vinegar*, distilled from *Verdigrease*, hath corroded Corals, and hath been absorbed by Them, and coagulated with them, then the Corals will be endued with the properties and conditions of *Vinegar*; not that the innate Acid, or Form of Corals doth perish, but only is suppressed by a more powerful Acid, as I have shewed before in the *Magistry*. If therefore your celebrated Spirit of Venus, *lawfully and duly* (as they say) exhibited (though they never yet shewed the way) helps *Hypochondriacal*, *Epileptical*, and *Hysterical Distempers*, &c. the Magistry of Corals (which with a proud and swollen breast, they call *Our Soluble Magistry*) made with Spirit of *Venus*, must needs perform much greater things? if otherwise, the Spirit must animate the Body, to whom it is joyned; as I have hitherto clearly and experimentally shewn, and shall hereafter shew.

But as *their Spirit of Venus lawfully and duly administered*, is the best to season a *Vinegar Vessel*, so also it hath, and will always retain the nature of *Wine-Vinegar*, till it become like *Alcabeft*.

But our *Master Deans*, with the rest of their Colledge-Company, out of the treasure of their Liberality, have lately discovered to us a great Secret, which had lain hid to this very day; *viz. That: their Counterfeit Spirit of Venus helps the Tooth-ach*: neither could we learn it out of *Dioscorides* his History of *Vinegar*, unless it had been discovered to the World in a Dream, or by hidden Revelation: But as *Vinegar* doth dissolve Corals, so it scours off, and takes away the hardened *Mucus* or Filth about the Teeth; that the Gums may be again united to the Teeth; for sound and sharp-pointed Gums admit not Pain, but when they are forced to recede by Filth, and the Teeth are never so little denudated or bared, presently upon the solution of a *continuum*, the Blood sours, putrefies, and is coagulated there into an hard *Fax* (which

some

Vinegar cleanseth.

some, but improperly, call *Tartar*) which *Fax*, when it is abraded or taken off with *Vinegar*, or Spirit of *Salt*, or else with an Instrument of Iron, presently the Teeth find relief.

And thus you have, O ye sincere lovers of Truth, the entire Tragoedy, the Rise and Overthrow of this Celebrated Spirit of *Venus*, which, with all its Eximious Vertues, cannot cure the slothfulness of these Approvers and Subscribers; so that it happens to them, as to those mens Children, who hire other mens Farms; for They seeing their Fathers (they themselves being yet but Children) gathering in the fruits, and commanding the labourers, do presently conclude the soil is theirs, and so are very Jocund: but when they grow up, and understand that there was nothing *Theirs*, but the labour of Tilling the Ground, then their Mirth is turned into Sorrow. Even such are these men, and as we read in *Sensivogius*, whatsoever the *Alchymist* would have out of Sulphur, it ended in a snuff, the same happens to these *Deans* with the other Approvers; Whatsoever Eximious Vertues they would have from *Copper*, 'tis still naught but *Vinegar*.

CHAP. VII.

That no Matter can be so destroyed, but It will remain under some Form or other.

I Shewed in the fore-going Chapter, that Acids do draw Alcalyes to their own properties, and that Both are changed into Salts. But those which are not fully Alcalyes, when a noble Acid *supervenes* upon them, their internal Acid is indeed abated, but not so wasted or destroyed, that any other new thing can be *Regenerated* out of it.

I will now proceed to prove by the following Argument, and that Mechanically, That all Alcalyes do, after a sort, retain of the Form, with which the *Mixta* were saturated, before they were reduced by Fire, into Alcaly;

ealy; of which see *Hippoc. Chymic.* Dissolve half an ounce of *Sublimate Mercury*, in fifty ounces of *Common Water*, distilled, or at least a drachm of *Sublimate* in twelve ounces of *Water*. Into a part of this clear *Solution*, instill by drops; but with a quick infusion, fixed Alcaly of *Tartar* in the form of *Liquor*, or (as they call it) Oyl of *Tartar per deliquium*; which in a moment separates and absorbs the Acidity, for the greatest part, from the *Mercury*; and the *Mercury* falls into the bottom of the Vessel, in the form of Powder obscurely Red. This Operation is called by *Apothecaries*, and their Operators, and by all Lovers of *Physick*, *Precipitation*; which name I shall also retain and use.

Out of the *Races* of distilled *Vinegar*, burnt into Ashes, *Alcaly of Tartar* is elicited by water, and though It be produced out of the same Vine with Wine, yet it precipitates *Mercury*, dissolved as before, sparkling and splendid.

But when the same Alcaly is calcined to Redness with a moist fire; then the same *Mercury* falls like pounded *Cinnabar*.

To the *Tartar* being burnt; if you superadd the *Calx*, and extract the Alcaly with Simple Water, The *Mercury* is precipitated *Rustant*. *Calx* of it self, doth not precipitate *Mercury* so dissolved, since it is Salt from Acid and Alcaly; and they who against Experience do deny the saltness of *Calx*, are to be reckoned in the number of Fools. But if the *Liquor* of *Mercury* afore-spoken of, into which a piece of *Calx* hath been injected, be suffered to rest for some hours, so long until the Acid, which contains the dissolved *Mercury*, can suppress That in the *Calx*, then indeed *Mercury* is forced to fall by little and little, and to stick round about the *Calx*, like *Minium*; a delightful spectacle to Curious Eyes.

Alcaly extracted from the Herb *Kaly*, being incinerated, doth precipitate *Mercury* much more obscure than the former.

The *Lixivium*, which *Sope-Masters* call *Magistra*, which consists of *Calx* and artificial *Alcaly*, yields *Mercury* darkly Yellow.

Out

Out of *Spain* there is brought an Alcaly (whether Simple, or Compound, is uncertain?) yet it precipitates *Mercury* of a Tauney colour: These Examples concerning Fixed *Alcalyes* (for *Sope*, and *Glass*) which do admit *Reverberation* in Ashes neither do easily perish from an acute Flame, may suffice; I will add certain *Alcalyes* in *Physick*, which do not bear sharp *reverberation* in Ashes, unless they be mixed with the former; And These are made of the Herbs called *Cephalickes*, as of *Rosemary*, *Lavender*, *Rue*, &c. all Hot, and of a Grateful Smell. I say, all these are indeed *Alcalyes*, but not fusible in Ashes, for they easily fly away, and are therefore *Medicinal*. All these, be they never so many, do cast *Mercury*, so dissolved into a Reddish shining Powder.

So also *Celandine* affords *Alcaly*, or precipitates *Mercury* most red, so that *John Isack Holland* doth not unskillfully, but excellently and learnedly speak, *He that knows not Salts, will never perform any thing in Art.*

All the foresaid *Alcalyes*, as well those burnt by a sharp Flame for *Sope* and *Nitre*, as the Medicinal ones, from *Cephalick Herbs*, do precipitate *Mercury* so dissolved (as I have said) of a different colour, a manifest Argument, that their Form is not totally consumed by the Fire, but that they preserve some properties of their Simples, from whence they were extracted; as *Geber* says, *Salt retains the property of that thing, from whence it had its Original*: To which the Experience, which I have shewn, bears witness.

Heretofore I was of opinion, that the difference of Colours in *Sublimate Mercury*, dissolved as before, and precipitated by *Alcalyes*, did proceed from the Fire, acting more or less upon the *Alcaly*, but at length, by frequent Experience, I have found my mistake; for day to day, and night to night sheweth Knowledge: we are not all born *Masters*, nor can we all be *Lullies*; but Age, frequent Use, and Experience do manifest the Truth. I have observed that *Hippocrates*; and *Galen* also, being better informed, did correct their Errors; so that it is no shame for me, a slow-witted Person, to amend the mistakes committed in my youth; especially, seeing I had no Fore-runners,

runners, from whom I might excerpt any thing, as they have, who seek for Glory in gathering together Receipts; neither had I any other guide, save the fountain of all Vertue: so that I have bolted out the Truth (by immense Meditation and Labour, and not a little Expence) from the fountain of Nature, by my own Industry: Wherefore to demonstrate the constancy of Forms, be it known to you, That I can find no better nor shorter way, than that which I have shewed by the alterations of *Mercury*, upon the affusion of Alcalyes. For when I endeavour to declare the Forms, with the same labour, the Precipitation of *Mercury* doth voluntarily offer and discover it self; which yet running, being dissolved in *Aqua Fortis*, upon the affusion of Alcaly of *Tartar*, is precipitated into a colour obscurely Yellow.

All the aforesaid Precipitated Powders of *Mercury*, are of a *Caustick* and *Corrosive* Property, because the *Mercury* assumes the nature of that thing with which it is first mixed; and the Caustickness is not wasted off by any Artifice, but by fire alone, as *Hippocrates Chymicus* shews.

In like manner, *Mercury* dissolved in *Aqua Fortis*, and evaporated to Siccity, the Fire being encreased, that the bottom of the Vessel may be Red-hot, is made a most Red sparkling Powder, and is called in Physick, the *Precipitate of Vigoe*, because *Johan. de Vigoe*, a *Chyrurgeon* of great Fame, was the Inventor of it; on which Red and sparkling Powder, if you pour Alcaly of *Tartar*, and leave it for an hour, in a warm place, the whole Powder will become obscurely Yellow, because the Alcaly hath in part absorbed the Caustick Acid left by the *Aqua Fortis*.

The Vertue of this red and sparkling Precipitate, is strongly, and almost without any biting Pain, to absume and eat up the thicker Sordes of *Ulcers*, *Callous*, *proud Flesh*, *Imposthumations* in the *Fundament*, and other like *Excreescencies*. Yea, it cures all *Sordid*, *Purrid*, *Mattery*, *Callous Shingles*, sometimes alone, sometime mixed in Plaisters, or Unguents, as necessity requires.

The same *Johannes de Vigoe*, made a Plaister of *Quick-Mercury*

The Precipitate
of Vigoe.

Mercury, with many other *Anodine Ingredients*, to mitigate the Pains of the Joynts, arising from an inveterate *Lues Venera*, with happy success; which to this day retains the *Author's Name*, and is called, *Vigo's Emplaster of Frogs with Mercury*.

So that *Johannes de Vigo* hath delivered to us; Two Medicaments made of Common *Quick-Mercury*, one Escarotick and Deterging, the other Anodine and Aswaging Pains. He, and with him the whole Senate of *Chyrurgeons*, intimating thereby, That *Anodines* are wholly contrary to *Escaroticks*, yet nevertheless, out of Ambition, Ignorance, or both, They pervert the Text and Meaning of this worthy Man, proving themselves Falsaries in the Law against Him (whose Defence I now take upon me) and they do moreover deride him for Teaching, that the *Mercury* is to be quenched with *Oyl of Bayes* according to Art, and with Spittle; but as out of gross Ignorance, leavened with Insincerity of mind, they have mutilated and defamed my *Hippocrates Chymicus*; so also they have suborned a Sense quite contrary to the intention of the Author; for He boiles this lovely Couple, live *Mercury* dissolved in *Aqua Fortis* with *Vipers Grease* and *Oyl*, till the Aqueous moisture be spent; affirming and giving out, that in boiling, this Caustick is dulcified and made sweet, which is contrary both to Experience and the manifest Truth.

Now if you desire to have it *sweet*, 'tis enough to extinguish it with *Oyl* and *Spittle*, according to the Author's Meaning; or else take *sweet Mercury*, as it is sold in *Apothecaries* shops, for neither of them are touched by Alcalyes, because they have nothing of *acuteness* in them, as I shall anon Mechanically shew.

I shewed a little before, That *Quick-silver*, or *Live Mercury* (call it as you please) dissolved in *Aqua Fortis*, and precipitated with Alcaly of *Tartar*, doth fall in an obscurely Yellow colour, the Alcaly for the most part absorbing from it the Acid Caustick impressed on it by the *Aqua Fortis*. But in *This* Plaister, the *Mercury* dissolved in *Aqua Fortis*, is scethed with *Axungia of Vipers*, to the consumption of the Aqueous Humid, and the Mass be-

The Anodine
Plaister of *Vigo*
deform'd into
a Caustick.

becomes of a Grey colour; upon which Mass if you pour Alcaly of *Tartar*, in the space of half an hour, you shall see the Alcaly penetrating the Fat, to consume the *Acid Corrosive* left by the *Aqua Fortis*; and so the *Mercury* to be obscurely Yellow, after the same manner, as it happens in *Mercury*, and simply dissolved in *Aqua Fortis* Precipitated according to *Vigo's* mind. And therefore *Mercury* so dissolved, and boiled with *Axungia*, becomes not sweet at all, as the foolish Doctors falsely say, but it remains corrosive, even by their own confession; for they affirm, That *Mercury* dissolved in *Aqua Fortis*, by boiling in *Axungia*, becomes sweet; yet afterwards they confess, that *Imposthumations*, *Putrid Flesh*, and the like, are consumed by it; which two Assertions are diametrically contrary one to another: This is that which made *Hippocrates* to break forth into a smiling laughter, and to say, *They know not what they do*. From their Fruits therefore, and Works, you shall know them (*i. e.*) the Works of Fire prove true Fire, and *Mercury* consuming *Impostumes* is true *Precipitate*, because it performs the Operations of *Mercury Precipitate*, as I have shewed by their own Confession, and also by the affusion of Alcaly; for they are both obscurely Yellow, as well the Red *Precipitate* of *Vigo*, as This boiled with *Grease* or *Axungia*.

Truly the condition of Mortals is to be lamented, whilest *Physick*, which is the Noblest and Famousst of all Sciences, in our days, is suffered to be directed by Stupid Ignorants, and for this reason it is justly proclaimed the meanest of all Arts.

Do not our Ancestors, those shining Lights of Learning, teach us, That *Terrestrial Mercury* is as the *Cœlestial*? And those things which are in the Superior, are also in the Inferior World? And to what Planet *Mercury* is joyned (*i. e.*) to what Vertue it is united, it takes upon it the nature of the same, since it is pregnant with the seeds of all things.

Johannes de Vigo did consider *Terrestrial Mercury*, as *Caustick*; whence by the advice of his Predecessors, he joyned it with an Earthly Planet; whose Vertue was Fiery and *Caustick*; it embraced the nature of This, and be-

Precipitate
Mercury, Cau-
stick,

became *Caustick*, according to the Doctrine of the Ancients, and is called the *Precipitate Mercury* of *Vigo*.

The same *Vigo* wanted a *Terrestrial Anodine* of *Mercury*, whence also, following the same Doctrine of the Ancients, he joyned it with *Anodine* things, viz. *Greases*, or *Suits*, *Oyles*, *Froggs*, whose nature it assumed, and became *Anodine*.

So that *Mercury* takes the form of That, by which it is dissolved, and it is mingled with it, as I have shewed clearly enough, concerning the Alcalyes of *Vegetables*.
He that hath Ears to hear, let him hear.

Hence it appears, That the Inventor of the *Precipitate*, and also of the *Anodine Plaster* (whether it were *Vigo*, or any one else, it is not my part to enquire in this place) was not only a Man of Experience, but an Understander also of the Causes of Things, and consequently a Wise Man; so that it is a piece of stivolous and absurd Ignorance, and Fanatick Dotage, to go about to reform actions of knowing Persons; Out of my pitty to such Undertakers, I shall do them the best service to bury this their insipid Discourse, in perpetual silence, lest they should be exposed to the laughter and derision of Fresh-Water *Apothecaries*, yea of the Vulgar it self: I wish they would learn hereafter, what they know not, before they babble forth their Scurrilities against the Truth, and the Ancient *Hippocratical* Doctrine of *Physick*. At this game I confess you are superior to me, for you know how to paint and set forth the fooleries of men, so neatly, that in this art I must needs lay down the Bucklers. But that your disease may not be *Chronical*, pray have a care how you often vomit out such things?

Moreover *Mercury Precipitate*, now made *Caustick* by the *Aqua Fortis*, for consuming *Putrid Flesh*, as all Skillful *Chyrurgeons* acknowledge, may be mixed, as Exigency requires, with any Oyntment. To what purpose then is this *Anodine* composition with *Precipitate*? especially in Countries where *Vipers grease* is sold dearer than Gold? whence this *Grease* is not only mixed with the *Precipitate* against the intent of the Inventor, but moreover is odious and troublesome to *Apothecaries* (especially since

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Hogs-grease will do as well with *precipitate*) as also unprofitable to the Sick.

You have now heard, O ye Truth-respecting hearers, on what ground this *Plaster of Froggs*, with *Mercury*, hath been *reform'd*. It is your part, to judge whether that ingenious Person, *John de Vigo*, deserves to be contumeliously Reproached for this? And, whether That barren, insipid, and truthless Doctrine be to be suffered, which Rails against both the order of Nature, and also the wise institutions of our Ancestors? by which, hopeful Youth in tender years being seasoned, the Poyson of Ignorance and Unskilfulness grows up with them, and so the wound becomes Incurable. But these things, were not of so great moment, if the Health of Man were not endangered thereby; for they prescribe to the Sick, *Simpl: water for Cordial*, *Vinegar* for an Epileptick Remedy, *Causticks for Anodines*; Poyson of *Copper* for a wholesome Medicine. Sick and weak Persons can hope for no Cure from such men, but only a foolish profusion of their money; and at length the loss of their lives to boot: Let them then avaunt, and be packing to the farthest *Garamantes*, with their *Spirit of Venus*, and their *Counterfeit receipts*; Let them not trouble the Civil World; Let them *there weep*, like Women, since *here* they have not acquitted themselves like Men.

Order now requires, that I should shew what *Mercury* Sublimated is? since I have laid *That* down, as an Instrument in the examen of of *Alcalyes*? How *It* is Prepared, *Hippoc. Chym.* shews *chap. 29*. Where observe, that *Vitriol* Rubefied, or Calcined to Redness, is not added, to encrease the weight of the *Mercury* (as these magnifick Masters with their Parrizans, do suppose) for then it would not be calcined to the highest Red, but to Whiteness only, as is done in the distillation of *Vitriol*, whose *Caput Mortuum*, left after distillation of the Spirit, is most fit for this purpose; and therefore we need not its Spirit to add weight to the *Mercury*, but it is added, that the Sulphureous *Nitre* might apprehend the Sulphur of the immature Metal, lying hid in the Rubefied *Vitriol*, as I have shewed before; and so by their Joynt-forces they

Sublimate
Mercury.

they may dissolve the *Mercury*. This is the reason why Rubefied *Vitriol* is required. But the quantity is *Quadruple* in respect of the Salts, because These are of easie fusion in the Fire, from the which by Rubefied *Vitriol*, they are preserved: see more in *Hippoc. Chymic.* in the fore-cited chapter.

The same *Mercury* once sublimated, needs not again be re-sublimated with new Powders, as the unskilful *Approvers* think, because it doth not put off or depose the Acid Spirits once absorbed, so as to stand in need to re-assume the same from new Powders: and suppose that it were sublimated an hundred times with new Powder, yet it would never become purer, as they falsely affirm; the reason is, because this way the External Sulphur is not separated, neither doth *Suscipere magis vel minus*, although (*Legitimately*, as they say) a thousand, yea an hundred thousand times it be resublimated; And the word *Legitimately* in this place, doth discover their gross ignorance, and stands for no other use, but to be nauseous to the understandings of Wise-Men; but it receives as much as is enough for its saturation, as they know well, who have sometimes dissolved *Mercury* in *Aqua Fortis*; which if it be not sufficiently Powerful, the Grain of *Mercury* remains untouched and quick, because it could not imbibe That which was not; and on the other side, the water could not dissolve it, because it wanted Acid Salt. Truly this word (*Legitimate*) with this (*pur. r Mercury*) and the rest of their false Receipts may well enough be discarded and abandoned even by the Puriest *Apothecaries*. But when sublimate *Mercury* is freed from the Acid Spirits by Vegetable Alcaly, and is fetched back quite from the Retort, then indeed it may be mixed with new Powders, and again sublimated; which way the Deans with their fellows are yet ignorant of: yet nevertheless it would not become *more pure and splendant*, because in its first sublimation it neglected all that, which was not of its own nature in the Faces and *Caput Mortuum*; but it would come over and return in less quantity, because it would return to Elements by frequent sublimation and revivification, as I have shewed above concerning Alcaly

The Revivification of Sublimate or Precipitate Mercury.

of Tartar, concerning Spirit of Vitriol, and concerning Vinegar: see Hippoc. Chym. chap. 10.

This foresaid mixture of Mercury with Rubefied Vitriol; Nitre, and Salt, if you sublime it, not by little and little, but in great haste, and more than is fit; the Mercury will concrete, in the top of the Caput Mortuum, into lucid and great Chrystals, like Nitre, and not inferior to a Diamond in lustre, which these Babblers vaunt for a great Secret, and affirm it to be *The purest Mercury*. For whom the speech of Mercury in *Sendivogius* may well be applied, *That 'tis natural for him to laugh at fools*; which Disease, as *Cardan* says, they may easily Cure without a Cudgel, by eating Hens brains, the Testicles of Doves and Tortoises, and by drinking a little White-wine Vinegar every day: If *Cardan* had had any knowledge of this child of Venus (newly born to these Obstreperous Doctors) perhaps he would have preferred it before Vinegar, since duly exhibited, it cures Epileptic and Melancholy persons, witness the Physical Doctors of the Austrian and Norimberg Colledge. In the interim let their humours be purged with black Hellebore, would all Anticyra had enough of it; Let them drink Capon-broth, and smell to the flowers of Nymphaea, which, with their grateful smell do mightily cheer the spirits of the Heart; and engrave Aristotle in a Topaze, walking Tempe. Hitherto Cardan, to which I add, that unless these overwise Doctors, with their fellows had approved and owned this child of Venus; the simplest man alive would never have believed there was ever any such thing. But lo, I communicate to you, this great Artifice gratis.

To conclude therefore, I affirm, that neither Mercury sublimated, or precipitated, ill-handled with Vipers-grease, and mortified in Aqua Fortis, and also mixed with Alcalies, and Revivified with a naked fire out of a Retort, and by consequence, weak and frail, as Alcalies, nor no other Matter, can be so destroyed, but it will still shew something of its Form.

CHAP. VIII

That Acid doth both Destroy and Perfect, and that the Fire, the Sun, and Acid, have the same Vertues and Powers.

I Have shewed in the beginning, Chap. 2d. both by Authority and Experience, That Nature hath endued Seeds with the least part of Acidity, because of themselves they receive Increase, and are multiplied; as appears manifestly in a grain of Corn, the quantity of whose natural Acid, is computed to be the 800. part, in respect of its Body, as the Sages of Natures Mysteries reach us: But if it be macerated with any mollifying Humour, with the addition of a convenient Heat, the innate spark of its Acid, is excited, which doth so distend and enlarge it self, that it seems evidently to be moved out of its place, and by this Expansive Motion it doth compress and overcome its Sister, whom it loves, (i. e.) as well the Alcaly of its own body, as That which it drew from the Water, and turns it into its own Nature) that is, into Acid: I call this motion, as both the Vulgar and Philosophers do, *Fermentation*; so out of Barley, which according to Hippocrates, is of a cold nature, there is made not only a temperate, but an inebriating Drink, called Ale, or Beer; out of which, by the Art of Distillation, there is elicited Aqua Ardans (which, before Fermentation, was not in the Barley) nothing inferior to Spirit of Wine, yea though it be inflamable, as Hippoc. Chymic. shews chap. 18. but the innate Acid is multiplied, either of its own accord, or by Art, viz. by the addition of its like Acid, which by reason of its similitude is easily admitted (like being pleased with like) and which, by a common name we call *Ferment*; but if we would excite that small portion of Acid, innate in the Grain,

Grain, by an Acid, not of the same nature but having a mineral Soul; as for Example, by the Acid of *Vitriol*, *Nitre*, *Salt*, or the like; then the more generous and Potent would surpass the weaker, and would choake it, which not enduring the yoke of Tyranny, would be quite destroyed and converted into nothing.

So a Pearl possesses, in respect of its body, the 82^{ce}. part of innate most precious Acid, upon which, if there supervene a more powerful Acid, taken from another family, viz. from *Vinegar* distilled from *Aerugo* (which they ridiculously call a *Secret Menstruum*) and doth exercise Tyranny over it, The *Restor* in the Pearl is suppressed, and that clear and precious light, the Child of the Sun, is slain, which would willingly have relieved the Vital *Lumen* of the Sick, unless it had been unjustly subjugated by the *Vinegar* from *Verdigrease*, that is, the false Spirit of *Venus*. Pearl therefore, so dissolved, can do no good, unless the weak Stomach of the Patient can subdue and conquer that Acid Salt (as I have before shewed in magistry of Corals) left there by the *Vinegar*. For as *Vinegar* distilled from *Verdigrease*, doth rule over, and subdue the vital light of Pearls, 'tis so in Diseases, viz. The Vital light is suppressed by the more Potent Morbous Acid (as *Hippocrates* says, *De veteri Medicina*) which if it be imbibed, as the Acid by the Alcaly, or if it be diluted and separated from the affected place, the Vital light soon recovers: see *Hippoc. Chym. c. chap. 21*. Hence arose that Famous saying, which is no less true in *Philosophy*, than in *Divinity*; *The fear of the Lord is the beginning of Wisdom*; which is as much as to say, Do thou not destroy Acids by Acids, against the command of the most High, but sweetly and lovingly cherish them, so shalt thou be Wise, as saith our Lord himself; a grain of Corn falling upon loose and spongy earth (not upon that which is hard bound, which depresses even the innate light (and therefore must be plowed and turned up) is there dissolved and loseth its exterior shape, yet its innate light suffers not, but in its own time produceth fruits like it self; neither is it dissipated, because the Sun's Child doth extend it self in spongy earth, and embraces its Sister

Alcaly,

Alcaly, which it loves, which being impregnated, attracts Nourishment from That, of which both of them do consist, and so both of them together produce fruits like themselves. This natural Operation and Process is the fear of the Lord and the beginning of Wisdom.

But when a grain of Corn is cast into Fire (i. e.) into a more powerful Acid, not agreeable to its own Nature, but taken from another family, or into Sulphurous earth, or into Counterfeit Spirit of *Venus*; then is there committed a sin of Disobedience against the command of God; and the Grain, as well in Matter as Form, is corrupted, dissipated, and made unprofitable both for *Generation* and *Fermentation*; as I have before shewed in Pearl dissolved in *Vinegar*: so the fear of God, is not regarded, and instead of the beginning of Wisdom, there grows up the beginning of Folly; where we may observe, that as the Acid innate in the Grain, doth act by *Fermentation*, and multiply it self, either in vertue or number; so also Fire, which is Acid, inflamed, doth act as ferment; and never gives over, till it finds something on which it might act, after the manner of ferment, or might make it like, or equal to it self.

So that whatsoever is dissolved in an Acid, out of its own family, or more powerful than its innate Acid, presently its weak Acid is suppressed, and being dissolved, it must needs take upon it the nature of the Dissolvent; for the Acid in dissolving, is coagulated and imbibed by the innate Alcaly of the Thing, and the weight of the same Thing is increased by the dissolvent Acid, as I have shewed above concerning the counterfeit Child of *Venus*, acting upon Corals; and in my *Hippoc. Chymicus*, concerning Sublimate *Mercury*, I say; they all increase in weight from the External Acid, which to the utmost of its power doth suppress and kill the Internal, and that not only in the *Via burntida*, as I have shewed; but in the *Sicca*, fiery, and burning way. An Example whereof may be seen in the following Experiment.

Lead, to the weight of 100. Drachms, being burnt in a reverberatory flame of dry Wood into Powder, which is very Red (for the weak Acid of the Lead is suppressed

by

Fire is the inflammation of the Acid Ferment.

Preparation of Minium.

by the imperious Acid kindled Flame; and it loses the name of *Lead*, and the Figure too; and again puts on a fiery Colour, and is called from its shining Redness, by means of the mastering Acid, *Minium*. Weigh this in a ballance, and you shall find the *Minium* increased ten drachms from the kindled Flame; for as in the moist way, Corals dissolved in false Spirit of *Venus*, and coagulated, do receive an augmentation; so also *Lead*, in the dry and fiery way, is increased and augmented from the Acid in the flame; Hippoc. Chymic. chap. 26. For there is the same reason in both, which, the Deans with their Fellows cannot comprehend; and that makes them cry out, *That the increase of ten drachms in the Minium, doth not proceed from the Acid out of the kindled flame, but from the Air.* What do your Doctorships say? From the Air! whether will ye go? Strait to *Anticyra*, I advise you, with the company going before you for your Cure. For Philosophers say, that Air is Nature's Sieve, through which Vertues and Influences are transmitted, and that it is impatient of a *Vacuum*, no ways condensable of it self, but an immortal and most subtil Fume, kindled from the heavenly Fire, &c. I have shewed before, that in *It*, the *Sun's* Child doth inhabit, which, assumes not a Body, unless with his beloved Sister; The authority and experience both of the Old, and also the Modern true Philosophers bear witness herunto: So that the Air being most subtil and incondensable of it self, can add no weight to the *Minium*.

The Air it self, is neither light nor heavy, neither is it compressed of its own accord, but by some force, in the barrel of a Gun, from which it again breaks out by force: we see the same thing in that Glassy Organ, which is called a *Weather-glass*, the Air indeed is compressed in it, by *Cold*, but is again rarefied and dilated by *Heat*. If therefore the Air, in a cold season, did add weight to the *Minium*, it would make it lighter in an *hot*: But *Minium* weighs alike in all Seasons; so that it is not the Air that gives weight to the *Minium*.

But supposing, though not granting, that the Child of the *Sun*, dwelling in the Air, did assume a body in the

the *Minium*; yet this would not be, but in some years space; as I have shewed in the Matrix of *Nitre* and Mines of *Vitriol*. But *Minium*, newly drawn out from the Furnace and as yet hot, weighs as much as it will do some years after; so that the Child of the *Sun*, neither hath any Tabernacle in the *Minium*, nor gives any weight to it.

The Air being impatient of a *Vacuum*, as I have shewed by the authority of Philosophers, is always filled with an Aqueous Humour, which in the cold presently concretes to Water. Take a familiar household example, when we drink cold things in the hot Summer-time, out of a Glass, as soon as the Glass is filled with the cold Liquor, presently it is troubled, because the Aqueous Vapor, dispersed through the Air, is condensed by the Cold, and sticks there, in so great quantity, that sometimes drops do fall down: Here they wonderfully lift up their Crests, and cry aloud rejoicingly, *Now you are caught*; This is that Aqueous Vapor, which is attracted by the *Minium* out of the Air, and adds the weight to it; but soft and fair, Your Aqueous Vapor doth concrete in *Cold*, and again rarefy in *hot* Weather, which your ridiculous and childish Experiment proves, viz. *The Caput Mortuum of Vitriol* (i.e. the Fax of *Vitriol*; out of which the Spirits by one single distillation, have been drawn) being exposed to the Air, is again saturated with Spirit of *Vitriol*; which, if it be distilled, doth again yield Spirit.

Lo, O Curious and Truth-loving Reader, This is their Proof (that as the *Caput Mortuum* of *Vitriol* is again satiated with Spirit in the Air; so also *Minium* drawn from the Furnace, is saturated out of the Air with weight) which is both Childish and Ridiculous; and, as I have shewed all the rest to be false, and ill understood, so I shall likewise demonstrate *This* to be most false, and least of all understood by the whole Colledge of Guessers.

For if *Vitriol* have once undergone the tyranny of a quick Fire, the Child of the *Sun* acts no more upon it, than it doth on an Egg boiled for the hatching of the Chick: Now burnt *Vitriol* doth attract from the Air by reason of its dryness, because it is without moisture, not the Acid

Spirit of *Vitriol*, but an Aqueous Vapor; which, when the *Vitriol* grows hot, either by the *Sun*, or by Fire, again flies into Air, as it is the property of all Water. For if that *Caput Mortuum* could again re-assume the nature of *Vitriol* in the Air, that Famous Distiller of Spirit of *Vitriol* at *Amsterdam*, who furnishes not only near the third part of *Europe*, but also all Ships, and both the *Indies* therewith, yearly expending many thousands of pounds upon it; if it being once Distilled and Exposed to the Air, would again become *Vitriol*; he would have luck in a Bag, as we say: but as it is false, that the *Caput Mortuum* of *Vitriol* returns to *Vitriol*, so it is also an untruth, that the Aqueous Vapor adds weight to the *Minium*; which I prove by this Experiment:

Take at least an Ounce of *Minium*, such as is commonly sold; and in a Glazed Earthen Vessel, large and low, put it for a Night in a Bakers hot Oven, or else expose it to the Noon-day Sun; whose heat as it doth exiccate not only the *Humid Minium*, but also dries up Marshes, Lakes, and Rivers; so in like manner it would expel the Humidity of the Air, if there were any in the *Minium*: but the same weight of *Minium* which was put in, is also drawn forth from the Oven, or heat of the Sun; so that That which gives weight to the *Minium*, is not the Child of the Sun, nor the Air, nor Water; therefore, against the absurd prateing of the *Deans* and *Approvers*, it must needs be the *Acidity* in the kindled Flame, which, as the false Spirit of *Venus* exercising tyranny over the Debile Acid in the *Medulla* of Pearls, or in Coral, adds weight to Them, so also the Acid kindled in the Flame, which by its tyrannical power and force doth keep down and suppress the Debile Acid in the Lead, is fixed into Alcaly, rules over it, and gives weight to it; *Hippoc. Chymic. Cap. 26.*

We may learn from hence, that if the Reader (who-soever he be, enquiring after the truth, in those infinite doubts, which in long Art do daily occur) should have recourse to these *Deans* and their *Associates*, what profit could he get thereby? Surely none, which plainly appears, by that counterfeit and lamentable piece of Science, which they hand forth to the whole World; for they call *Simple Water*,

Water Volatile Salt of Tartar, and moreover judge it an incomparable Cordial. Besides, with what pompous and swelling Words, do they shamelessly adorn it? and commend it to their poor Neighbours, and to the Sick? as I have shewed above in the Chapter of the *Difference of Salts*, in their own Words there quoted: They say also, *That Vinegar Distill'd is the Son of Venus, that Acid is not in Graines of Kermes, that Gold is not Fixed and Constant in the Fire; that Mercury corroded with Canstick Water is made sweet by boiling with Vipers Grease; that Minium acquires weight from the Air; and infinite other absurdities, which I shall anon discover.* Fye for shame, defile not Youth, with these fooleries and falsities: Dispute not *de Lana Caprina*, and after the dispute ended, you silence your Opponents in a matter of no value, and gain nothing but an empty puff of breath: And then in your silence, Truth, as the Philosopher says, though unsought for, will come to light, if she may. But, leaving these Jeune Interpreters of Physick, who proceed to the Practick Part, as the Ass to his fodder, not knowing to what he lays his Lips; I shall go on to prove, that there is *Acid* in Fire, by This, no less Noble, than profitable and pleasant Example.

I shewed before, That the Salts of Vegetables do preserve their forms untouched from Common Fire, and that they illude the violence thereof, either more or less: And if such a power be in Vegetables, must not the Mineral family attain a degree thereof, more or less perfect? To make this out, Let Flint be the Example, which is most constant in the Fire; and Corals (the Red are always to be chosen) less constant: A Flint (the White is to be chosen) is corroded by no *Acid Liquor*, no not by *Aqua Fortis* it self; because it hath obtained a Temperament equal to its Nature. (i. e.) it hath got so much Acid, as in a just Ballance can satisfy and saturate its Alcaly; for if never so little Alcaly did superabound, the External Acid would find an easie ingress; so that a Flint can be dissolved by no Acid, no not by the *false Son of Venus*, in regard of the equal and perfect mixture of the Acid and Alcaly.

An Enquiry
how Flint differs
from Corals.

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I shewed before, That the Salts of Vegetables do preserve their forms untouched from Common Fire, and that they illude the violence thereof, either more or less: And if such a power be in Vegetables, must not the Mineral family attain a degree thereof, more or less perfect? To make this out, Let Flint be the Example, which is most constant in the Fire, and Corals (the Red are always to be chosen) less constant: A Flint (the White is to be chosen) is corroded by no *Acid Liquor*, no not by *Aqua Fortis* it self; because it hath obtained a Temperament equal to its Nature. (i. e.) it hath got so much Acid, as in a just Ballance can satisfy and saturate its Alcały; for if never so little Alcały did superabound, the External Acid would find an easie ingress; so that a Flint can be dissolved by no Acid, no not by the *false Son of Venus*, in regard of the equal and perfect mixture of the Acid and Alcały.

An Enquiry how Flint differs from Corals.

But Corals, not being enriched by Nature, with so much Acid, as can saturate their own proper Alcaly, are therefore less Constant; whence it come to pass, that if you pour any manifest Acid on Them, presently it corrodes them; and such a quantity of the Acid is imbibed by them, till it be brought to an *Equilibrium* with the Alcaly, and thereupon the dissolved Corals be increased in weight, as I have shewed before in *Magistry* prepared the common way.

A Flint burnt in the Fire, as it receives not Acid and *Humid* Liquors, so it is neither encreased nor lessened in its weight from the Acid Flame of the Fire, because Acid, which may avolate, doth not superabound in it; nor is the Alcaly thirsty, which might imbibe the Acid Salt of the Corals, or *Aqua Fortis*, 'tis only the Nutritive Glew which dies; which in Pearls and Crabs Eyes (as I have shewed) is like to thin Pellicles or Coverings, which are not dissolved by the false Spirit of *Venus*, because they are *Pinuous*. But Corals duly burnt, (in the Flame either of Coals or Wood) do encrease in weight, because there is an overplus of the thirsty Alcaly in them, which could not be saturated by their proper Acid: hence it is, that they easily admit the External, either humid or kindled in Flame, and so far, by means of the received Acid, they encrease in weight; as I have shewed before in *Magistry*.

Flint burnt in Fire, till it chop and gape, becomes Cautick, and turns living or dead Flesh into rottenness.

But Corals in like manner burnt or calcined in the Fire, till they chop, do not affect either *living* Flesh or *dead*, because they become a Powder almost insipid.

Flint burnt, until the Glew (*i. e.*) the Aliment dies, is called *Calx* or Lime, which, being yet fresh, grows hot with Water poured on it, and its Acid Acts upon its powerful and proper Alcaly; and they are both turned into a stony or petrous substance, which coagulates with it, whatsoever it layes hold off.

Corals duly burnt for six days and nights, till the Aliment die in a flame of Wood, or Coals, do increase in weight; they grow not hot upon the affusion of Water,

Burnt Flint is called *Lime*.

Remember that They grow in the bottom of the Sea.

ter, because they have not so much Acid, as will suffice for a mutual Action or Combate, neither is it coagulated into a stony substance.

Out of Flint, Calcined with Vegetable Alcaly, is extracted a *Lixivium*, which boiled with Suet or Fat, becomes *Sope*.

If Alcaly of Vegetables be added to Calcined Corals, The Alcaly extracts from them the Acid drawn from the Flame, and the Corals fall into a White Insipid Powder. Pour Distilled Vinegar on Calcined Flint, and the Vinegar dissolves its Alcaly with bubbles and hissing.

But if you pour the same Vinegar on these Calcined Corals, they are wholly dissolved, without either bubbles or noise, because being saturated for six days and nights by the Acid Flame, they are no longer Thirsty: on which Solution, pour *True Spirit of Vitrinol*, which (as I have shewed before) doth keep down the weaker Acid of the Distilled Vinegar, and associates to its self the Alcaly of Corals; but the Fire, or Life of the Corals is united with the Vinegar, and so the whole Composition is *Red*. This Redness is the Life of Corals, according to *Paracelsus*, which you may learn to separate by the Midwifry of your helping Hand, and you shall have a Cordial not to be despised; of which *Plato* forbids me to speak any more in this place: See *Hippoc. Chymic. Chap. 27*.

As the Life, or the Acid of Flints, is White, or Dark Colour, or Green, intended according to the innate humid, as *Vitrification* shews; so of *Red* Corals it is *sparkling*, which difference of Colours and Vertues proceeds from their first Seed, which Art cannot effect; if any one pretend to it, he is a *Lyer*. But to bring the Seeds to Maturity, that they may produce the Fruits, this is a privilege granted to Philosophers, not to Ideots.

So that our Calcined Corals become not a *Calx*, because they have not the properties of *Calx*; as the ridiculous and putid Flock of vain *Doctors* do ignorantly affirm; for Corals are as much esteemed by the Indians, as Indian Pearls are by us: Wherefore Corals and their Bodies (as all other Jewels, which take their forms from

Corals calcined become not a *Calx*.

the

The Vertues of the Limpid Fountains of the Heaven and the Sun) are made of the purest Drops, impregnated with Cœlestial Influences; hence it is, that they contain many and excellent Vertues in them, which, if any one desire to draw forth, he must approach nearer, and open the locked doors, otherwise than by begging Receipts (and Those ill understood) as it were from door to door, or by prescribing *quid pro quo* to the Sick, or by a petulant blemishing of the Truth, by raging and unheard off Male-dicence. But the Ignorant Vulgar hath this sottish property, that what it doth not understand at first reading, That it contemns and loads with foetid Calumnies; And yet herein it judges it self not *Ignorant*, but very *Wise*; but by this very thing they manifest their folly to the *truely Wise*, when to their own followers they would seem to be *Wise*; for 'tis a wretched thing, in endeavouring to procure a Name to ones self, to be exposed, as a Ridicle, to all understanding Persons.

The Martigenous Hornets provoke and challenge the Eagle. Take notice, Brethren of the woful Combate.

Iron what?

Having hitherto proved that *Acid* doth both destroy and also perfect, it is a Subject agreeable to this Chapter, to treat of the Destruction of *Iron*: That Iron differs from all other Mettals, it appears by its terreous Principles, whence the *Acid* thereof, wanting its Sister *Alcaly*, dwells in an earthly most inconstant matter; wherefore it vanishes of its own accord, or its innate Acid is easily oppressed by an external Acid superveneing; and so the whole substance of Iron is turned to *rust*. *Hippocrates* took notice of this Volatile Acid of Iron, hence he teaches in his Tract *De Diata*, that when it is quenched in Water, it acquires Strength; because the Light Alcaly in the Water, is a True Comforter of the Light Acid in the Iron: and Curlers do strengthen It with the Alcaly of Animals, which is also Volatile, as *Hippocrates Chymic*. shews, Chap. 19. For this cause *Aristotle* the 4. *Meteorol.* not without Reason, makes a difference betwixt Iron and all other *Metals*. *Gold*, says he, *Silver*, *Brass*, *Tyn*, *Lead*, *Quick-silver*, belong to Water; but *Iron* to the earth: and *Galen* says, 4. *de Facult. Simplic. Medicament.*

ament. That Iron is a terreous and crass Body, &c.

So that the *Acid* degenerating or dying of its own accord, or being separated by the stronger, there remains only the terreous principle (as *Hippoc. Chymic.* shews of *Alcaly of Tartar* Chap. 10.) which by the Ancients and by Practicers of Physick, as *Dioscorides* witnesseth, is called *Rust*.

This *Rubigo* is also prepared by Art, out of the dust or filings of Iron, when the sharpest Vinegar is poured on it, and it is dried in the Sun, and again afterwards dipped in Vinegar and dried; then it must be washed with common water and dried; and so kept powdered and small.

And as Vinegar, so also all sorts of Acids, do turn Iron into *Rubigo*; yea Gold it self doth occultly and presently turn that Acid into *Rust*; as I have shewed Chap. 2.

Hence we see the Cause why Gold cannot be conglutinated with Iron, unless it first assumes a *Cupreous* Nature, as *Hippoc. Chymic.* boldly shews, Chap. 28. concerning the *Golden Nail*; for the Truth offends none, but those that hate it.

The Lord *Aubert*, a Noble man of *France*, in his Natural and Moral History of the *American* Islands, proves by Eye Witness, that the *Unicorn* is not a four-footed Animal, but a *Fish*, that hath an Horn growing in his Forehead; yet he grievously offended, not the Lovers of Truth, but those only who made a *Monopoly* of those *Hornes*: so I never read that *Moralists*, or *Politicians* did envy the Truth, though *Hoarse Grass-hoppers* chirp against it, and the *Cuckows* subscribe and approve their Note. He that is affraid of the Truth, is not perfect; for an *Adept*, or one compleatly Wise, should fear nothing. For which Cause, I was always willing, that my *Hippoc. Chymic.* should speak the Truth out and not conceal it, not fearing any thing nor respecting either the friendship or hatred of any Sect; but that it should give things their proper Names, not being solicitous either to offend or please: in imitation of *Thucydides*, who perceiving the Writings of *Herodotus* to be in great esteem, I had rather, says he, displease by speaking the truth, than please by relating Fables; because by displeasing I gain, but by pleasing I hurt. But I return whence I digressed. This most ancient *Rust* of

Rust is natural
Crocus Mart.

Gold turns Iron
into *Crocus* or
Rubigo.

A Golden Nail.

The Unicorn.

Hippoc. Chymic.
a Truth-speaking
Book.

Iron

The invention
of Crocus Mar-
tis.

Iron, that it might be more pleasant to the Eye, the *Curious* began to burn it in an acute Flame, into a small Powder, and from its fair redness, they call it *Crocus Martis*.

But use, age, and experience, being our daily Instructors, they observed, That This is a long and tedious way of turning Iron into *Rust* by the aspersion of *Vinegar*; therefore they burnt the dust or Filings of Iron in an acute Flame, the acidity whereof being set on fire, they found they could make more of this light and rare red Powder in a day, than they could do with Vinegar in a month; so that they rejected the *long* and tedious, and took to the *quicker* way of operation: This Powder they called *Crocus Martis* from its redness.

Crocus Martis
curiously pre-
pared, doth o-
pen and a-
stringe.

So that Filings or *Scobs* of Iron, or its Natural or Artificial *Rust*, either with Vinegar eroded, and afterward reverberated in the Flame, or else without Vinegar by Flame simply, or with Vinegar from *Aerugo*, or *False Spirit of Venus*, being converted into a red Powder or Liquor (for it is all one) and taken by the Mouth, have a *strengthening* Vertue, so that They are good for the Stomack and for a Loose Liver, for *Dysentericks* and *Lientericks*, and all moist or *præhumid* Diseases; for Womens Flux, for the *Gonorrhæa*, or incontinency of Urine, and all *solutive* Distempers. And the same *Iron* performs also contrary operations, for it opens great *præhumid* Livers and their Obstructions, it promotes Womens Terms (so that it hath restored *some* *Girls* (I say not *all*) who were discoloured by paleness, to their Health and Beauty;) and therefore both Philosophers and Physicians do unanimously teach, that Iron of it self doth both *open* and *bind*: Experience also shews as much, which is, and ought to be accounted the *Best School-mistriss* to us all.

It wants not therefore the suspicion of fraud or ignorance, when men shall passionately, yet weakly affirm, That *Iron*, from its single preparation, is either *astri-
ngent* or *aperitive*: They should live and die in their ignorance for me, unless sick persons were in danger to be ruined thereby: Learn therefore, not from Me, who have al-
ways undervalued vain applause, but from the *Giver*
of

of all good, for frequent experience, and the company of dexterous Philosophers, and true Practitioners are more to be believed than either an handful of Calumniators, or a multitude of such, who are ignorant of the Instruments of Physick.

Now they who commend *Iron* in all Diseases, and do prescribe it in every *Dropsie*, in the *Schirrhus* of the Liver, in an inveterate Jaundice, especially joyned with a Feavor, in *Hypochondriack Melancholy*, or in Diseases of the Stomach. They do it not, without the extreme Peril of the Patient; 'Tis true, *Iron* is very good for great Livers, loosed with moisture, and tumid, but when they are hardened to a *Schirrhus*, it is so far from dissolving it, that it rather confirms it, and by consuming its *Acid* producer, drives it to a *Lapideous* hardness; so that *Iron* either Filed or any other way turned to *Rubigo*, hath been always commended by sure Experiments, for great and swollen Livers, but never for dissolving a *Schirrhus*. So Ferreous and Acid Waters are good to attenuate the Spleen, and to open all Obstructions of the lower part of the Belly, arising from *Morbovs Acid*, as yet fluid; as *Hippoc. Chymic.* shews by clear Experiments, Chap. 16. v. z. by consuming the Acid humour, by corroborating the Fibres, and by contracting Them when loose; that so the inbred heat might arise more strong in the corroborated member, and may digest, that which remains: so that they who commend *Iron* in the dry and acid Diseases of the Liver or Milt, and do there either fraudulently or ignorantly call it *Aperitive*, cannot escape the brand either of Ignorants or Impostors. For *Iron* administered against the aforesaid Indications, as I have shewn, then indeed it wants not a *Meletery* Vertue, as *Avicenna* teaches well; for it excites the gripings of the Intestines, dryness and roughness of the tongue, siccidity of the Body, costiveness of the Belly, and pains of the Head; because it doth consume not only the manifest Ferment of the Stomach, but also the occult Acid of the other Bowels, and sucks up the Vital Seed; but the quantity of it being small, viz. the 8200 part of its Body, 'tis no wonder if upon the taking of *Crocus Martis* (though it should be *A-
peritive*,

What Diseases
Crocus Martis
is not good for

For what it is?

peritios, as they ignorantly babble) the Disease become more vehement, to the destruction of the Patient. And in that Case they blame the *Apothecary* behind his back, as if he had mistook the Box, and so detract from his honesty without Cause.

But if they will not hearken to an old faithful Admonition, and to my Experience, but pertinaciously resist good Counsel, it may chance to come to pass, that at last daily Experience and the Death of their Patients, will in spite of their teeth enform them of the Truth.

Otherwise the World would be filled with far fetched, ill understood, false and dubious *Receipts*; and the diligent Observations of our Ancestors would be lightly esteemed: and so a new, unskilful, ambiguous; costly, speculative, infinite, and groundless way of Physick, would take place; which under the disguise of false Words and deep Learning, would be entertained by *Ideots*; who not knowing the Vertues of Things, hotly contend amongst themselves, and rail one at another, not only about *Aperitive* or *Astringent* Iron, but about many other things; some of which I have spoken of, as much as the nature of the Argument and the good of my Neighbours require: So also by uncertain Conclusions and vain Opinions they revile the Wits of the Studious, and to the hurt of their Neighbour; and the infamy of the Art, they approve and subscribe to *Lying Fables*: And not at all studying the Truth, they boast themselves to be great *Doctors*; who yet never will attain to *Science*, because they follow the herd, that went before, and think they have already attained it, as *Seneca* rightly speaks; but to return to the matter.

Dioscorid's handles Iron two manner of ways, either preparing *Ferrugo* out of it, or extinguishing It in Water or Wine: yet to both the Preparations, he ascribes an Astringent Vertue; he doth not call the one *Astringent* and the other *Aperitive*. For when Iron opens, it comes from the specifick Acid, degenerating in the body, which Nature could not receive into nourishment, and therefore, by reason of its Acid taste, it rushes to the Iron; so the Bowels being strengthened by degrees, Nature expels That together

together with the detained excrements by stool. Hence *Helmont* says, that Iron doth open by a *specifick* and appropriate Vertue, but it binds by a *second* quality: so that neither of the Vertues of the Iron, do proceed from the absence or presence of its *Mercury* (which they boast, but without Truth, that they can extract from it) but from the attraction of the specifick Acid in the *Morbous* Bodies, as *Hippoc. Chymic.* shews, Chap. 16. and 28. Thither I refer the Reader, that I may not clog him with the repetition of things there spoken.

But we may grant, that they can as well extract *Mercury* from *Iron*, as Eximious Vertues from *Copper*: These Vanities are, and always were, nauseous to Me, as well as to the World and the Sick; for they have no foundation in Nature: so that they, and their Masters, are to be banished from the society of good Men; whilst on the other side, I deal with the Doctrine of Truth and the most Ancient Science, which the Ancients found to be agreeable to the Nature of Man, and thought worthy to be ascribed to God, as the School of Truth yet thinks, as *Hippocrates* hath it, *De Veterum Medicina*; for He there teaches, that as there is a manifold Acid in the *Macrocosme*, so also in Mans Body. And in his Book *de Arte*, every Acid hath its proper Ventricle, which yet the vocal and wordy Colledge is ignorant of, and therefore he adds, as they know who study these things; but seeing it is easier to steal blind *Receipts* and to approve them, to suppress Truth and to load It with Calumnies, then to learn the knowledge of the *Ventricles* of Mans Body, 'tis no wonder, that They are ignorant of the Instruments of Physick, who have no regard to the *Ventricles*; For if, says the Old Man, they do not know the Constitution from the beginning, and that which is predominant in the body, they cannot prescribe that which is good for a Sick Man. Lo here the Cause, why *Crocus Martis* being *Aperitive* in the hands of superficial and ignorant *Doctors*, becomes *Astringitive*, and *Vice Versa*; because they are ignorant of their proper Instruments: and in the method of Curing, know not how to apply *Active* things to *Passive*, because they have not the knowledge of *Ventricles*, or *Sapors*: neither

neither did they ever learn Them out of *Hippocrates*, of which my *Hippoc. Chymic.* doth discover very many.

This is the reason, why, as I said before, they come to *Practice*, as the Ass to his fodder, not knowing to what he extends his Lips, but only as far as his exterior senses, without understanding, by seeing and tasting, do draw him to his meat. But why do I insist on the decrees of *Philosophers*, deduced and drawn down from Nature it self, since I have to do with such *Persons*, who never so much as dreamt of the *Verity* and *Excellency* of the Art of Physick. Therefore they are to be instructed by *Examples*, taken out of the Shop of Wise Nature.

Observe then, That in the Stomach and Milt of a sound Animal, there dwells a Viral Acid proper to the Milt, but when That Acid doth degenerate into an unusual taste, or sapor, all the neighbouring parts are also contaminated; and presently the pores are contracted; and the Body, which was transpirable in health, now ceases from action; hence the *Milt* swells from the motion of the *Ferment*, which will not obey purging Medicines, as experience shews: Now *Iron* taken at mouth, is good for that Ferment and præ-acid Taste, by which the Milt is lessened or dried (call it which you will) but not by reason of the *Aperitive* force of the Iron, but that Acidity there detained, doth in a special manner love the Iron, as a thirsty Man doth Beer. Let *Silver* dissolved in *Aqua Fortis* be an Example.

Aqua Fortis, hath the smell and property of *Sulphur* of Iron, because it is made of Sulphurous Nitre, Vitriol or Allum; whence by reason of the likeness between them, it loves Copper and Iron, as I have above Mechanically shewed: Now as in the Stomachs of Animals, the hungry Acid desires to be satisfied with its like, and *Tar* like (*i. e.*) food, it dissolves and is delighted with it; 'tis just so in the *Macrocosme*: For Example, The Acidity of *Aqua Fortis*, is as an empty Stomach, which desires to be satisfied; *Silver* being given it for food, it dissolves it, and is pleased with it; but when you cast in a *Physical Drug* (as I may so call it) into this Solution, I mean *Copper*, with which, for the similitude

millitude between them, it is more delighted than with the Silver; presently it deserts the Silver, and again dissolves the Copper, and the whole Solution becomes green.

It must needs be so also in the Body of Man, since *Nature is in every thing alike*, as *Pythagoras*; and since *Him, Hippocrates* have taught us.

Again, If you put *Iron* into *Aqua Fortis* (which here is as the *Stomach* or *Ventricle*) impregnated or loaded with Copper, in regard Copper is of harder Solution and Concoction than Iron, the Water presently leaves the Copper and dissolves the Iron:

And although *Aqua Fortis* hath already deposed Silver and Copper, yet its Acidity and Property hath still dominion over them, until they are freed by a melting Fire; which is to be observed by *Our Friends*, for it is else-where of great use.

But it is objected by such, as are ignorant of this Common and Ancient Order and Consent of Nature, and who out of their small Skill, go about to overthrow the Hippocratical Verity, *That I put my Sickle into another Mans Corn and Harvest*; as if it were a shame for me to know, *That* which all men should or ought to know in an Art; or, as if, They were the only famous Philosophers, who compile together Surreptitious and ill-understood *Receipts*, without the knowledge of the Causes of Things. And as Silver and Copper were troublesome to the *Stomach* of *Aqua Fortis* (that I may so speak) which is better, when it is cured with Iron: so also this Morbous Furrain Ferment, or Humour (call it which you please) being consumed by the Iron, The Ventricle of the Milt and the neighbour parts become better affected. Take therefore at mouth *Stomoma* (*i. e.*) Steel, or its *Crocus*, either *Astringent* or *Aperitive*, with which that Acid Ferment hath a greater agreement than with the Milt; and therefore it hastily rushes in, pervading its Pores from the Ventricle of the Milt to the whole Stomach, *How* as his that it may associate it self with the assumed Iron, which *Steriliu R. bigo* by that Acid Furrain Ferment is dissolved into a Black or Green *Fax*, according to the property of the Acid;

as the Excrements of the Belly do testify : and if this Acid be not totally consumed by the Iron, at one turn, it is repeated so often, till the Milt shew some signs of its Exiccation; so the *Anima* of one *ens* (i.e.) the Ferment of the Disease, enters into the Iron, and the *Anima* of another goes out, because the *Acid*, or *Anima* of the Iron, which constitutes the Iron, goes forth, (Hence *Crocus Martis* is called by *Horatius*, *Sterilis Rustigo*) that the *Acidity* of the Disease might again enter in, according to the Doctrine of the *Pythagoreans*. For Nature acts in the *Microcosme* by the same Instruments as in the *Macrocosme* : For the Ancients have taught us, *That it is every where alike.*

Here Ideots and Destroyers of Hippocratical Medicine, will object, That I place a Disease in the Ventricle of the Milt, and yet give Iron by the Mouth? How then can the *Morbus Acid* come or reach from the Milt to the Iron? as they have also written concerning burnt Harts-horn: Which Objection is not worth the answering, for one Fool may raise more Questions than an hundred Wise Men can answer; but since these sluggish *Doctors* never understood *This* out of *Hippocrates* his Sixth Book *de Morbis Popularibus*; out of pity to them I will shew them the place; for he there says, *that the whole Body as long as Life is in it; is perspirable and penetrable;* see *Hippoc. Chymic.* Chap. 16.

But when the Milt or Liver is gone to a *Schirrhus*, then indeed the Steel, by consuming the *Faber* or *Operant*, would more harden the Bowels, though the *Aperitive Crocus Martis* of all these *Subscribers* be never so much taken by the Mouth. He that desires to know more of *Iron*, let him read *Hippocrates Chymicus* in the fore-cited Chapter.

So that the *Acid*, which Iron consumes in the Body of Man, differs very much from the *false Spirit of Venus*, and from all other *Acids* in general, because it is a *specifick*; and to be found in no other place: for if Iron be not wholly dissolved by *It* in the Body, the Excrements of the Belly are not tinged into a Black or Green Colour; and then indeed Iron doth *Astringe*, though the

Aperitive

Aperitive Crocus of these *Innovators* be administered, as *Hippoc. Chymic.* in the fore-cited Chap. doth experimentally shew: so that *Acid* is also a *Specifick*, which burnt Harts-horn drinks up; in some Feavors; which the sluggish *Approvers* do judge must needs pass through the intestines to the place affected, and to the seat of the Feavor; if otherwise it ought to consume the *Acid* there generated and detained: They understand not what *Hippocrates* teaches in the fore-cited place, *that the whole Body in Living Persons is permeable*, and that a *Spirit Acid*, more *Acid*, or most *Acid*, is the Cause of Diseases, &c. and that it is fermentable, and so flows as well through the Pores *adextra* by *diaphoresis* or gentle sweat (as appears in the *Crisis*) as it goes and rushes to the Intestines unto the Harts-horn, as I have shewed concerning Steel; provided it find a convenient and *specifick Acid* in the Body. Truly this is a rural clownish Doctrine, and worthy the *Approvers*; for if *Medicines* must needs pass out of the Stomach to the Seat of the Disease, through the Pores, then the Sweat and Urine would wax Red from the *Crocus Martis*; especially their *Aperitive Crocus*. *Bezoar* in Swoonings, doth not pass through the Membranes of the Stomach to the Heart, nor doth it return from thence, for consuming the *Lypothymick Acid*: Neither doth *Ostiacolla* travel to the broken Bone, that it may prohibit or absorb the *Specifick Acid* there; neither doth the Stone of a Crab go to the Wound; nor doth a grain of *Opium* taken at Mouth, for the Head-ach, pass up or ascend to the Head. They are ignorant, that the *Subtile Argute Judge*, and equal Weigher of all things (which distinctly knows the *Seminal Virtue*, not only of *Medicines*, but also of all other things besides; and accordingly doth either embrace, segregate, or neglect *It*;) dwells in the Stomach, as I shall shew by Experience, Authority, and Reason, in the following Chap. wherefore this indecent kind of ignorance is to be hissed out of the School of *Hippocrates* and out of *Common Life* too, *To instruct Block-heads*, as *Lucian* says; *is a greater and nobler Secret*, than the very *Philosophers Stone*; for it were to transform the understanding,

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So that the Acid, which Iron consumes in the Body of Man, differs very much from the *false Spirit of Venus*, and from all other Acids in general, because it is a *specifick*; and to be found in no other place: for if Iron be not wholly dissolved by *It* in the Body, the Excrements of the Belly are not tinged into a Black or Green Colour; and then indeed Iron doth *Astringe*, though the

Aperitive

Aperitive Crocus of these *Innovators* be administered, as *Hippoc. Chymic.* in the fore-cited Chap. doth experimentally shew: so that Acid is also a *Specifick*, which burnt Harts-horn drinks up; in some Feavors; which the sluggish *Approvers* do judge must needs pass through the intestines to the place affected, and to the seat of the Feavor; if otherwise it ought to consume the Acid there generated and detained: They understand not what *Hippocrates* teaches in the fore-cited place, *that the whole Body in Living Persons is permeable*, and that a Spirit Acid, more Acid, or most Acid, is the Cause of Diseases, &c. and that it is fermentable, and so flows as well through the Pores, *adextra* by *diaphoresis* or gentle sweat (as appears in the *Crisis*) as it goes and rushes to the Intestines unto the Harts-horn, as I have shewed concerning Steel; provided it find a convenient and specifick Acid in the Body. Truly this is a rural clownish Doctrine, and worthy the *Approvers*; for if *Medicines* must needs pass out of the Stomach to the Seat of the Disease, through the Pores, then the Sweat and Urine would wax Red from the *Crocus Martis*; especially their *Aperitive Crocus*. *Bezoar* in Swoonings, doth not pass through the Membranes of the Stomach to the Heart, nor doth it return from thence, for consuming the *Lypothymick Acid*: Neither doth *Ostiocolla* travel to the broken Bone, that it may prohibit or absorb the *Specifick Acid* there; neither doth the Stone of a Crab go to the Wound; nor doth a grain of Opium taken at Mouth, for the Head-ach, pass up or ascend to the Head. They are ignorant, that the *Subtile Argute Judge*, and equal Weigher of all things (which distinctly knows the *Seminal Vertue*, not only of Medicines, but also of all other things besides; and accordingly doth either embrace, *segregate*, or neglect *It*:) dwells in the Stomach, as I shall shew by Experience, Authority, and Reason, in the following Chap. wherefore this indecent kind of ignorance is to be hissed out of the School of *Hippocrates* and out of Common Life too, *To instruct Block-heads*, as *Lucian* says, *is a greater and nobler Secret*, than the very *Philosophers Stone*; for it were to transform the

understanding,

understanding, and to make Dolts and Stupid Persons, Teachable.

CHAP. IX.

That Acid and Alcaly in Animals is the innate Calid and Radical Humid.

HAVING discovered the Properties and Essences of Things, the Rise, Progress, and Death of Seeds, both Theoretically and Practically, by the two Instruments of Nature, *viz. Acid and Alcaly*: Now the Nature of my Argument requires, that I discourse some things concerning the Nature of *Animals*, very necessary for this work, and that I make them plain by clear Examples.

Now, as from the beginning, I have chosen the *Ancients* for my Guides, so for the future, I shall respect them, as my *Deities*; and shall not stir an hairs breadth from the Truth, for fear or favour of any Man: but amongst the *Ancients* I chuse chiefly in all things to follow *Hippocrates*, He being to Discourse of *Animals*, chuses Man as the Noblest of all, saying in his *Book of Diet*, *The Soul of Man is increased in Man, but in no other, and likewise the Soul of other great Animals, &c.* The Divine meaning whereof, he gives us in the foresaid *Book of Diet*, in a Learned and Profound Interpretation; where also he proposes the Universal Generation of all Things, and the Nature of Seeds; which my *Hippoc. Chymic.* explains according to his meaning: *All Things*, says he, in the same place, *both Animals and Man himself, consists of two Principles, differing indeed in Faculty, but agreeing in Use, viz. Fire and Water: Both these together are sufficient both for all other Things and for themselves mutually; but either of them apart is sufficient neither for it self, nor for any other;* and a little after in the same *Book*, *Omitting other Animals, I shall speak of Man, a Soul creeps into Man, having the mixture or temperament of Fire and*

Fire adorns,
Water nourishes.

Water; Fire adorns all things which are in the Body, and can move all things, but Water nourishes all, and through all, because for a need it abounds with Alcaly: as I have shewed before by evident Examples; by which a solid substance is concocted by inspissation; against the opinion of these gain-sayers; but the Fire, of which the Old Man speaks in this place, is not culinary Fire, as he shews in the same Book: Man, says he, Threshes, Washes, and Grindes Bread-Corn, and after it is baked in the Fire, he uses it, but with a strong Fire in its Body; it is not made up, but with a soft and gentle one; so that it is a soft Fire, which adorns and moves all things, which in the 2 Chap. of this Book, and here and there besides, throughout the whole Book, I have shewed by many Examples to be Acid; and hereafter shall likewise further shew:

So that *Fire and Water, or Acid and Alcaly* (call them which you will) is that *Balsam*, which is given to Bodies for *Salt*, That they putrefie not; and in very deed it is *Salt*, as *Hippocrates Chymicus* shews from the 12 to the 16 Chapter; and it will more fully appear in the progress. This is that innate *Calid*, which old *Hippoc.* says, doth abound in things that grow, *Aph. 14. S. 1. because it is fermentable and expirable; and, from aliment taken in like it self, it doth incessantly re-germinate; therefore reason persuades that it very much must want Aliment: by which Aphorisme he intended to shew, that unless the innate Calid (i. e.) Fire and Water in Animals, especially growing ones, being very Volatile, were restored by its like, the strength of the Body would soon decay. Hence that saying, Ubi fames, laborandum non est, &c. Now that which is its like, is not that External Body of Flesh or Bread, which we touch; since Man lives not only by Visible Bread, but by the innate Calid of the Aliments; which as soon as ever it is embraced by the Stomach, even before it be heated there, presently the strength of the Body is repaired.*

This innate *Calid* is also in *Lestice*, so that the *Acid* of the Stomach after it is consumed by the Aliment, and is passed into Radical Humid or Moisture, immediately the Stomach Contracts it self, and the whole Body Languishes

N n for

for want of *A.* Hence ariseth Hunger and Appetite of Food, so that an hungry Man, though he be weakened by long Fasting or by Labour, yet upon the taking of Food or Drink, yea of one Cup of Wine only, he finds himself immediately refreshed; and that, before the Food begins to be chylified; because the deficient Acid is restored by *That* which was in the Meat, Drink, Bread or Wine, though imperceptibly, as to our outward Senses. Whence *Hippoc.* says, *Aliment is that, which is turned into Spiritual Vapours; by such as these the Vital Spirits, which are the Authors of the Active, are nourished.* For as I shewed before, That as every Acid Spirit carries the *Anima* inseparably in its belly, and gets dominion over that body, into which it is infused; immediately forming it according to its own nature, as I gave examples, *chap. 6.* in Spirit of Salt; which being poured into Alcalý of Tartar, presently forms to it self a Saline Body, agreeable to its own Nature, and becomes *Salt*; and Spirit of Vinegar, or Distilled Vinegar, in the same Alcalý of Tartar, forms to it self a Body, adæquate to its proper nature, and becomes *Tartar of Wine*: The like may be said of Vitriol, and other Acids: So also the Acid of the Stomack of a Man, when it lays hold on Bread, or any nourishing thing, over which it may have dominion, it doth turn and transmute it into *Chyle*, and afterwards into *humane flesh*: And the Acid of a Dogs Stomack converts the same Bread into Dogs Flesh, as we are daily taught also by other Living Creatures; because Nature works by the same Instruments in them all: as I have shewed in the beginning of this Chapter out of *Hippocrates*, in these following words: *The soul of Man is increased in no other, but in Man, &c.* and from the same things of which it consists; and though Bread be fermented and Acid, as most Aliments are, either more or less; yet the Acid in the Stomack of a Man, though of it self weak, hath yet a vitality joyned with it; whence it can obtain dominion over the same: As Vinegar gets dominion over and suppresseth the Acid innate in a Pearl; and *Aqua Fortis* subdues the Acid in *Silver*, so also the *Vital Acidity* of

of the Stomack subjugates the Acid Ferment of the Bread and other Aliments, and bears such rule over them, as to convert and change them into its own nature: For example, When a man eats a Capon, the Acid of his Stomack overcomes the radical moisture of the Capon, and being predominant over it, transforms it into its own nature; on the contrary, if a Capon, or a Fish, could, or did eat a Man, his Vital Acid in the Stomack, overpowers and kills the radical moisture left after death in mans flesh; which then becomes the flesh of a Capon.

Now that there is a Radical or Vital Moisture remaining in a Dead Carcass, appears by the *Worms*, which will infallibly breed there; and likewise by the growing of the nails and hair: And this not only *Paracelsus*, but many other curious Enquirers into Natural Things, have observed. And unless there were a Radical Moisture remaining in Flesh, and in all Aliments, fit and sufficient nourishment could not be suppeditated to the *Living*; especially to those, who are growing and encreasing: witness Flesh and Fish salted and dried in the smoak, which have less Radical Moisture than when they were fresh or new; for much of it is eaten up by the Salt (as *Hippoc. Chymic.* shews *chap. 14.*) and therefore they nourish less than if they were fresh. Wherefore *Acid* or *Soft Fire*, is to be found as well in the Vegetable and Mineral, as in the Animal Family; and it is *That*, which adorns every thing which is in the World; even as Water is *That*, which nourisheth it, as *Hippocrates* rightly speaks. I say, by the presence of this *Fire and Water*, both which do constitute the Radical Moisture (as I shall shew) immediately before Chylification, is the Acid of the Stomack enlightned and refreshed; in regard it is more or less in all Aliments (as also in other things) as experience shews. There is more radical humidity in one new-laid Egg, than in an whole Pot full of Coleworts; more in one Cup of Wine, than in an whole Bucket of Water. Wherefore Acidity, being deficient in the Stomack (as *Hippoc. Chymic.* in the places fore-cited plainly shews) is restored by the *Radical Moisture* of Aliments; but chiefly and most of all, by that *Celestial Food* dwelling in the Air; for This is the Seed of

Life, without which neither Man, nor other Animals, or any Vegetable can attain to Generation or Life; for that Spiritual Food or Attraction of the External Air, which by often breathing we suck in, doth so much conduce to the Life of Animals, that it hath caused not only Philosophers, but also Plebeians to admire at it: Neither hath Nature Artificially placed her Bellows in the neighbourhood of the Heart, onely to cool it, as the Vulgar think, &c. but also that by their frequent Ventilation they might suck in the *Aethereal Aura*, by whose *assatus* and in-breathing, the aforefaid Acid is repaired, and doth uncessantly regerminate. For, as the Ingenious *Cosmopolita* shews before in the Third Chapter, as the Rain receives That Vertue of Life, and by the Sun Beams joyns it with the Alcaly of the Earth; so also the same Vertue of Life is attracted into the *Microcosme* by Inspiration, and is fixed by the Solar Beams of the Heart into the Alcaly, or Radical Moisture of Animals; as I shall by and by Experimentally shew:

This is the True Ancient Learning and Doctrine of *Hippocrates*, concerning the *Soft Fire* Adorning Bodies, which will always hold in despite of Rabious Maledicence, as *He* testifies in his Book *de Carnibus*; as well as *Cosmopolita*; saying to the same sense, *I will also deliver my Opinion, That which we call Calid seems to me to be immortal, and to understand all Things; to Adorn, See, Hear, and Perceive all Things, both present and future; the greatest part whereof in the general Perturbation of all Things, retired into the supream Appartment; which the Ancients seem to me to have called Aether: The other part, obtaining the lowest place, is called Earth, Cold and Dry, undergoing many mutations, wherein there is yet much Calidity: What can be spoken more clearly for the Radical Moisture of Things? For That which Cosmopolita shews in the Macrocosme (see Chap. 3.) the same things according to Hippocrates, are to be understood in the Microcosme; For Mans Body, unless it were required by that Immortal Calid, both by Aliments, and also by Inspiration, being Cold and Dry, would undergo many changes, and at length would crumble to nothing before our Eyes, even as the flame of a Candle,*

Candle, when the Wax or Tallow is spent, or when it is blown out by the Wind; yet it doth not wholly perish; as 'tis Vulgarly thought, and as it seems; but being destitute of its *Pabulum*, is plucked from it, and so is scattered abroad and vanishes into Air, which is the *Abyss* and Universal Receptacle of the Lights and Spiritual Natures of the Material World; as *Raymund* hath it; and as the Text of *Hippocrates* in his Book *de Carnibus* doth a little before explain. Wherefore the chief Fuel and Food of Life, is supplied out of the Air to all the three Kingdoms: Hence the Ancients said, *Jovis omnia plena*; and *Cosmopolita* affirms, that the *hidden Food of Life is in the Air*, which as I have shewed, assumes a Body to it self, in an agreeable and consentaneous root and subject.

Wherefore *Innate Calid* and *Radical Humid* differ much one from another, That is wholly Solar and Occultly Acid and Oily, but This is more Corporeous, Constant, and Saline; That is of a Superior Order, This, of an Inferior; in which is that Country, where Man takes a Wife to himself, as *Cosmopolita* speaks in his Tract *de Sulphur*; and it is the Hell, whether *Plato* is said to have hurried *Proserpina*; and *Ceres*, her Mother, imploring Jupiters aid for her Redemption, was answered, That she might return, if she had tasted nothing in Hell (i. e.) unless that Celestial Spirit, the Child of the Sun, had not been absorbed by the Alcaly, but as yet had dwelt free in the Air, then she might have easily returned; but she had tasted Grains of a *Pomegranate* in *Elisum* (i. e.) in Pleasure; for which Reason she could not return, till six Months were expired (i. e.) till the *Pomegranates* were consumed; and then *Proserpina* returns to her Mother, as the Light of a Candle doth to its Source or Country, as I said before. So that They are deceived, who confound *Innate Calid* and *Radical Humid* in all the Three Families; for they differ no less amongst themselves, than *Aqua Castica* doth from *Mercury*, in which it takes a Body, as appears by the falsified or counterfeit *Emplaster*, unjustly ascribed to *John de Vigo*. For in mixt Bodies, the *Radical Moisture* is the Seat and Food of the Celestial

Celestial Fire, and its Bond uniting it to the Elementary Body; but that *Ignovis Virtue*, is the Form and Soul of mix'd Bodies; more clearly thus, The Spirit being either occult or manifestly *Acid*, is the Seat and Band which ties the Soul to the Body. Let us then do as Nature doth, whom Art ought to imitate as her Guid in all Things; or otherwise we shall never become Compleat Servants to Nature.

Let Elementary Water be an Example, which being impregnated with the *Child of the Sun*, that is, with Celestial heat, falls upon the Radical Moisture or Alcaly of a Vine, and is imbibed by it, and so becomes the same thing with it, as I have shewed in the Second and Third Chapter.

I shall also give an Example in the *Counterfeit Spirit of Venus*, which from the beginning was Simple Water, which being impregnated with Celestial Calidity, fell upon the Radical *Humid* of the Vine; This in undergoing many Mutations, by Reason of the aforesaid *Calid*, having a power in it self from Nature to multiply it self, is brought to Maturity, and becomes a *Grape*, whose Aqueous Juice, being pregnant with Celestial *Calid* and Radical *Humid* (These Two beginning Action and Passion one with another) it comes to pass, that from their Mutual Action and Re-action, it conceives Heat (see *Hippoc. Chymic. Chap. 18.*) whence it is said to be *Fermented*, and it becomes *Wine*, in which the heavenly *Calid* overcomes the Radical *Humid*; and if *This* at length gain strength; it becomes *Vinegar*: with this Vinegar and Lees of Wine, now soured, *Copper* is eroded; which so eroded (as *Dioscorides* rightly teaches) becomes *A-rugo*; from which by Distillation, *Vinegar* is again drawn forth; which unskilful Persons by a false Name call *Spirit of Venus*, as I have exactly shewed in its place. This *Vinegar* is nothing else but Water impregnated with *Acid Salt* from the Principle of the Vine; and it is the Seed and Radical *Humid* of its innate *Celestial Fire*: now specified by the *Vine* (for being pure, it doth not expose it self to be handled by the impure hands of Ignorants, or of the Vulgar) and it is called by a common name

name *Vinegar*: And as the Heavenly *Calid* had from its first beginning its Seat in the Alcaly of the Water, and afterwards was multiplied in the *Vine*: Hence also it hath retained the Name of its Original, which it keeps also inviolate in *Copper*, to the shame of the *Norimberg* and *Vienna* Doctors and their Colleagues. So that *Vinegar* shall again be an Example to us of the Celestial *Calid*. I say, let *This* be satiated with *Alcaly of Tartar*, till the Ebullition and *Strepitus* cease; in that Ebullition The Spirit binds and unites the Heavenly Fire with the Terrestrial Body (i. e.) with *Alcaly*: *Alcaly* in this place represents the Radical *Humid*, in which the Heavenly *Calid* is bound; and after the *Alcaly* (i. e.) the Matrix hath received a due Proportion, it casts forth and ejects the rest, to use *Cosmopolita's* words.

If you would have *Proserpina* return to her Mother, then distil this *Tartar*, and there will come forth an Oil and Water which is bitterish by reason of the Oil, the Oil is that *Pinguous*, by which it was made *Vinegar*: again imbibe this Oil and Water in *Alcaly*, and distil it, as before, and instead of the Oil there comes forth insipid elementary Water; and so Water in the beginning is impregnated with Celestial *Calid*, and afterwards 'tis changed by Fermentation into *Grapes*, then into *Wine*, then into *Vinegar*; at length 'tis made *Salt* in its Mother *Alcaly*, which is turned into *Oil*, and at last (as I have said of the Light of a Candle, and of *Proserpina*) it returns to its Mother (i. e.) to *Aether*, as *Hippocrates* spoke a little before. So that the root of the thing, returns into Elementary Water, viz. into that which it was, before it was fecundated with the Indoles of a Vine, by the *Child of the Sun*. So also the *Caput Mortuum* which is left, is nothing else but the *Alcaly of Tartar*, in which the same Spirit inhabits, which I have shewed in *Vinegar*; but in a way more constant; therefore I shall call it in this place *Radical Humid*, which also by repeated Distillations returns into empty Earth and simple Elementary Water; as *Hippoc. Chymic.* teaches *Chap. 10.* Thus the saying of *Hermes* and others is fulfilled, *That nothing in the World dies*, &c.

The absurd Collegiates (as appears by one of their Society) do venditate and boast this *Simple Elementary Water*, to be a *Cordial* in desperate Diseases, as I have said above, Chap. 4. but with what advantage to Physick, let honest Men judge. Wherefore, that Igneous and Oily Vertue is the matter of *Humid* and *Calid* in mixed Bodies, dispensed into these *Inferiora*, by Superior Natures, without which the Earth would again be vacuous and inane; but the *Aqueous* Humor is the immediate Keeper and Cabinet of that Igneous Spirit incarcerated in the Seed, which abides there so long, till by adventitious heat it be promoted to Generation in a fit *Matrix*. And as I have shewed in *Alcaly* with *Acid*, so also the Radical *Humid* in every mixt Body, is the Shop and Hearth of *Vulcan*, into which that immortal *Fire* flows, and wherein it is kept; which is the first Mover of all the faculties of the *Individuum*: and because it is the Child, and as it were Vicar, of the Sun, I conclude with *Raimundus*, and by the authority of *Hippocrates de Carnibus*, that it acts all things in every lesser world, which the Sun doth in the greater.

The Seat of
Radical Moisture.

These things being premised, let us now see where the Seat of this Radical Moisture in Man is? which without intermission doth catch and absorb the *Child of the Sun*, or *Proserpina*. From the situation and effectual Vertue of the *Sun*, we may infer, that it supplies the place of an *Heart* to the Universe; for *Life* flows down into all parts from the *Sun*, in regard Light is the Vehicle of Life; yea it is the Fountain and next Cause, which inspires Life into Things, excepting only the Soul of Man, which is a Beam of super-cœlestial uncreated Light. Now as the *Sun* in the *Macrocosme* supplies the place of an *Heart*; and inspires *Life* into Things; so also the *Heart* in the *Microcosme* must supply the place of the *Sun*; if these Things are True, as they are most True and Veracious, which *Hermes* hath left us, In his *Tabula*, viz. That Superior Bodies are as inferior ones, and *Vice Versa*: Therefore the Vital Spirit, or Cœlestial Calid attracted by the Lungs, and as it were sifted through a Sieve, passes directly to the *Heart*, where *Proserpina* is embraced

Uncreated
Light.

embraced and detained by the Radical *Humid*, and there acquires a Body as I above observed out of *Hippocrates de Carnibus*: and I have noted the same thing also concerning *Caustick Water* with *Mercury*, and concerning *Vinegar* with *Alcaly of Tartar*: And as *Phlegme*, or Elementary Water, which is the Root of *Aqua Fortis* and *Vinegar*, is not coagulated with *Mercury*, neither with *Alcaly*, but exhales from heat, and returns into Elementary Water, as I have shewed; so also the *Phlegme* and Elementary Aqueous Vapor, which we inspire and suck in with the *Celestial Calid the Child of the Sun* must needs again by Expiration return to Water, as every *Plurician* knows and is forced to confess: But the Saline Nature of *Aqua Fortis* is fixed with *Mercury*, as the Saline Nature of *Vinegar* into *Alcaly* with *Corals*; so also *Proserpina*, or the *Child of the Sun*, by Inspiration attracted by the Lungs to the Radical *Humid*, which hath its Seat in the Heart, is detained there, and is wrought and fixed by the *Radii* and heat of the Heart (after its manner) into *Alcaly*, or *Radical Moisture*: which thereupon by the same Heat and *Pulse*, or Protrusion is diffused through the whole, and inspires Life, Actions, and Faculties into Things and Members (for *Hippocrates* hath said in his fore-cited Book *de Carnibus*; That It Understands, Sees, Adorns, Hears, and Perceives all Things: See also the end of the fore-going Chapter.) And as It performs several Actions, so it hath obtained several Names; for in the Eyes it Sees, in the Tongue it Tastes, in the Fingers it Touches, &c. And as I have shewed that *Acid* and *Alcaly* do constitute Ferments, so also Radical *Humid* and innate *Calid*, as well in a Grain of Corn, as in Mans Body, do perform Vital Actions, and therefore may not unfitly be called, The *Vital Ferment*; for it flows and is diffused from thence into all the Members of the Body: And as that *Vital Spirit of Child of the Sun*, is multiplicative (that I may so speak) of it self in the Stomach or Ventricle of a Grain of Corn (which is the 8200 part of its Body, as the deep Sages of Natures Mysteries have observed) and from the super-abounding stock of its Wealth, may wax four, and

Vital Ferment.

be made *Ardent and inflameable Water*: So also *This* in Mans Stomach doth regerminate, is multiplied, it fours after the manner of *Ferment*, and like *Aqua Ardens* doth illuminate the whole humane Body with vivid Heat and Colour; and because it hath the Operations of *Fire*, therefore it is called by *Hippocrates*, a *soft Fire*; having its Seat in the Stomach. For as the *Sun*, the heart of the World, doth uncessantly send this Spirit to the *Aether*, which contains all Things which the World hath in it self; lest the Frame of the World should fail: so also the *Heart* doth unintermittently send this Spirit to the *Aether* of the *Microcosme* (*i. e.*) to the Stomach, which contains in its Cavity or Venter all Things which the *Microcosme* hath; and therefore Natures *Myxta* have given it the Name of *Multiventrous Spirit of Mercury*. Now because *It* flows all the days of our Life, and vanishes by reason of the volatility and frailty proper to the Nature of Animals, especially growing ones, as *Hippoc. Chymic.* demonstrates, Chap. 12. It is therefore necessary that *It* should be repaired by Congruous Food (for we are nourished by the same Things of which we consist) which doth acquire in the Stomach a beginning of volatility from the fore-said Spirit of the Animal himself; a *Species* whereof that *Spirit* was from the beginning (so Meat in the Stomach conceives Ferment from within, as *Raymond* in his *Theory*.) Hence of necessity, Bread and Water in the Stomach of a *Man*, become *Humane* Aliment; and the same Bread and Water in the Stomach of a *Dog*, become *Canine* Aliment, &c. because the Vital Acid of Animals, and the Acid Occult in Aliments, are by Digestion and Concoction turned into Radical *Humid*: All these have fetch'd and deduced their Original from the *Child of the Sun*: But the specifick Acid Vertue in the Aliments is overcome by the Vital Acid dwelling in the Stomach of Animals; as the Acid seated in a Pearl, is subdued and brought under by Vinegar; but Aliment doth not fall down from a sound Stomach, till it hath attained the end of *Ferment* (as I have shewed by many Examples in the 6 Chap. *For Nature is alike in all Things* (*Hippocrates*, the Authority of the Ancients, and Experience, proving the same (*i. e.*) till it hath

Why 'tis called
ignis Mollis?

hath attained the Foundation of Vitality and Volatility; for since the Radical *Humid* of all Animals is Volatile, as it is also the very Shop of *Vulcan*; it is requisite, that whatsoever is laboured and wrought out there, should be also *frail* and *volatil*. Hence the Flesh of all Animals, Blood, Urine, Sweat, Stones, Sand, Gravel, Schirrhus, Tophus's. &c. and whatsoever an Animal can generate, do not resist, but are destroyed from their former State and annihilated by *Fire*, or else are reduced into an insipid *Calx*, as Bones, or into a mordicant *Calx*, as the shells of Eggs, of Oysters, and the like, &c. But that all These before spoken of, were Occultly Salt, before they were burnt, we may be convinced, not only by the Reason aforesaid, and by the Authority of *Hippocrates*, but moreover also, by our School Mistriss, frequent *Experience*: For which, that I may not cloy you with Repetitions, see *Hippoc. Chymic.* from Chap. 12. to the 16. For whatsoever is distilled from an Animal, by the help of Fire, there goes forth from it a Liquor, pinguous Oil, and flying Alcaly; but the Acid, which bound up the Alcaly in this tyrannical Operation, returns with *Proserpina* to her *Mother*, which you may again fetch from thence by Art and subtile Hands, as I shall shew anon: But the *Caput Mortuum*, even from the hardest Bones, is left *vacuous and empty*, except Blood; which whilst it is by degrees reduced to a Coal by a gentle Fire in a Retort; then out of it by Common Water is elicited a portion of *Salt*; but the greatest part is turned into Fugitive *Alcaly*, not very much stinking: a plain argument, that in the *Blood* there is a greater part of *Occult Acid* (binding in the *Alcaly*, that with a Light Fire it may not fly away) than in the *Bones* or other parts, *Hippoc. Chymic.* Chap. 12.

But that it is *Salt* (*viz.* a Composition of *Alcaly* and *Acid*) the Solution of Sublimate *Mercury* doth prove; for being cast into *It* it doth not precipitate *It* as *Alcaly*, as above Chap. 7. But the part, which is distilled from the Retort, is fugitive *Alcaly*, and precipitates *Mercury* of a White Colour, and in to a small spongy Powder. Add fixed *Alcaly* to *Urine*, a little coagulated

Salt of Blood

Alcaly of
Blood.

Ferment of
Putrefaction
what?

to the consistence of Honey, that the Alcaly may imbibe the Acid Salt which Man eats, Distill it through a Limbeck, and it will emit a flying Alcaly, having the stinking smell of the Urine from the Ferment of Putrefaction. Urine doth not acquire this putrefactive Ferment in Artificial Putrefactions, as those *Deans* with their wild *Colleagues* do imagine, but in that very moment when the *Scrum* passes through the Reits, as through a Syringe; but for want of a Name, I call it *Ferment of Putrefaction*, to distinguish it from other *Ferments*; for *Alcaly of Sweat* doth not stink, as that of *Urine* doth: neither doth That of Bones nor Horns, but hath a fresh smell, which these vain-glorious *Artists*, hitherto were ignorant of, though my *Hippoc. Chymic.* hath taught them it; yet they never understood it: for *That Book*, as it sets forth the difference of fixed *Alcalyes* and the constancy of Forms by the Precipitation of Sublimate *Mercury* dissolved; so it distinguisheth the Permanency of the Forms of Volatile *Alcalyes* by the Ferments acquired in their Native Places; because the same Form walks *pari passu* to the Fire with them even unto the very Elements, *viz.* The Form of the same thing, from which they were taken, as *Geber* and Experience do witness, as I have above clearly shewed. By this we see the reason, why Alcaly and Viperine Radical Humid, or the Alcaly of other Animals, passing through Actual Fire, as I have said, doth retain the Form of the Animal, whence it was taken, undestroyed; but as the *Alcaly* or *Mother*, or *first Matter* of Metals (which I have before demonstrated) is variously agitated by the unskilful multitude in Acids and Causticks, and *Calx's* of Things, not agreeable to its Nature, with which they oppress and destroy its internal Form, and the spark of Acid Metaline *Light*, so that it cannot be encreased or multiplied (as I have shewed in a Grain of Corn) so also I find the first Feminine matter of Alcaly of Vipers to be miserably tossed and debased by unskilful Sciolists, sometimes with *Calx*, sometimes with most *Acid Spirit of Salt* (see *Hippoc. Chymic.* Chap. 3. and 11.) Things contrary to its Nature; so that the spark of *Light* or Internal Form of the Viper, which

which ought by a gentle Fermentation to be encreased and multiplied, by these Violators of Nature is almost wholly destroyed and annihilated, in like sort as the *light* of a Pearl remains oppressed and slain by *Their Celebrated Spirit of Venus*. And as a skilful Artist, taking Nature for his Guide, can multiply the form in *Mother* of Metals, so also the same Artist, by the same Guide, can multiply the Form in the *Mother* or *Alcaly* of Vipers. I have shewed, how wise Nature, by her working, doth perfect *Radical Humid* for the Family of Vegetables, on which Antiquity hath superstructed *Artificial Humid* with good success. I have also shewed out of *Hippocrates de Carnibus*, the method and way that Nature useth in the preparation of *Radical Humid* in the *Animal* Family; in imitation of which, I have made the *Artificial*, not departing an hairs breadth from the Natural Operation.

Hence it will appear to all in general, and every individual Man in particular, both present and to come, against the opinion of Calumniators, That This *Invention* of *mine*, may be truly and without fraud called *Radical humid by Art*, as well as *Salt of Vipers*; for it consists of the Alcaly of Vipers (which, as I have above evinced by Experience and the Authority of *Geber*; to act the Woman, as in Minerals and Vegetables, so also in this *Animal Classis* it is wholly of a feminine nature, and hath in it an Occult Viperine form) and of *the Child of the Sun*; or *celestial Calid*, not as yet corrupted; which since it cannot be alone, is received into and detained in the Alcaly of Water, until it be fermented into *Salt* (*i. e.*) into the degree of the perfection of its Nature: Thus you have my mind. For an Example of this *Salt*, my *Hippoc. Chymic.* chap. 10. holds forth the way, whereby with Alcaly of Tartar, Vitriolate Tartar may be made out of a Crude *Minera* of *Vitriol of Mars*; and it shews also, *That Nature is in all things alike*, and truly it discovers a great thing. But these barren and unfruitful pretenders to Physick, by reason of the cæcity of their minds, are not capable of the evident truth; yea They scarce know the things which are before their eyes; for in Acid Fountains they see not *the Child of the Sun* diluted by

The Viperine
Salt of the Au-
thor is Radical
Humid by Art.

provident Nature in Water, which never fails; and by flowing by an immature Vein of Iron, it licks and affects it with a sweet Acidity, and after it hath flowed down a little it waxes yellow, as *Hippocrates Chymicus* shews, chap. 16. An evident argument that the Celestial Spirit flaggs in its action, when seed fails, no otherwise then as *Proserpina*, having enjoyed her pleasure, returns to her Mother; yet notwithstanding it suffers not it self to be taken by polluted hands, but to intelligent persons, it manifests it self even whilest dormant and asleep: Wherefore there are many wayes conducing to this end which are very craggy and obscure to Detractors: But what ingenious Man would not try the same with crude Natural Vitriol of *Mars*? Unless perhaps he be afraid of the frequent solution, long digestion, and judicious coagulation.

Behold here, all ye Candid Assertors of Physical *Light*, how the first Fæminine matter of *Alcaly of Vipers*, by a Triumphant and Solemn Marriage with the Child of the Sun, is exalted into the Nature of *Salt*; whose Marriage is celebrated in the House of Nature, to use *Cosmopolita's* words; against which, for these twenty years (whilest I have made my abode in this Country). Dogs have barked, Ravens have croaked, and unheard of clamors have been made; which I despising, do yet live to triumph over and contemne my Adversaries; but if I had died, some would have accounted those things as Prodigies and Omens of my Death. Oh how much paper have these *Grammatical Masters* spent about this matter? what slanders, what infamatory Libels, how many Calumnies and filthy Reproaches, have these uncivil Declaimers against the Works of Nature, vomited forth into their own laps? As for my Self, I have chosen Truth for my faithful *Defendress*, which though it may be oppressed and exercised with great weight and burden amongst Men, yet it is impossible that it should be wholly extinguished; in regard it is powerful, inexpugnable, and triumphant above all things in the World, as my Preface to *Hippoc. Chymicus* proves out of the *Holy Scriptures*. Therefore I entertain with delight, the

the contempts of *Phebeians*, for I can scarce find filth or dirt enough to stop the Mouths of such evil Speakers. I know, that 'tis the part of a fool to contend with unskilful persons about things which they understand not, or to think to get any credit, by teaching them; but on the contrary, a Wise Man will silently consider the times, places, and customs of the *Ruling Men* with whom he is conversant; and besides, he will confide in just actions, and then cheerfully expect an *equal* event; for hereby accreus great glory and emolument: Let *Helwigidrick* be a late Example (I speak not reproachingly, for we should say nothing but good of the dead or of the absent) what stone did not he turn heretofore, together with his Associates, against the Experimental Truth? which was a stranger and unknown to Them all? what did they not infuse into the Vulgar against my conversation? (as if that were at all to the purpose) but I derided all the actions of these dancing Camels (to speak proverbially) as knowing, that 'tis the common refuge of vain and wild heads, when they want reasons to oppugne the Truth, to catch at any opportunity to blemish ones *manners*, as my Answer published in the year 1656 under the Title of *Eccho* may witness. These furious Deans, with their foul-mouthed Colleagues, and their antecedent herd, do commit the same evil at this day; but the best is, they are All *Judges* contaminated with filthy ignorance, and are unjust witnesses, yea falsaries in the Law; as I have hitherto clearly proved. All whose Writings, as well past as present, though by foolish diligence compacted into a great Volume, yet they are not sufficient to bear down *Tachenius*, who is supported by the Truth. But these Idlers do but waste their golden and irreparable *time* in these employments, in thus exercising their lying Genius's, and in fruitless blotting of Paper; Their labour both formerly and hereafter shall be in vain; for if a generous *Horse* regards not the Barkings of following Curs, I shall as little esteem my present or future Opposers, either single or altogether; you know my meaning, for I live and confide in just actions; but enough of This: To return, In
Vitriol

Eccho to vindicate Chyrosophus

Vitriol there is an Acid most grateful to, pleasant, and desired by humane nature, as *Paracelsus* and Experience say: This Acid, because it cannot be alone, associates it self with the immature Metal, and with *It* grows into a Saline Body; free or separate *It*, and it will be worth your labour; for there lurks in *It* an *Arcanum* for the Epilepsy, of which the ingenious *Crollius* speaks: *Paracelsus* attributes many *Vertues* to the volatility of Spirit of *Vitriol*, in curing the Epilepsy; but I could never see any of *Them*: neither did ever any man affirm to me, that he could cure a confirmed Epilepsy, only by *Vulgar* and simply prepared Spirit of *Vitriol*. Thus far *He*. Therefore, for the reasons hinted before, it cannot be elicited by Distillation, as all Candid Operators witness; for this cause, the Searchers into the Secrets of Nature have tried another way, which I should willingly have declared in this place, but that I have experience, That 'tis a foolish thing to expose oneself to Ignorants and to the *Vulgar*, for what they praise is blame-worthy, what they think is vain, what they speak is false, what they disapprove is good, what they allow evil, and what they extol infamous; as I have hitherto proved by clear Examples. Neither doth an *Arcanum* lie hid in the said *Volatility* only for the Epilepsy, but also for the Suffocation of the *Matrix*, for the Palpitation of the Heart, and for the Corroboration of the Spirits, Brain, Heart, and of the whole *Individuum*; since it is the Child of the Sun, and the Twin-brother of our Vital Spirit. But of This I have said enough. I return now to the *Vacuous* Alcaly of *Vipers*, which is ill treated by the company of *Vulgar* pretended *Chymists*.

As we do not give a *Scorpion*, or a Piece of Wood, to those that are hungry, and ask for *Bread*; neither do we give Oil mixed with *Gaul* to such as are *thirsty*; but we exhibite to them similiary and consentaneous Aliments, of the same family of which the hungry person consists, as *Hippocrates* teaches: So also the Alcaly of *Vipers*, being *vacuous*, hungry, and thirsty, must be satisfied with *That* of which it consists, not with *Calx* or Spirit of *Salt*, as unskilful Writers give out; for I have shewed

Paracelsus Vokert.
his White Spirit
of *Vitriol*
what?

shewed in the 3. Chapter of this *Traict*, That Nature doth so, and she is every where alike. And if the *Alumens* and Scholar of Truth in his Operations shall imitate *Her*, he can never go out of the way, as by and by will appear by a clearer Example: But here I would have all *Readers* to take Notice, that as all Remedies, proceeding from *Animals* are weaker for Mans use, than Those that come from *Minerals*; so we are here to understand, that *Alcaly* of *Vipers* possesses a specific Form, and is impregnated with Natural *Acid* supervening, and under a convenient heat of Digestion, it is ripened into one excellent Body: The same *Alcaly* indeed may arise more efficacious, by reason of its *Masculine* adjunct, yet it cannot ascend beyond the boundary before alledged out of *Raymund*; so that the Remedies taken from the *Mineral* Family, are found to be much more perfect in the Epilepsy, Asthma, Stone, and most Coagulated Diseases (*Hippic. Chymic. Chap. 14.*) in as much as their Radical *Humid* is found by Experience to be more constant.

Now Those in general are called *Coagulated Diseases*, who from Immature *Acid*, flow from the Stomach to the other Shops of Digestion, and are Coagulated there, or if in these very Shops, through the degenerating of the Occasional Cause, the *Acid* become more powerful, then it suppresses the *Innate*, and presently the Pores are contracted, and it undergoes Coagulation with the *Alcaly* of the place, according to the property of the Member; as I have above shewed out of *Hippocrates*. And as in the *Macrocosme* there dwells an Occult Food of Life in the *Air*, which because it contains all things which the World hath, is therefore called a *Multiventrous Spirit*; we must also understand the same in the *Microcosme*: So that in the *Air* of Mans Stomach, there inhabits a *Multiventrous Spirit*, which contains in it whatsoever a Man can do, or hath; as I have shewed out of *Hippocrates* in his Book *de Carnibus*. If therefore any of This Spirit, dwelling in the Stomach, shall suck in a more *Acid* Air of a strange and forraign taste or smell not agreeing to its own Nature, which it cannot through-

Coagulated
Diseases.

ly change into *Mature* or *Salt*; and it falls into another Shop of Digestion, where Concoction, and Alteration proceed more sweetly than in the Stomach, then presently the more powerful suppresses the weaker, and they are both Coagulated into a farrain *Indoles*; whence the indwelling Spirit rages, and as it were disdains, the Member waxes hot; and doth not Concoct its proper Aliment, from whence a *Disease* is manifestly produced; after the same manner, as when *Vinegar* suppresses the indwelling *Rector* of a Pearl, and doth so weaken *It*, that it loses the form and shape of *Pearl*; as I have elsewhere clearly shewn.

Wherefore the vivid and manifest *Acid*, if by mistake it fall from the Stomach, and pass to the *Oeconomy* of the Bowels, immediately, as farrain and more powerful, it subdues the feeble *Operator* of the place, and takes the *Province* to it self; causing either Collick pains, or making the Belly either loose or costive, or working such like disorders in the Intestines; which I think better, to avoid Prolixity, to omit in this place, for they require a distinct Tract by themselves. I have only endeavoured to deduce necessary Arguments in this matter, from thence to discover the folly of Those, who have learned to do nothing else but to defame and revile the Truth, which is unknown to them. Now this vivid and manifest *Acid* (of which I now speak) must not be understood to be a certain *Fluid Liqueur*, which as the vulgar speaks, descends as a swift Torrent, but it is also a vital thing, called by *Hippocrates*, *Aura Lewis*; by *Virgil*, *Igneus Vigor*; by *Horatius*, *Divina Aura*; of it self wanting a Body, but not enduring to be alone (as *Hippocrates* says, *de Diata*) it incorporates it self with Meats and Drinks, and informs Them into the Vital Aliment of the Body, which takes in that Food. Hence again, *Hippocrates* in his first Book *de Diata*, *The Soul of Man is encreased in Man, and in no other, and the like of other great Animals*. Now this *Aura* by Irradiation alone perfects its work, but a farrain *Aura* mixed with it, as Water with Water, Fire with Fire, is alone sufficient to be the cause of Diseases, as our Master teaches *de viterum Medicina*, because it can easily alter the inbred

Vital Aura.

Aura the Cause of Diseases.

bred *Operator* (for every Male hath its Ventricle) which being altered, presently the Digestion of the place is disturbed, and the very Aliment, otherwise Vivid; is perverted into a *Mucous Indoles*, according to the property of the diseased and affected Member; just as the Occult Sulphurous Odor of *Orpiment* doth die and denigrate *Sal Saturni*, though far distant from it, after this manner, Write with *Saccharum Saturni* dissolved in Water, that Writing will not be seen upon the Paper; place that written paper in the Frontispiece of any Book, then have ready an Humid Sulphurous Odor, which is made of *unslaked Lime* and *Orpiment*, both first severally pounded, and afterwards mixed together; pour Water on this Powder, and make a *Lixivium*, with which you moisten another Paper, and place it at the end of the same Book; shut the Book, and the next morning you shall find the Writing to appear obscurely black, because the Sulphurous Odor of the *Orpiment*, being excited by the *Alcaly* of the *Lime*, hath pierced through the whole body of the Book unto its own subject. In like sort (says *Hippocrates*, *de Diata*; *The nature of Man doth operate, with which all Arts and all Artifices do communicate*. For if the *Operator* and Causes of that glewish matter called *Synovia* in the joynt of the Foot (for Example) were so disposed to receive the vitiated *Aura* of the Stomach, as *Sal Saturni* is to entertain the *Aura* inquinated by the Odor of the Sulphur of *Orpiment*, then indeed the *Aura* of the Stomach, being tinged with a farrain Odor, would also inquinate the *Synovia* in the joynt of the Toe; and this is done only by Odor, that I may so speak, from whence ariseth pain in the joynt of the Foot, which from the place is called *Podagra*, or the *Foot-gout*; and immediately the Aliment, otherwise vivid, is perverted into a *Mucous Indoles*, &c. as I said but now.

This kind, after the manner of the Ancients, *Hippocrates* in general called *Divine*, and hath enjoyed every one to take notice of and observe, That if there be any *Divine* Thing in Diseases, we should have special regard to that, if ever we would be good and admirable Physicians.

A way of Cryptography.

Art imitates Nature and this Art.

The Divinum
of Hippocrates.

Now that *Divinum* of Hippocrates is the Occult; Arduous, Obscure, Hidden, Cryptical and Admirable Ferment in all the Ventricles, both of the great and lesser World; which cannot be seen with the eyes, neither can it be perceived by any outward sense, but only 'tis known by its effect, and that not without much labour, and no little expence of time; but I have shewed it to be the *Child* of the Sun, Chap. 2. For whatsoever doth escape the sight of the bodily eye, the eye of the Understanding doth, and can reach it; as in *His book of Precepts*.

The Vienna
Professors gross
and Centume-
lous Opinion
of the founda-
tion of Anci-
ent Physick.

This arduous and obscure Ferment hath so crazed the Brains of the Déans, and their Collegiats, though they think they were solid, strong, and well grounded in Art, That they do altogether dislike that *Divinum*, as a certain piacular thing, (which my *Hippoc. Chymic.* celebrates both in Diseases and Remedies) and they are also ignorant how to distinguish new things from old; latter from former; which the fourth in order of the *Vienna* Professors, a scurrilous and dicacious prater, doth confess, *viz.* that he is amazed to find that it should be treated of by learned men, as being *manifestly false and foolish*; but he Dreams waking, as the Proverb is.

But our *Galen* (even when he was old, deriding such mens madness) together with many other famous Men, had It in great esteem, and (with *Hippocrates*) confesses in his 2. Book of the Differences of Feavors, Chap. 27. That It is placed in a certain secret affection, and that it doth inhere in the very parts, saying of intermittent Feavors, *It ceases not to bring about the Circuitus of their Fits, as long as the Disposition, in the generating part, is preserved*: whence it appears, that in that place he fetches the Cures of Feavors a little higher than he doth in his *Books of Method* and in his *First Book of Art to Glaucos*; affirming, *That the correction of this Disposition, is the principle scope of the Cure*; and in the same book, *Where heat overcomes the matter, it is called increment*. He means nothing else, but what my *Hippoc. Chym.* hath more clearly explained (for the sake of the studious, *viz.* Ferment, either occult, or manifest; which speaking to Plebeians, he calls *heat*, and *Alcaly mat-*

ter

ter; for if *heat* do overcome, it must needs have dominion over the *Matter of Alcaly*; as I have abundantly proved by all examples both in the great and lesser world; and then (says *Galen*) *Heat* is encreased not only in Feavors, but also in all other Diseases and Matters, as I have before shewed in Barly, a seed of the *Macrocosme*; and now shall likewise shew even *adoculum* in *Paronychia* (*i. e.*) (an imposthumation under the root of the Nails) a seed of the *Microcosm*. Now *Paronychia*, the Mistress or Queen of almost all Diseases, is an Igneous Tumour; so called from the most Acute pain accompanying it; the like whereof is hardly to be found amongst Men; it arises in the root of the Nails (*i. e.*) in their Ventricle, when the Occult Ferment is by mistake *There* made manifest and soured; in that very moment the vivid Aliment is perverted, the neighbouring parts are disturbed, and sometimes the Bones themselves are eroded.

But this *Disposition* is corrected by a more powerful *Acid* descending from a perfecter Family, which can subdue the inflamed Ferment of the *Microcosme*: For before the Tumour be opened, it must be anointed over, and the whole Nail too, with *Acid* of Sulphur, as it is gathered *Ex Campana*, which by reason of its thickness they call *Oil*, when this *Uction* causeth pricking and itching a little in the part affected, in that very moment you may observe the corruptive *Disposition* to be corrected, because the more powerful *Anima* gets dominion over the weaker, no otherwise than as counterfeit Spirit of *Venus* subjugates the Occult *Acid* in a Pearl. Do but wash your Finger with this warm Water, and it is enough. I would have discovered many more of these things, for the benefit of my Neighbours, as also a pleasant, safe and delightful Remedy for the *Lues Venerea* it self, unless I had been every where prevented by the deep Wisdom of the *Vienna* Professors.

I know Learned Men, not a few, have by long use and experience taken notice of things, that do eradicate certain *Dispositions*; but by reason of the multitude of *Ignorants* in this woful age, which, with one mouth would rail against them (I am almost ashamed to speak it) they

are

are afraid to publish Them, because they exceed the understanding of *Gregarians* and *Talkative Medicks*.

So the Vulgar Country People by proper Antidotes (*i. e.*) such as specifically destroy some *Dispositions*, or do restrain, absorb, or overcome the *Acid* and Ferment of the place) do sometimes Cure not only Feavors, but many other Diseases, without Purgation premised; whereby Old Women do sometimes disgrace, even the most able Physicians, and do counterfeit their Art; so *Hippocrates* teaches in his Book *de Affectionibus*, *If Patients seem to have no need of Pharmaca, give them Medicaments in Drink, by which the Feavor may be either changed or may abate.*

My *Hippocrates Chymicus*, with *Galen* and *Hippocrates*, give many Examples of this Correction (as the former calls it) of *Transmutation* (as the latter) of *Dispositions*; which being Cryptical, Abstruse, and Magetical Works of Nature, and besides are the Foundations of the Physick of our Predecessors, The *Deans* and their Colleagues have indeed read them, as appears, but being above their reach, and above *Priscians* Grammar Rules, they could not understand Them, as appears by their reproachful canting; for therefore they asperse them, as not having learned to consider obscure things from manifest, as *Hippocrates* pleasantly derides them, *L. 1. de Dieta*. But if this Spiritual Operation be to be derided, then surely, *whole Nature*, and the profound *Science* of True Physick will be also counted ridiculous. For whatsoever Nature works in the greater or lesser world, she always begins and ends it in a Spiritual manner; for the Creator hath given her no other *Instruments* to work withal: Out of a small Seed of Hemp or Flax, there ariseth a Plant, which having first undergone many vexatious Alterations, at length is made a *Sail*, by the help whereof, and by the blowing of the *Winds*, Men are carried up and down the World. This Action, from the beginning to the end, proceeds Spiritually, like *Cryptography*, as *Hippocrates Chymicus* shews in the fore-cited place. And also Mans Nature it self, of Bread only and simple Water, doth not only frame for it self the *Body*, which we touch, but also the

Wonderful are thy works O Lord &c. Psa. 91.

the Optick Spirit of incomprehensible Tenuity. None but the *Norimberg* and *Austrian Collegiates* and their fellows, would ever have called this Operation of Nature *inspt*, Circum-foraneous, and Mountebank-like. So in the very Science of Physick, neither *Rhubarb*, *Senna*, nor *Agarick*, &c. (their innate Spirit being taken away) can any longer disturb Mans Body; neither, in their full strength, if they could be given to a Carcass of a Man (the Spirit being gone) would they purge It. So that whatsoever is in *Medicine*, besides the Clamours of the *Deans* and their Colleagues, like *Cryptography*, it proceeds Spiritually; for we must needs confess, that all things do consist of insensible Principles, as *Lucretius* says, *Lib. 2.* Moreover one weight or parcel of *Galls*, and a fourth part of that weight of *Vitriol* (though neither of them black) yet being joyned together with an *Aqueous Liquor*, by reason of the innate Spirit, do wax black, because the *Alcaly* of the *Galls* doth suck up the *Acid Spirit* of the *Vitriol*, and the immature Iron is diluted into Ink, which is in use amongst Kings, Learned and Unlearned, yea *Plebeians* themselves: Yet all these, when they handle this Cryptick and hidden Colour, brought thus to light, are accused by these lofty *Deans* and their Owl-light Companions, as *Circumforaneous* and *Juglers*.

Truly they use their Tongues ill, but their Ink worse. But to make an end, I conclude with *Lucretius*, That both Learned and Unlearned must needs confess, *That whatsoever the World hath, is produced of Cryptical and hidden things*; Only these talkative *Praters*, to evidence to the whole World that they are vain and empty Bodies, without Spirit, do laugh at these *Works* of Nature, together with their *Instruments*. They are a company of light; ungrateful, and ludicrous Birds, which I leave to be fed upon by such hungry Stomachs as desire them; and so I return whence I digressed. The *Aura* of the Stomach, being endued with a forrain odor, can creep to the joynts of the Foot (as the *Aura* of Common Sulphur can reach *Sal Saturni*, though far distant from it, as I have experimentally shewed) and there it can so trouble the inhabiting Spirit, that the

Bread and Water are made Spirits.

Ink produced of Occult things.

Aliment of the place waxes four, and pain arises, which from the place is called *Podagrick*. But of what *Species* this *Acidity* is, so tinged by the strange or forrain *Aura*, Mans understanding cannot comprehend: Whence *Hippocrates* in *Fræceptionum libello*, *By reason of diverse attributes, sometimes Diseases stay a longer while*. So that for the particular Cure, That which is contrary to these pains lies hid in the specifick *Alcaly*, which thirsts after such an *Acid*; as I have shewed concerning *Iron* for the Spleen, and concerning *Ostio Colla*, &c. (see *Hippocrates Chymic.* Chap 28.) But for an external Remedy I have sometimes seen the most vehement pain to have been mitigated by warm Water of Frogs Spawn, which is rich of Volatile *Alcaly*, as *Hippoc. Chymic.* hath it, Chap. 19. *Tenzelius* also, in his *Exegesis* hath the same, only adding *Allum*. This *Aura*, if it creeps to the Reins, and there suppresses the presiding Spirit, whatsoever it lays hold on, it coagulates with the *Alcaly* of Urine, into the shape of a *Stone*: the same also happens in the Bladder, in the Liver, in the *Vena Porta*, in the Lungs, in the Vesicle of the Gaul, and in all the Shops of Digestion, in which there is found a fluid Nature. For the way, see *Hippoc. Chymic.* Chap. 14. Stones are preternaturally generated after the same manner, not only in Men, but also in certain Animals, and their parts; and the same Acid which had coagulated them (the order being changed) doth again dissolve them, as *Dams* Nature shews in Stones of Crabs; which yet are not Morbous to the Crabs, but arise from their very first Constitutions. I also keep by me *Stones* taken out of the Kidneys of Capons, and out of the Gauls of Oxen. There are some, which can shew *some* taken from Their Bladders and Reins.

So also there is preternaturally bred a stone found in the Gaul of an *Histrix* or *Hedghog*, which such *Fablers*, who are ignorant of the nature and causes of things, do mightily commend; especially Those, who would be accounted by Old Wives and the ignorant *Vulgar Canonical Physicians*: Whereas the *Learned* know, That *Hypocratical* Medicine is but *One*, which needs be distinguished but into *Internal* and *External*; whereas these Men, out of their

Water of Frogs Spawn, rich in *Alcaly*, takes away *Gowty* inflammations.

The Original of the Stone.

The Stone of an *Histrix*.

their ignorance have parted it into diverse *Sects*, as my *Hippoc. Chymic.* hath it in the Preface. I return to the stone growing in the *Hedghogs* Gaul, to which they ascribe many imaginary *Vertues*; and out of meer simplicity (which is not to be endured in *Physick*) do affirm, that it is of singular *Vertue* above the stones of all other Animals; grounding their opinion, on this weak argument, because it is bitter to the taste, not considering that it contracted the bitter tast from the *Gaul*, part of which hath undergone coagulation with *Acid* and *Alcaly*; after the same manner, as the stone of the Kidneys, is many times red from the *Blood*, and That of the Bladder is white, by reason of the *Mucilage* mixed with it, which the Bladder doth exsude. For whatsoever the coagulating *Acid* and *Alcaly*, do lay hold of in hasty coagulation, being thrust forth from the *Vital Regiment*, and doth not much recede from the nature of them both, they take it into their society; just as *Lime* moistened with *Water*, again becomes a *stony* or *petrous coagulum* with things mixed with it, as daily experience shews. Hence it is, That *Hippocrates de Dieta* laments, *That Men are ignorant how to know, or collect obscure things from manifest*. But why, I pray, is not the stone found in the Gaul of an *Oxe*, of the same *Vertue* with that in an *Histrix* or *Hedghog*? since in other tastes, nothing comes from an *Oxe*, which is not good for Mans use? The reason is plain, because it is more common: The *Deans* and their *Colleagues* do commend the *Hedghogs* stone, by this just, as wise, as powerful, reason; *If it were not of great vertue, Noble Men would not buy it at so great a rate*. Fie upon it! do your mighty *Masterships* so expose yourselves to the laughter of the *Vulgar*? What; are *Great* and *Noble* Men the proper *Arbitrators* and *Judges* of *Physick* in our days? And if they were, yet it is no new thing to approve *Distilled Vinegar* for the *Son of Venus*, and *Elementary Water* for *Cordial*, and out of meer Ignorance to commend and dedicate It to them for a great *Treasure* in *Physick*, and to swear that they are good for our Neighbours Health; whereas they do but appear so, but are really for his destruction. But the multitude of *Follower*s procures no patronage to lies,

Stone in the Gaul of an *Oxe*.

though unhappy Mortals are apt to obey and follow
ground sloth and ignorance.

But how came Great Persons to know that the Vertues
of this Stone were so excellent, seeing they cannot be
learned, but by the knowledge of their Causes, and by
manifest Experiences; witness *Hippocrates de Aeg.* But
Noble Men or very few of them study either; and
therefore they must needs by a kind of adoption suck
in this their knowledge from such vain Fblers, to whom
they subscribe, and who make great but empty vaunts of
their Skill in Physick; for they know not how to distin-
guish *Vinegar* from *Salt*, as I have proved, as clear as
the Sun.

Away therefore with these trifles, which redound so
much to the detriment of the Noble Art of Physick, and
the misery and damage of ones Neighbour. Such *Me-
dicasters* are so full of vanities (witness the reformed and
vulgarly applauded *Auspurg Dispensatory*) that the Name
of a Physician is now become the reproach of the Pople,
and the jeer of *Comedians*; and unless this fordid unskil-
fulness and miserable ignorance be laid aside, I am a-
fraid the day is at hand, that Physicians must turn
Country Plow-men. To which doughty principle and
design the supplanting of the Ancient Physick of *Hippo-
crates*, and the defaming of the memorable Doctrine
of our Predecessors (God so permitting) will not a
little contribute. But to return, at length they pour
Water on the Stone, leaving it there so long till it grow
bitter; which is done in a short space of time, especi-
ally if the Stone be new and fresh; for if it hath been
washed oftentimes before, then it must be steeped a
longer time in the Water. This Ablution they after-
wards prescribe to the Sick, whose taste is bitter and its
vertue heating.

Here *Zacutus* jestingly and smilingly says, *In intenso
Fevvers it is not good to be given, for it mightily heats, in-
flames, and provokes thirst, although it be mixed with cold
Cordials, and at last it provokes Sweat (after great trouble,
straits, and with much ado) and removes obstructions by rea-
son of its bitterness.* The meaning is, that *Lacet anguis*

Zacutus Idere.

in herba, for highly to heat, to inflame, and to pro-
voke thirst, are accidents proper in Malignant (so cal-
led) Feavours, which properties if they proceed from
the Ablution of the Stone, being drunk, as *Zacutus*
testifies, then certainly it is far from taking them away,
as our Mr. Deans and their Collegiates do promise.

But let us hear *Dioscorides*, who ascribes the same Ver-
tues to the Gaul of Animals, which our great Doctors
do to the Ablution of their Stone. *The Gaul*, says he,
is bitter, sharp and heating; and therefore the Ablution
of the Stone is bitter from the Gaul, because it hath the
same Vertues with the Gaul, if we believe *Dios-
corides*. But we will prescribe this Ablution to great
Men, in Maligne and Perillous Diseases, say our Mr.
Deans and their Fellows. Why I pray? because it costs
dear, ergo, &c. Oh sottish Society! The shame and
detriment of Great Men, That it is bitter from the Gaul,
the hasty ablution shews, as I said before; and there-
fore if this Stone be *Aperitive* simply for its bitterness,
it must of necessity be granted, That one drop taken
from the Gaul of the meanest Fish, is of more avail for
opening of Obstructions, than ten Ablutions of this Stone,
because the Gauls of all are sharp and heating, witness
Dioscorides: see also *Hippoc. Chymic. Chap. 14.*

But 'tis a mad thing to imagine, that this Stone is
bred thus in the Gaul, and that it contracted not its
bitter taste there-from. Sope is boiled and made out of
Alcay and *Oil*, and becomes a Body of a *Salt* taste and
white, because no forrain thing enters into it: To which,
if you add, in boiling, Juice of *Beet*, it acquires a *Green*
Colour; and if *Gaul* were likewise added to that Juice,
the Sope must needs be bitter.

So the Stones of the Kidneys are of a *Red* Colour, by
reason of the Blood which transudes or soaks thither by
little and little out of the Veins, by reason of the *Mor-
bous Acid*, and entering into the *Codrylum* tinges and
dies the Stones. The Stone of the Bladder is *White*,
by reason of the Slime found in the Bladder; and shall
not the Stone bred in the Gaul of an *Hedghog* or *Histrix*,
acquire a bitter taste from the Gaul? And shall it not also

draw from it, its heating faculties? Why I pray? doth it draw the Cause of the Disease or no? Let us see therefore how this happens.

Loadstone.

'Tis clear that the Loadstone draws Iron to it, only by Odor, as the distance, through which it draws it, proves; The Radical *Humid*, or Natural *Acid* of the Iron, being very frail, exhales of its own accord, as *Hippoc. Chymic.* shews Chap. 19. out of *Hippocrates*. For unless the Acid of Iron were of this sort, it could not be killed by the Stomach of Animals; and by consequence the filings of it, taken by the mouth would do no good. The Loadstone is the Mother of Iron, which perceives the smell of her Son. because she loves him; but not being sufficiently satisfied with the smell of It, for that cause it attracts and allures Iron to it; as I have shewed concerning *Alcalyes* and the Mother of things.

Rubigo Sterilis.

But *Rubigoe*, or *Crocus Martis*, though that be also the Son of the Magnete, yet it is neglected by it, because its *Soul* or *Acid* is departed from it; and therefore his Mother doth not perceive his smell and odor. Hence it is called by *Horatius*, *Sterilis Rubigo*. And by how much the younger and newer the Loadstone is, by so much the more strongly and vigorously it draws; but the Ablution of it doth not do so: Now as the Ablution of the Magnete doth not attract Iron, so neither doth the Ablution of the *Hisprixe's* Stone draw the Cause of the Disease? no not although it were the Mother of a certain Morbifick Cause, hitherto un-named.

Whatsoever attracts any thing from afar off; as the Magnete doth Iron, it attracts it for loves sake, and it always attracts its *like*; and as Vegetable *Alcaly* draws *Alcaly* of *Lime* for making Sope (for this is a true attraction and of a thing like it self) so we have seen that Gold is attracted (yea plainly is dissolved and dies, I say dies, because the Cadaver stunk) by the Mother *Alcaly*, and this is the *Magnete* of *Albertus Magnus* drawing Gold to it. (which words a certain foolish Doctor taking in a literal sense, turned into a jeer) for so saith *Bernardus* in the fourth part of his Book, *The Fountain is to it as the Mother; she draws the King and not the King her*.

Her: This was *Paracelsus's* meaning, when he said, that the Magnete (extinguished in Oil of Mars, that is, Gold dissolved in the strongest Metaline *Alcaly*, its like, then to acquire a ten times greater Vertue) is encreased ten times in his force. For unless there were a consent of things, and a mutual natural Love amongst them, Nature could not subsist; or if it should be interrupted awhile; the frame of Nature in a short space of time would be wholly ruined; for the Son onely would be left in a small quantity, neither would he encrease, or be multiplied; so that there is no discord or disagreement in Nature, as some have taught, but whatsoever is done is done in love; for Nature of her own Genius, doth chiefly covet and desire to be in the bottom of the Elementated Body, in which she operates, by strengthening its Natural heat and Prolifick Vertues, because it is pervious to all Bodies, as *Great Raymund* witnesses; which Doctrine and Attraction of Natural Love, I shall demonstrate by the following Experiment in a Metalline Example (since our present discourse is of Metals) that it may appear, *Nature to be alike in every thing*.

Take an Ounce of Silver dissolved by *Aqua Fortis*; coagulate this Solution into a Saline Powder, and cast this Powder upon Lead melted in the Fire, but not very hot nor quite cold, and in the eighth part of an hour, The *Acid Salt* of the *Aqua Fortis* deserts the *Silver* and corrodes the whole quantity of the *Lead*, as much as it had lost of the *Silver* (i. e.) an Ounce, because it performs the Office of Metaline *Alcaly* in Artificials; it draws and is saturated with the *Silver*, which by a probatory Cupple returns again to Light. Many Learned Men have admired this Experiment, for they have drawn out an Ounce of *Silver* from the *Lead*, and have found the Powder of the same form and weight, as they cast it on; whence they doubted in their opinion, whether it were the same Powder of *Silver*, which they cast on; from which they could gain much, if the way how the Powder might be refunded into the Body could be found out. But as the Loadstone draws Iron, so also *Saturn* (the *Alcaly* in Artificials) draws *Luna*; and when the thirly Salt of the *Aqua Fortis*, wanting Aqueous

Oil of Mars
what?

Aqueous Humidity, cannot be alone, it attracts so much Lead, as it had lost of Silver. These and the like Operations and Attractions; which I have explained by illustrious Examples, both in my *Hippoc. Chymic.* and in this Book, have been perhaps erst exploded, because the *Metempsychosis* of the *Pythagoreans* hath not been understood.

Metempsychosis.

On this foundation, the Stone also of the hairy Serpent, newly found out, is attractive; Kircher describes it, in his Book intitled, *The Magnetick Kingdom of Nature*, I have plenty of this Stone by me, and do apply it to the bitings of mad Dogs, to which it sticks strongly for about eighteen hours; and I applied it to another Girl, hurt by a mad Dog, for seven days and nights, and yet the Ablution of this Stone had not done the feat, whatsoever these upstart Doctors do babble. And as the Magnete of all the Things and Metals in the World draws nothing but Iron, and is delighted with its Spirit, (neglecting the *Rubigo*) and the Stone of the hairy Serpent, rejoices to attract the Odor of the Poison, infused by the venomous bitings, but it doth not attract Arsnick, Wolfs-bane, nor any other Poison; so also Jasper draws an Exotick Spirit, which makes an Impetus in Mans Blood. I have known sometimes Eyes troubled with a Suffusion of Blood, to have been cured the next morning, upon a Jasper Stone being bound to the neck at night. But as the Ablution of the Magnete doth not draw Iron, nor the Ablution of the Serpents-stone, Poison, nor That of Jasper, the Spirit making the assault, from the Blood; so neither doth the Ablution of the Hedghogs or Histrices-stone draw out any Malignity from Humane Bodies; so teaches Galen in his First Book of *Natural Facultes*, Chap. 14. *Whatsoever things, says he, do draw forth the Poison of Serpents, or Weapons; These do shew forth the same Vertue, that the Lead-stone hath;* but the Ablution of the Magnete shews no such Faculty, and why then should the Ablution of the Porcupine or Hedghogs-stone? so that these are meer Dreams and Old Wives Fables, imposed upon Great Men. It were better for such dreamers, and for the Art of Physick too, if they did philosophize with the

Jasper.

the Spade, as *Lucian* jeeringly speaks of one who was about to dig the ground.

I have said, That the Magnetick perceives Iron at a distance from it, and attracts it by its odor only, provided it be taken out of its Native Oil, for otherwise where it grows, it attracts nothing, because there, in its Native Place, there is no want of the Odor of Iron.

The Island *Elba* is fruitful of Lead-stones, yet it was never seen nor heard of, that it did incommode Ships passing by, nor injure the *Needle of the Compass*, because the Mother *Magnete* is there saturated with Spirit of Iron; so also the Stone of the hairy Serpent, being saturated with the Odor of the Poison which it drew from the biting of the Mad Dog, receives not beyond its measure, it neglects the rest, and spontaneously falls from the Wound; so that this Stone, according to *Galen's* sense, hath an Attractive Faculty with the *Magnete*, but no such Faculty is found in the *Hogs-stone*, and therefore, says *Galen*, it hath no Magnetick Vertue; so that it is clear, that whatsoever is devised against the dangerous Diseases of Great Men from the Ablution of this Stone, hath no existence, but in the Brains of the Inventors, but sinks down into a meer Nullity, and a dark *Chymera* of ignorance.

Serpent's-stone.

But when it is given in Powder, then without doubt, like other Stones, it would attract any Acid agreeable to its Nature; as Crabs Eyes draws forth that other Acid which putrefies the Wound: A Sponge-stone, the Acid which Coagulates the *Struma*: The Stones of Perches, the Acid of Urine in the Strangury; Bezoar-stones, the Lymphomick Acid, arising about the heart; The Stone *Ostio Colla*; That Acid which hinders the Conglutination of the Bone, &c. All these afore said do imbibe the Specifick Morbous Acid.

So also the Hedghog or Histrices Stones, taken by the Mouth, would imbibe its Specifick Acid, which was yet never described or taken notice of by any of these Approvers.

But what that Specifick Acid is, which I have spoken

of,

The Cause of
Diseases Acid.

of, and which is the Cause of Diseases, it cannot be explained in words, as my Doctor says, *De Veteri Medicina*; who after he had demonstrated that the Cause of Diseases was Acid, yea and most Acid; he goes on in these words, *There is none of them can be seen or known by our Bodily Eyes, and therefore they are called by Me Obscure; not that they alwayes remain so, and exceed our understandings, but because they are not found out, but with much labour and in a long time; for those things which are above and beyond the sight of our Bodily Eyes, The same may be reached and fetched in by the Mental Eyes (viz. of us Chymists.)*

Hitherto *Hippocrates*, his meaning is, that we must gradually ascend from known things to unknown, as my *Hippocrates Chymicus* shews; which doth proceed as it were by steps, from Artificials to the Fabrick of Humane Nature; for as I have shewed, that the Acid of Iron, though it be scarce perceived by the sense, and is found no where but in Iron, being of a singular kind, yet the Loadstone perceives It and attracts it even at a long distance; so also there are many, yea infinite Acids in Mans Body, some of which are made by the degeneration of the Morbous Cause, which are not perceived, nor attracted, by other then their own proper Magnetes; as the Morbous Acid in the Spleen is attracted by no other thing but the *Rubigo of Iron*; the Morbous Acid generating The *Struma*, is perceived and drawn forth by no other (that I know of) but a *Sponge-stone*. They may be called *Magnetes*, because they scent and attract the fore-said Spirits, as the Magnete doth Iron; and unless the aforesaid Acid Spirits were in readiness, and were smelt or scented by their *Magnetes*, they would not be attracted nor absorbed by Them: So *Gold* is inodorous to our senses, yet it is smelt even afar off, by its own *Magnete* or *Mother*, for she draws the King, says *Bernhard*, and not the King her. Upon which occasion of *Occult* Odors, a convenient opportunity is offered to me to speak of the *manifest* Odors of things, for, as I have shewed, that the former come from *Acid*; so I shall also experientally shew, that these latter also proceed from *Acid* or Ce-

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The Odor of
Things.

lestial Calid: Odors are quiet and at rest till they be roused up or stirred; and they are stirred, as soon as a proper and consentaneous Humid acts upon the Odorous thing; for then its Odor is presently spread far and near, more or less stinking or sweet, according to the Seminal Vertue of the innate *Calid*: which Paradox, before I proceed, I shall make plain, by clear Examples, taken out of the Shop of Nature.

Lime is inodorous of its self, but when it is dissolved in simple Water, for the building of Walls, the Acid acts upon the Alcaly, and on the contrary. This Action and Commotion diffuses and scatters a smell not agreeable to Mans Nature; and therefore before a Man can dwell safely in an House, newly built, a years time had need pass over, in which time the Action of the Humid upon the Acid will be at an end.

Barley also of it self is almost of no smell, but when its Meal is boiled and fermented for *Beer*; that is, when the constituting parts do begin to act one upon another, then they afford an inebriating smell; which though it be not noisome, yet it so disturbs the Spirits, that it prejudices the *Memory*. A *Grape* hath little smell, but the Juice expressed under the Action of Fermentation, yields a smell afar off; so doth *Bread* under the Action of Fermentation (*i.e.*) when the Humid acts upon the *Calid*, or the *Acid* on the *Alcaly*.

Acid Fountains themselves, yet bubbling forth in their Native Soil, do expire a most grateful Odor, because the Agent it self is a *Celestial Acid*, friendly to Mans Nature.

So *Vinegar*, when it corrodes any thing, as *Coral*, for Example, smells more strongly than when it was at rest.

Amber is pinguous and of a most sluggish smell, you can scarce tell that it gives forth any smell at all, because its *Calid* or *Acid* is the least part in respect of the *Radical Humid* or *Alcaly*; but when it is stirred up and excited by Solution, with a just proportion of Odors and convenient Fat, *v. g.* *Zibeth* (the purer and sincerer it is, *Amber* *Zibeth*)
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the more acute and ingrateful is its smell) then the torpid *Calid* of the *Amber*, being excited by the *Zibeth*, begins to act upon the Humid, and upon that Action there ariseth a most sweet smell: as for Example, Pound ten Grains of *Amber*, and three Grains of *Zibeth* in a Mortar, and the *Amber* presently melts; upon which, for encreasing the *Acid*, infill a drop or two of Juice of Lemmons, and by this means you will have an unguent of an admirable suavity, which rubbed upon the Skin yields an incredible Odor.

Musk:

So *Musk*, by how much the purer and simpler it is, it smells strong indeed, but 'tis a bad scent, or at least not a very good one; but when it is dissolved with some drops of *Ardent Spirit of Roses*, which I have proved to be *Acid*, 'tis to be admired what a fragrant smell it will afford. Three Graines of this Musk so dissolved, being added to the aforefaid Solution of *Amber* and *Zibeth*, you will hardly find a more odoriferous thing; but I have shewn, that the harsh smell of Lime, Beer, &c. is noxious to many Men, so also this sweet smell is an enemy to many both Men and Women: Those that are troubled with Uterine Distempers, or Diseases of the Lungs, cannot endure it; which Diseases, according to *Hippocrates* proceed from Acidity; for when the smell, though sweet, reaches from the Nose to the Womb, presently the Dormant Morbous Acid, which is in the Womb, is excited by meanes of the Ferment, for like hath an easie ingress into like, as Fire to Fire; as we see in a Candle newly blown out, whose pinguous Yume easily takes flame again, which is nothing but kindled fume; so also Diseases of the Womb are more easily excited and inflamed by Odors which are fermentable: which fermentation in the Womb, may again be allayed and overcome by those Odors which are stronger, and prevail over those which are excited; as the greater flame overcomes and extinguishes the less, and the less Light is put out by the greater; as I have before clearly demonstrated in Acid Minerals, which overcome Those of Vegetables, and These again do suppress Those of Animals:

De Veteri Medicina.

Uterine Diseases.

mals: So also Womb-diseases being excited by suaveolent Odors, begin to ferment and to boil up with great violence; and These again are suppressed and killed by *graveolent* things. In Physical Practice, it is observed, that the *Matrix*, of its own Nature, at the smell of sweet things, is turned upwards or downwards, if the same sweet Odor be applied below; if then it be elevated upwards, and its capacity be blown up, and distended by flatulent vapours excited in it, then the *Diaphragma* is straitned; which being compressed by much wind, hinders Respiration and Speech, so that the *Patient* is at Deaths door; for a *Cure* in this case all sweet-smelling things are carried out of the Chamber (lest their smell should arrive at the Nostrils of the Sick Woman) and they are applied to the *Vulva* of the *Matrix*, that by the sweetness of the Odor it may return down again; (which arises from hence, that the Womb is delighted with and greedily turns it self to sweet smelling things:) and Odors are applied to the *Nose*, which by their vehemency may over-power, or wholly kill the sweet Odor attracted (as I have a while ago shewed of Acid Liquors) as *Assa Foetida*, *Castoreum*, *Oppopanax*, *Sagapennum*, *Oleum Petrae*, *Oleum Tartari Distillatum*, and the like; or else such things as being drawn in and smelt to by the Nose, can mortifie the inward sweet Acid of the Ferment by its contrary; and these are Volatile Alcalies absorbing the suave-acid Odors of the Womb: As for Example, the smoak of things burned, taken from the Animal Family, for they being burned, do breath forth nothing but Volatile Alcalies, which is destructive to and a consumer of Acids. But Women (led rather by superstition than reason) chuse Partridge Feathers, and Goats Horns (perhaps, because taken from Salacious Creatures) Hairs, Leather of Old Shoes, or Urine of a stinking Chamber Pot, all expiring *Volatile Alcalies* (which I have shewed to be contrary to and destructive of Acid Fermentation) the least part of which Odors being attracted by the Nostrils, presently the Sick Woman revives, and begins to be better, because the Uterine

Volatile Alcalies.

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Ferment

Ferment is restrained by its contrary; for Fermentable Odor, as it is easily mixed and makes Ebullition with its like; so by its unlike, it ceases from the Ebullition. This is the meaning of that of *Hippocrates, De Diata*; when he says, out of *Pythagoras* his School, *He that believes not one Soul to be mixed with another, is besides himself.*

The smell of a Rose is acceptable to some, but pernicious to many; hence a Rose is said by *Pliny* to be of an Angust Odor, *Lib. 21. Chap. 41.* I knew an honest Citizen of this place, who, as often as he scented a Rose, though afar off, his Breast was not only griped and straitned, but he was troubled with a *Coryza* many days after.

Syrup of Roses solutive, inconsiderately taken by the Mouth, how often hath it caused *Deliquia's*, or Swoonings? especially in such Women whose Noses are quick-scented; yea; it hath caused their Bowels to tremble inwardly, as Practitioners have observed.

There are some who cannot digest the Herb *Selenium*, some that cannot concoct Spices, but resist their concoction by continual belchings: All which things my Wife *Master* observing, advises those who practice Physick; *Aph. 28. Sect. 5.* In this manner, *The smell of Aromatical things draws the Muliebria, and it would often be good for other things too, unless it occasioned the heaviness of the Head;* where we must observe out of *Columella*, *Lib. 12. chap. 20.* That he takes *Odors*, and *Aromata* for the same things. Hence *Lucretius* speaks of himself, *I perceive diverse Odors of Things, yet I could never see them coming to the Nostrils, Lib. 1. chap. 60.* Our Acute *Galen* comprehending all these things in his Book, *De Victus Ratione*, thus concludes, *Odours do both good and hurt;* which Sentence of *Galen*, I have a little before shewed to be exactly True in Uterine Diseases, as the Female Sexe can testify. For Fermentable Odour, which all Aromaticks do expire, and which is multiplied by Fermentation, hurts many; and on the contrary, Alcalizate Odour, and That which is excited from the burnt parts of Animals, because

because it is destructive of the Ferments, profits and does good to many; as we see by daily experience and use; so that every smell is to be distinguished and reduced to its proper *Classis*. This was *Hippocrates* his meaning de *Virginum Morbis*, *Tis not possible (says he) to know the Nature of Diseases (if they are knowable by Art) unless a Man knew Nature in indivisibility, from which in the beginning they were distinguished.*

All these things being considered, it appears, why Venerable Antiquity hath prescribed to us for a weak and languid Stomach, that compound Inodorous Medicine, called *Syrup of Wormwood*, that it might be of use to every individual? This, because it is made up of simples, as of *Pontick Wormwood*, which is of an Aromatick and Astringent Taste, of *Roses*, *Indian Spike*, most Odorous Plants, of *Old Wine*, of *Juice of Quinces* likewise binding, and *Sugar*, therefore they commanded them all to be boiled in an Earthen Vessel being open, That so the Volatile Spirit of the *Old Wine* might carry off the Aromatick Odors, both of the *Spike*, as also of the *Wormwood* and *Roses*; and so the Odors, as *Galen* says, can do no hurt to those, who otherwise are not able to bear them (words in my *Hippocrates Chymicus Chap. 30.* either not understood, or malignantly changed) and their Syrup may help a weak Stomack, not by the Odorous Spirit of *Wine*, but by a moderately Astringent Faculty. This is the reason why such a Syrup was found out, as the *Text* witnesses: From whence we learn the deep Judgment and diligent Observation of our *Predecessors* in compounding of Medicines, and why they appointed this Syrup to be *Inodorous*? See for this the *Tetras* of *Quercetan*, consult all Practitioners, and the Truth of the thing will appear; which, by how much the more it is oppressed, by those that hate it, so much the more gloriously it triumphs and treads down *falsity* under her feet. For it is not enough, out of meer ignorance to condemn the memorable Observations of the Ancients faithfully made, by long study and many watchful lucubrations, and so trans-

Syrup of
Wormwood.

mitted

mitted to us, and farther by unusual clamours without any known reason and cause to *Reform* them; defaming also all such who tread in their steps: but Men had need to demonstrate the contrary, if not by Authority and Experience, yet at least by reason; otherwise all their ridiculous and inept approbations, together with their absurd clamours, will not only be judged to be false and vain, by Wise and Understanding Persons; and therefore worthy to be sent packing from whence they came: but will also be reckoned by the Vulgar amongst futile and sordid *devices* and *fogeries* and the highest *levities*; for so indeed they are. 'Twas never read in the Writings either of the *Old* or *New* Interpreters of Nature, that They taught, That *Distilled Vinegar was Celebrated Spirit of Venus*, or *was as Alcahest*; That the Poison of Copper, extracted by Vinegar, was an Epileptick, or Hysterick Remedy; That Elementary Water was Volatile Salt of Tartar, and a *Panacea* for desperate Diseases; or That Corals, which both by Wise Men and by Ideots too, are reckoned amongst Gemmes; should be compared to Common *Corrosive Calx*, and pronounced unuseful; or That the Vinegar distilled from Meal was Acid Spirit of Sal Armoniack; or That Minium could condense the Air into a Ponderous Body; and many hundreds more of such falsities, destructive to Mankind, and worse than the dotages of frantick Persons; which besides the corruption of good manners, can hardly be read without tediousness: such things, I say, and others like them, were never taught by our Ancestors, and yet though they are found most false, by Experience, Reason, and Authority, and to be to the detriment of Physick and Mankind; nevertheless They are approved and cryed up by our fore-said Magnifick Doctors. Hence it is, that *Aristotle* in a passion commands *Sciolists*, to dip their Pens in their Minds, before they do it in Ink, least one inconvenience being granted, a thousand false conclusions do follow: As not only the Studiers of Ancient Physick do find to their great detriment, but Physick it self (and that which is more to be lamented, the Sick) suffers

suffers under such things, as manifestly appears in the *Syrup of Wormwood*, which the Ancients appointed to be made without any smell, that it might be given for an Astringent to every individual; as clearly appears by the Reasons and Experiences just now alleaged: but *These* men, against the institutions and precepts of Medicine, yea against the order of Nature her self, do mixe it with Aromatized Spirit of Wine and that most odoriferous, and do so prescribe it, being induced thereunto, by this false and vain opinion, *That Odors are good indifferently for all, both Men and Women*. But with what fruit or profit they so think, Let Practitioners speak, and let those judge who have but the Spirit of a Man in their Breasts, and who have ever seen the Female Sexe troubled with Uterine Distempers. I confess in a pedantick slavish Writer, this error were tolerable, and need only simple correction; but it is an abominable wickedness, and not to be endured in the *Deans* and their *Colleagues*, who sore at such *High* things, and boast that they can teach others Skill, themselves being in the meantime ignorant of the common and safe way of healing, prescribed by *Galen*, as I have shewed. For if, the Ancients (whom they insult over) could find out *Syrup of Wormwood*, and *Syrup of Quinces*, as we see in *Dioscorides*, what difficulty had it been for them to add odoriferous Spike and Roses, if Odors and Spirit of Wine had been useful in this Compound? It appears by this, that They knew well *a Dog from a black Sheep* (to speak proverbially) and could distinguish things, that smelt of Garlick, of the Hogsty, of the Sow and Goat mixed together: I have sometimes admired, why not only *Hippocrates* enjoyed that we should only speak of Those Things, which are known to Plebeians, but that *Arnold*, *Holland*, and many others have so industriously concealed the Ancient Foundations of this Art? Yea, heretofore It was confined only within the Family of *Aesculapius*; but my wonder ceases, when now adays I see the Truth judged, condemned, and cast out of doors, by Those who are bound to advance it, for their Neighbours

Neighbours good; and this not by choice of Doctrine or Science, but by a meer fit of foolish temerity, before they understand the cause of the matter, as I have evidenced in this whole Tract from the beginning to the end very copiously; not by opinion only, as South-sayers do; but by clear Reasons, Authority, and Experimental Operations. Wherefore let such Putative and Inspid Doctors be hissed out of the Theatre of Wisdom, and cast forth unto their sluggish Colleagues, together with their emendicated and inept Receipts, ill understood and falsely approved; That so the Ancient and True Hippocratical Physick, the Noblest of all Arts, may be redeemed from the contempt of the Vulgar, and by degrees may recover its Ancient estimation and lustre.

The Conclufion.

Take therefore in good part, O ye Curious Readers and Lovers of the Ancient Truth, this my *Clavis*, which I sincerely and faithfully offer to you, by the help whereof you may unlock and open the Ancient Cabinet of *Hippocratical Medicine*. Sluggish Doctors, who by their ulcerous, yet *reforming* Doctrine, do endeavour to pervert Nature's order, and to hinder the progress of *Hippocratical Physick*, to their Neighbours detriment, are conversant in thick darkness, far from the Light of Truth, who not being able to get out from thence by their own strength, do study how to lacerate and revile the fame of their Predecessors, yea the works of Nature it self, that they may obtain a Name and Praise amongst such as are like themselves. 'Tis wonderful to consider, how far this mad rage of evil speaking hath extended it self (by occasion whereof the unshaken Wisdom of the Ancients shines forth with greater lustre, and the fundamental Verity and Excellency of the most Noble Hippocratical Physick doth the more appear:) so as laying aside all modesty, Men dare petulantly to rise up against the minds of *Hippocrates* and *Galen*, yea against the Truth it self, against Experience and the Law of Nations, and openly, to their perpetual shame, to extol, subscribe, and

and approve, miserable fooleries and false receipts, to the damage of their Neighbours and their Posterity.

Wherefore let the unprejudiced Reader weigh with an equal balance and indifferent mind, This Ancient Doctrine of Truth, and Firm Foundation of our Forefathers, which are laid and established in my *Hippocrates Chymicus* and in this *Comment* upon it, according to their mind and opinion; and then I doubt not but he will pass an equal Sentence: for he will find all my Experiments deduced from the same Fountains from whence the Venerable Ancients and the more Novel Interpreters of Nature's Secrets have drawn *Theirs*, and therefore in no sort fallacious; yea he will find a necessary connexion of Causes amongst themselves, so as some depend on others, the last on the first, the inferior on the supream, the less on the greater, the weak on the stronger, according to the Wise Series of Nature; and that all things are increased, preserved, and destroyed by mutual commutation, digestion, and fermentation; and again how they rise up into new beings before our eyes, as faith *Hippocrates de Diata*. And as I have shewed Mechanically, that such things must infallibly be in the *Macrocosme*; so I have concluded by just reason according to the Opinion of the Ancients; and by evidence of Experiments, that they must be so in the *Microcosme*; so that Diseases are caused by this method, and by the same method they are cured, since Art imitates Nature, and Nature Art, according to *Hippocrates*; whose Ancient Doctrine, underpropped by the firm Principles of *Fire* and *Water*, I hope as long as I live, to defend by my self alone, against all unjust invasions and assaults; for in doing hereof, I shall not need in a meretricious way, the assistance of many flattering woers, as the destroyers of this Noble Medicine do.

But if any Man accuse the Inelegancy of my Style it shall not trouble me at all; I give leave to every ignorant Fellow to bark, prate, and raile; for I fear not the buzzing of such *Hornets*: indeed for their greatness and multitude they are terrible, but their *Stings* are out;

S f

and

Hermes in Schedula.

Cicero.

Horace.

and let them do what ever they will or can, yet they shall never get the victory. Let me tell thee this one thing, O Man, such as thou art, so think thy self to be; and as far as thou art remote from the turpitude of Things, stand at the same distance from the Licentiousness of Words; and moreover, speak not that falsely against another, which, when it is answered, may cause thee to blush. I know how to defend my self (to speak without boasting) as well as another, yea I know how to return opprobrious speeches to others, if I so pleased, and would indulge my self that liberty. But here, friendly Reader, I conclude, since my Book may not justly be extended to a greater length; but hereafter I shall speak to thee in a graver Tone.

F I N I S.

Show me better, if thou canst (before thou canst at mine) and I shall give thee thanks.



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T H E
I N D E X:

Containing the
PRINCIPAL EXPERIMENTS
and other Observable Things,

Which occur in the

C L A V I S

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p. 18. of the *Clavis*, being by mistake doubled
over, what occurs in the first of either of them is
marked with an Asterisk * annexed to the Fi-
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W*ater the first mat- ter of all things*, p. 9
Water of a Feminine Nature, p. 9
Water the root of many things, p. 9
Water called Alcaly, p. 9
Water, Catholick Wine, p. 11
Water nourisheth all things, p. 11
Water Elementary contains an occult Alcaly, p. 45
Water nourisheth all in the Body, p. 78
Water of Frogs Spawn rich in Alcaly, takes away in- flammations of the Gout, p. 102
Wood rotten, void of Lixi- vious Salt, p. 24

An Advertisement concerning the ERRATA.

In regard the Translator could not at all attend the Press during the whole time of the Im- pression, several mal-punctations and literal mistakes have happened; which are left to the Reader's candor and ingenuity to amend with his pen: But the Errata which do most affect the sense; are these which follow:

In HIPPOCRATES CHYMICUS.

Page 15 l. 7 read in for into; p. 14 l. 10 r. comma! for commend; p. 16 l. 7 r. it ran into Chrystals as Nitre, for, it was chamfered in its coolution as Nitre; p. 17 l. 20 r. In Alcaly of Tartar is made Nitre, for in Alcaly is made Nitre of Tartar; p. 20 l. 34 r. in a Test, for in an Earthen Pot; p. 21 l. 10 r. the Covers of the Test, for the Earthen Covers; p. 21 l. 5 r. alayed, for bound in; p. 22 l. 27 and 34 r. Neighbour Vessel, for Neighbours Vessel; p. 23 l. 22 r. to fall for to run; p. 27 l. 3, l. 7, l. 9, l. 13, r. pla'e for llax; p. 39 in margin l. e. 6. for l. 6. p. 40 l. 10 r. from Acid into a Lacteous Salt Chyle, for from an Acid Salt into a Lacteous Chyle; p. 41 l. 18 r. precede for proceed, p. 42 l. 22 r. apart for part; p. 43 l. 23 r. in all vacuities for all vacuities; p. 44 l. 14 r. bitter for better; p. 45 l. 32 r. with all its strength, and is grateful, for of great strength; and is grateful; p. 45 l. 15 r. there is acidity in the Stomach, for the acidity in the Stomach; p. 48 l. 2 r. Liquor for dissolving the Stone with Ludus, for a Liquor for the Stone Ludus; p. 52 l. 30 *adde more dark*; p. 56 l. 21 r. Spirit for powder; p. 67 l. 28. *dele e*; p. 70 l. 13 r. simples for simply; p. 73 l. 30 *as in for in*; p. 75 l. 18 r. *Homineus* for man; p. 78 l. 17 *dele of the*; p. 76 l. 34 r. constancy for consistency; p. 78 l. 32 r. things for salts; p. 79 l. 37 *dele their*; p. 84 l. 23 r. petochiales for pe'e'riales; p. 83 l. 2 r. one acidity alone, for acidity alone; p. 85 l. 34 r. *litium* for *libium*; p. 88 in margin r. *mumail* for *mumail*; p. 90 l. 5 r. Acid and Salt for Acid from Salt; p. 102 l. 14 r. *Campanam*; p. 108 l. 3 *dele the*; l. 5 r. into for in; p. 113 l. 18 r. Nitre for Gless; p. 118 l. 30 r. impertinently for impatiently.

In the CLAVIS.

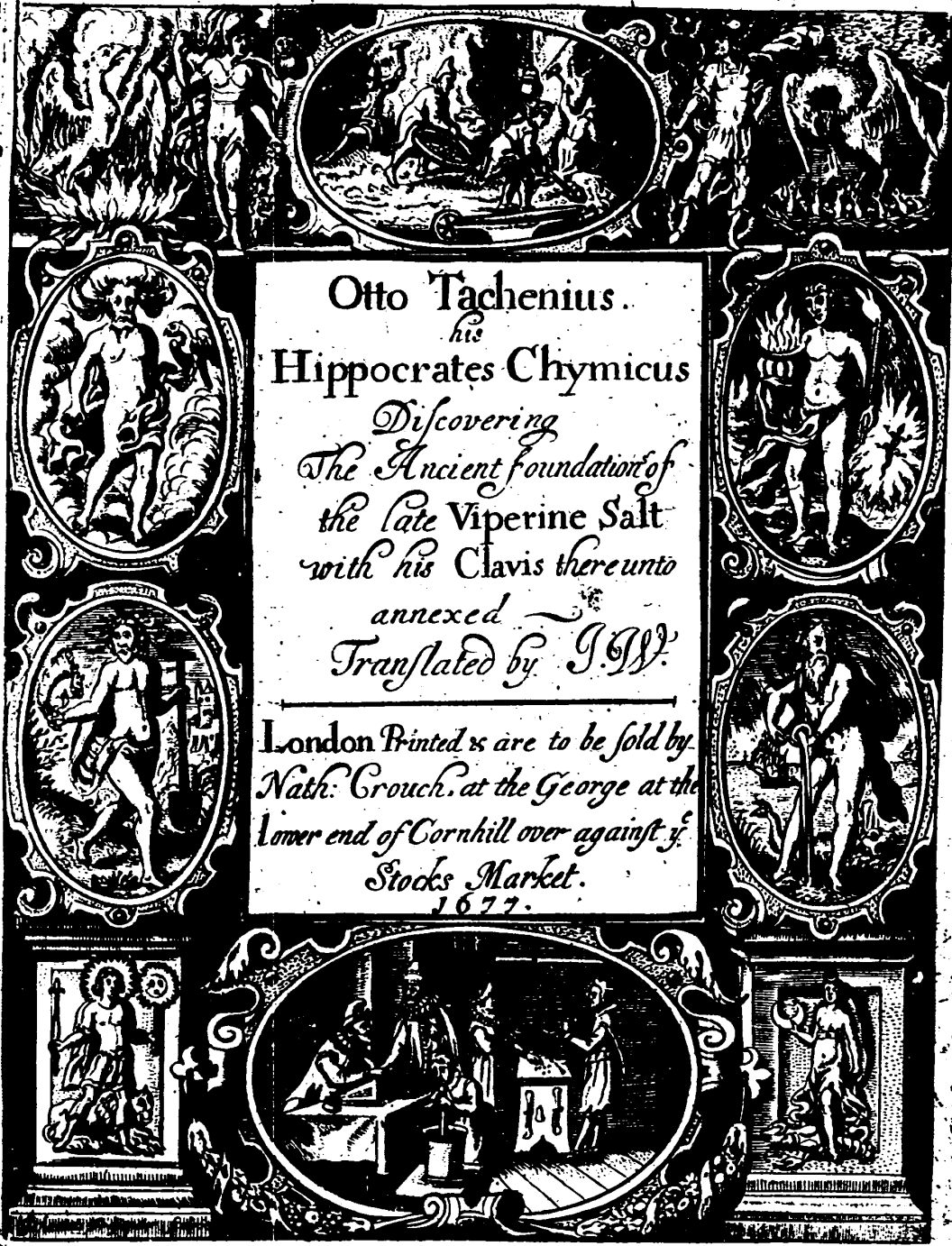
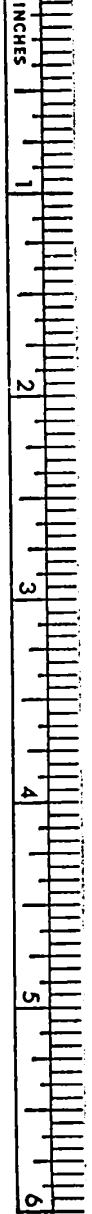
In the Epistle r. *savourer* for *seavourer*; p. 3 in margin r. *Sun for Son*; p. 11 l. 27 r. is coagula- ted for as coagulable; p. 13 l. 4 *dele comma, after Salt*; p. 18 l. 3 r. *Sun for Son*; l. 35 r. *Acids imbiber* for *Acid an imbiber*; p. 24 l. 31 r. *apluda* for *apluda*; p. 18 l. 2 r. *Salts for Stals*; p. 27 l. 25 r. *Acid for Alcaly*; p. 25 l. 7 r. *cuch* for *flame*, for *cuch* its flure; p. 31 l. 17 r. *can for can- not*; p. 33 l. 24 r. *covets the bottom* for *covets the fire*; p. 36 l. 33 r. *luco* for *plated*; p. 38 l. 9 r. *educd* for *reduced*; p. 40 l. 4 r. *had for hid*; p. 54 l. 5 r. *Mercury simply dissolved in Aqua fortis*, and precipitated, for *Mercury and simply dissolved in Aqua fortis* precipitated; p. 58 l. 9 r. to whom for from whom; p. 59 l. 25 r. which though it beinflameable, is yet Acid, for yea, though it be inflameable; p. 66 l. 15 r. *coals for corals*; p. 83 l. 22 r. *Plato* for *Plato*; p. 33 l. 14 r. *myte* for *myta*; p. 97 l. 1 r. *muscie* for *male*; p. 98 l. 39 r. *ferment*, *v. r. Acid*, for *viz* Ferment either, &c. p. 102 l. 6 *after* *arributes insert* (i.e.) various Acids; p. 107 l. 9 *after* *Son*, *insert*, of the Sun; p. 109 l. 3 r. *magnet* for *magnetuk*; l. 5 r. *soil* for *Oil*; p. 115 l. 7 r. *indivisibili* for *in- dividibility*.



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Otto Tachenius.
his
 Hippocrates Chymicus
Discovering
The Ancient foundation of
the late Viperine Salt
with his Clavis thereunto
annexed
Translated by J.W.

London Printed & are to be sold by
 Nath: Crouch, at the George at the
 Lower end of Cornhill over against y^e
 Stocks Market.
 1677.

THE
TRANSLATOR
TO THE
READER.

THe Author of these ensuing Discourses, who is, as tis hoped, yet Living at *Venice*, hath his Name in an high degree of Merit amongst the Prime Physicians and Chymists of this Age; His knowledge in the *Spagyricall Art* (in the judgement of those eminent and Sagacious persons, who have Studied the Controverſie betwixt Them) far exceeding *That* of *Zweller*, his Antagonist; who during this whole Treatise, goes under the name of the *Reformer*, for the reason mentioned p. 2. The Translation it Self was not performed without Labour and Sweat, partly because the Editions which were made use of, one from *Brunswick*, the other from *Leiden*, were very unperfect and incorrect; partly also, because, The Author being more intent on *Matter* than *Words*, on *Things* than *Expressions* (tis his own Apology, p. 4.) doth sometimes leave his Sense to be picked out by the Analogy of his Doctrine. If morose and supercilious Censurers shall object Impoliteness, Solecisme, Inept Cadencys and Cohasions of Words and Sentences; Obscurities, length of Parentheses's

The Translator to the Reader.

ses, and other flaws usually incident, or at least imputed to Translations: in bar to such Hypercriticks, I offer the particulars following, *viz.* That every Language hath its *Idiom*, which is not properly transferrable to another; That a *Translator* is no *Paraphrast*, but being limited to the *Sense*, and in great part confined to the *Words* of his Author, hath no allowable Liberty to make Excursions, or to add any explanatory Embellishments, to another Man's *Work*: It is his Province to write by the Copy before him (*i. e.*) to *Vestigate* and *Overtake* the Author's *Sense*, and faithfully to render it; which I hope is here, not unhappily performed; As for the *Obscurity* objected, The *Doctrine* it self must bear part of the *Guilt* (if any be) For *That* being *Novel*, or at least retrieved from *Antiquity*, may not perhaps be so clearly and *Apodictically* explained in a *Compendium* (which the Author intimates more than once) as to stop the Mouths of all *Gain-sayers*, though plainly enough (especially with the addition of the *Clavis*) to satisfy the *Reasons*, and convince the Judgements of *Candid* and *Ingenious* Readers. Lastly, Since 'tis an easie thing to be *Witty* in another Man's *Labour*, I shall conclude with the *Poet*,

Carpere vel noli nostra, vel ede Tua.

A. W.

THE

THE
PUBLISHER
READER.

THIS Book, as to the *Translation* of it, hath been sufficiently perused, justified, and approved by some of the most learned and experienced Chymists in and about this City: As to the *Matter* of it, it needs no other Commendation than the long since allowed and printed Observation and Approbation of the *Royal Society of England*, in these words;

Philosophical Transactions, Aug. 16. 1669.
Num. 50. page 1019.

OTTONI STACHENII Hippocrates Chymicus Venetiis in 12.

THIS Author, though Printed two or three years ago, came not to our Knowledge, till now: He in his *Treat* endeavours to justify the *Ancients* blamed by *Zwelfer* in his *Chymicopoeia Magastana*, for having committed several Faults in the preparation of a certain Salt

The Publisher to the Reader.

call'd *Theriack*, because extracted out of *Vipers*, and diverse other Ingredients composing *Theriack*; and having done this, he thence takes occasion to Treat of the Nature of *Salts*, especially of *Alcalies* and *Acids*, which he, with some of the *Chymists* hold to be the first Principles of all mixt Bodies: And being perswaded that *Hippocrates* was also of this opinion, and a great *Chymist* too, he Entitles His Book *Hippocrates Chymicus*.

Though the Salt *Alcaly* properly signifieth that Salt which is drawn out of the Ashes of an *Egyptian* Herb, named *Kaly*; yet *Chymists* take it in a larger Sense, and understand by that Word all the *Salts*, which, like that of the said Herb, draw and impregnate themselves with *Acid* ones. To this Salt our Author refers almost all the Operations of Nature, and having examined its properties, relates divers, not Uncurious Observations concerning it.

For Example, That nothing pierceth so much as *Alcalies*, and that therefore Nature hath stored the Sweat of Animals so plentifully with it, for that the Ordure which continually gathers on the Skin, would soon stop the pores of it, if the Sweat were not furnished with some effluvia Dissolvent to open and pierce Them; Whence he observes, that the best liquored Boots, and such as are Water-proof, will be quickly pierced by the Sweat of Horses; adding, that though Riding-poll, he had, to avoid that inconvenience, rubbed his Boots with a *Vermilion*, which resisted even to *Acid* ones, yet the Sweat of the Horses heretofore dissolved that force, and the fecundity of his Urine.

Next,

The Publisher to the Reader.

Next, He holds it to be an error to use *Spirit of Vitriol* for whitening the Teeth, Experience shewing that from the mixture of an *Alcaly* and the *Spirit of Vitriol*, there results a yellow; and that there is an *Alcaly*, continually transpiring out of the Gums, as out of all the other parts of the Body; whence it must follow that the *Spirit of Vitriol* employed to rub the Teeth, when mixt with that Salt, must tinge them of the same colour.

Then he affirms, that Wood rotten hath no *Alcaly* in it, and that it rots not, but upon the account of the exhaling of that Salt, Whence 'tis (saith he) That the *Venetians* to harden the Timber designed for building of Ships, sink it green in Water, and there leave it many years, which is the cause, That the *Alcaly* having been hindered from exhaling, the Timber rots not, but becomes as hard in a manner as *Stone*.

We cannot pretermit taking notice, That this Author finds occasion in this Book to explain the way, by which the Famous *Turnbeiser*, a *Germane* Chymist made that celebrated *Nail*, half Gold and half Iron; which is shewed at *Florence* in the Repository of the Great Duke of *Tuscany*. 'Tis said, that That *Chymist*, having in the presence of that *Prince*, immersed in a certain Oyl, the one half of a *Nail* which appeared to be all Iron, that part which touched the Oyl, was instantly found to be good Gold: Several persons having examined this *Nail*, and seeing the Gold and Iron, exceeding well conjoynd, were perswaded that it could not well be effected, but by a true change of one of those two Metals into the other; believing it impossible they could be So-

(a)

dered

The Publisher to the Reader.

dered together. But the *Author* of this Book maketh that a very easie thing, if the Iron be before prepared after a certain manner, which He teacheth; and He pretends, That That was the whole Secret of *Turnbeiser*, the rest being nothing but Illusion; for after he had by that means Sodered together a piece of Gold with half a Nail, He knew so well to give the colour of *Iron* to *Gold*, that Men believed that the whole Nail was of Iron; and having afterwards put this Nail into the Fire, and held it in the Oyl, to take off that colour, he made appear that *Gold*, which was hid before.

To



To the Most Serene and Mighty
P R I N C E S,

The LORDS { *George William,*
John Frederick, } Brethren.
Ernest Augustus, }

By the Grace of GOD,
DUKES of *Brunswick and Lunenburg,* &c.
His Most Bonntiful LORDS.

Pondring often in my Mind (*High and Mighty Princes, and my Noble Patrons*) the Great and many Favours which Your Grand and Princelike Liberality hath most Graciously heaped upon me, and thereby Eternally obliged me to Your Excellencies; I became solicitous and concerned in my thoughts, with what Veneration and Industry of Wit (answerable to the Obscquiousness of my Devoted mind) I might declare by some Testimony, at least, an endeavour of Gratitude for Your Benefits bestowed upon me. 'Tis the guise of Others in Dedicating their Lucubrations to Princes and Nobles, chiefly to concern themselves in Blazoning their Genealogies, and in Decyphering their Praises and Heroick Acts, in an high Method of Elegancy, thereby extolling them (as we say) with an open mouth to the Skies. But I (well knowing that the full-blown Elogies of Talkative Fame, do displease Your Excellencies, especially since glorious and memorable Vertue it self, for so many Ages backward (together with Magnanimous Bounty) have flourished in the most August House of Brunswick and Lunenburg, and by God's Blessing

(a) 2

The Author's Epistle Dedicatory.

Blessing will ever flourish in the same) I, I say, waving therefore all such Proceedings do come only furnished with a gift not large, nor great (though you are worthy of both) nor glittering with Gold, Silver, or Precious Stones, Ornaments which (Divine Bounty hath abundantly replenished Your Highnesses withall, but) are denied to me, and persons of my condition: Mine is only a Paper gift, but extracted from the true Protochymick Art, which is most Ancient, and hath more in the Recept than it promises in the Front: Yea it is That, by which the uncreated Spirit, the Founder of the World did order and distinguish the (otherwise) confused Natures of things. Hereupon I perswaded my Self, that I could offer no gift more grateful to Your Highnesses, than a new work of this most Perust, yet Wonderful and Necessary Science. A Work most curious in it self, which hitherto Envy hath forborne to restore, and to gratify the World with: For although the unconquerable Truth comes commended only by its own strength, and is sufficiently fortified by its proper and native Vigor (for nothing can subsist, which is not firm'd in the very Foundation of Nature) and so enjoys this invincible Patronage; yet the plain Purity of my Writings being Dedicated to Your Eminencies, and thereby armed with so great Splendor, thus doubly strengthened, will appear more boldly in the Eye of the World. Accept therefore (most Noble Princes) this Diminutive Gift for the bare Title's sake, and go on, if not entirely to love, yet somewhat to respect and favour,

VENICE the Ides
of May, 1666.

Your Highnesses, most
Devoted Servant,

OTHO TACHENIUS.

THE

The PREFACE to the Courteous READER,
And Lover of the Ancient Doctrine of
HIPPOCRATES.

Hippocrates, That bright-shining Light of Physick, did wrap up His Divine Oracles in Ænigma's, and with an Obscure Brevity, related his Precepts in all the parts of his Works; So that his Instructions and Aphorismes, by reason of their Obscurity, are wrested by Writers into diverse Senses; some of which Galen, with wonderful Skill and comely Order, hath digested into Chapters; but othersome, especially the Golden Book De Diet, which is full of Mysteries, he hath left untouched. For the Divine Old-MAN bequeathed Those only to the followers of Chymistry; which Art was heretofore, and perhaps in Hippocrates his time, called Natural Philosophy. For who can understand the rare sayings of that Old-Man, or comprehend the Soft Fire mentioned by him, unless he be well versed in this Occult Natural Philosophy of Hippocrates. Raimund Lully gives his Attestation hereto; for, says he, Though a Logician may have as profound Wit, acquired, or natural, able to argue concerning outward things, yet he can never understand by any Reason grounded on Sense, how the Seed in the Earth doth germinate, increase, and brings forth Fruit, unless, being assisted by experimental Learning, He first have made some progress in Our Natural Philosophy, rather than in That Sophistical Wordy one, which Logicians do attain to, by sundry Phantastical suppositions and presumptions; who thereby, with the Prognostications of their sequels against the force of Nature, do cause many Men pertinaciously to err; through an intoxicated Mind. But by our Mechanical Science, the Understanding is rectified in point of insight, and of true Mental Knowledge, by the force of Experience: Yea, Our Experiments are superior to all phantastical Probations of Conclusions, and therefore admit not of Them, but do shew the way how all other Sciences may enter vigorously into the Understanding. Whence we further learn by Nature, that

The Writing of the Ancients were like the Oracles of Apollo, Ænigmatical,

T. Jam. chap. 26

In-

The Author's Preface to the Reader.

Inward thing, That it is, and What it is; because by such Science the Understanding is freed from those superfluities and errors, which do ordinarily carry it off from the Truth, by reason of those presumptions and prejudices which are believed in the Conclusions. Hence it is, that Our *Chymists* have directed themselves through the path of every Science, to enter into all Experience by Art, according to the course of Nature in her Univocal Principles. For 'tis only Chymistry, which is the Glass of the true Understanding, shewing it how to feel and see Truths in a clear light, and therefore *Tabula Smaragdina* saith, By this kind of demonstration all Obscurity is banished and expelled from Man, &c.

Lib. 1 de Dieta

Hippocrates points at the foundations of this most Ancient Art, in the beginning of his aforesaid Book.

All other living Creatures, says he, as well as Man, are constituted of Two principles, different in faculty, but concurring, and jointly fit for Use, Fire and Water: Both of These together, are sufficient both for all other things, and also for themselves mutually; but either of them severally and a-part, is sufficient neither for it self, or any other, &c.

It is my purpose in this short Tract, to expose to View those two, hitherto Obscure Principles, to wit. This soft Fire and Coagulable Water, only out of a desire to propagate Truth; which in this Age is wofully kept under by the Haters of Hippocratical Learning; not that I think it possible for any Men wholly to extinguish it, In regard it is Powerful, Impregnable, and Triumphant above all things in the whole World, as Holy Writ also testifies; For Zorobabel says, Wine is strong, The King is stronger, Women strongest, but above all things, Truth beareth away the Victory; all the Earth calleth upon Truth; The Heaven praiseth it, it is always strong, it conquereth and liveth for evermore, &c.

3 Esdr. c. 3 & 4.

Obj.

I know many men according to the variety of their Dispositions; will diversly censure me, for publishing That which Nature hath decreed to manifest only to Philosophers; and Those too, rugging hard after it, by Labour and Study.

Theor. c. 1.

For, says Raimund, Nature, my Lady and Mistress ap-

The Author's Preface to the Reader.

appeared to me, and with Tears in her Eyes, bespake me thus; Alas! what shall I now do? endeavours are on foot to take away my Weapons and Instruments from me, and to plunder and discover my Secrets, &c. Whereupon I obliged my self to hide her Instruments and to preserve them from the hands of their enemies. These Instruments of Nature the profound Lullye, being so instructed by Hippocrates, keeps in the dark and points at them only in two Words, calling them *Entia Realia*.

So also Basilus Valentinus hides Them under the barbarous terms of *Asa*, and *Phalaia*: Yea, the same Mechanical Instruments of Nature, which Hippocrates calls *Firs* and *Water*, He elsewhere styles, *Gladiatores*: And as Hippocrates did display them only to a few Disciples, after the manner of the Pythagoreans, under the operation of various Arts; so Basilus, following his Master, chuses to represent them under the notion of Brewing of Beer, and other Rural Labours.

A Clari. 1. 2.

But Paracelsus despising vulgar Allusions, though condemned of Heresy by the Church, yet agrees with Hippocrates in this most Ancient Learning, and holds forth the aforesaid Instruments of Nature under the names of diverse * Spirits.

See Cur:
Triumph.
Actum.
* One spirit
draws, another
throws out, both
doth same things.
&c. Hip. l. 1.
De D. x.

The rest of the Ancient Philosophers veiled the said Architectonick Instruments under the fained compellation of *Re-bis* (as if intimating two things) Hence the Rhythme,

Est *Re-bis* in dictis rectissima norma figuris,

From *Re-bis*, as two things,

The right Rule springs.

Others have notified and represented Them under other disguises, &c.

In answer, That I was not without the deep consideration of these and many other things in my mind, yet (for a reason to be mentioned anon) I could by no means be diverted from my purpose; especially being perswaded, that therein I benefit the Common-Wealth, to which all of us owe the greatest part of our Fortunes. For in displaying these Instruments of Nature, I do likewise exhibit a sure and certain Method, hitherto observed by few, exclusive of all Ambages and Fallacies; so that for the future, This most Ancient, Noble, and Necessary Art of Chymistry may for ever be vindicated from the Calumnies and Barkings of Illiterate and Fligitious Persons, who are its rude and ignorant Haters.

Ans.

The Author's Preface to the Reader.

I would impair
no good Man's
Credit hereby.

For what doth more frequently proceed from such Giant-like mouths (not only against the afore-mentioned lights of the World, but also against Those, who out of their zeal for Piety and Freedom, have endeavoured by their assiduous labour and meditation to conquer those Difficulties and dispel those Obscurities, which the Ancients (worthy to be had in perpetual remembrance) have propounded) than the names of Apostates, Mountebanks, Empiricks, or Experimentalists (though this last Epithite they sparingly give; as not willing to mention any thing of experience) Yea, they likewise threaten and crack amongst unlearned ones (a just Wonderment that so great Arrogance can be spent on so small a Subject) that they will shortly manifest to the World by their Pens, the Vanities of Chymistry, though they never yet knew what this Ancient Dame was, nor had ever the honour to salute her, so much as at the Threshold. O how sorely do they mistake our Friend Galen, whose Followers, yet they profess themselves to be. For he teaches, That in every thing a Man must first be his Crafts-master, before he begins his Work. Assuredly there is a great difference between the Skill of making Experiments, and an habit of uttering vain and empty words. Of such Heraclitus said of old. It is not best to hide their ignorance; but 'tis fit (as Plutarch speaks) to discover it, and to endeavour to heal it.

Such Learned Men, who have not had their minds darkned by vain and prejudicate Opinions, have had far other thoughts of Chymistry: For Mathiolus writes to Andrew de Blau, That no man can be an ordinary, much less a compleat Physician, who is not well exercised and versed in Chymistry. But what need is there to all-age the Testimonies of Learned Men in the case? Nature it self fights for Her, which, without this Art, cannot produce so much as one grain of Seed; as shall be demonstrated: Hippocrates was very well skilled in this Ancient Doctrine, as will easily appear; Yea, He commends it to all the true lovers of Physick: Nay, without this Art the enemies and opposers of It would live like Bruit-beasts, not having an House to defend themselves against the injuries of the Weather; for they would want Lime and Brick for building: neither would there be Glafs for Windows, nor Looking-glasses, or Spectacles, necessary helps
for

*In lib. Hip.
de Aliment.
Comment. 3.
Text. Pharmacia.

Lib. 4. Epid.

The Author's Preface to the Reader.

for Old-Mens eyes. Yea from whence could the least gain be expected? unless the melting of Minerals, and the separating of Metals had been found out by Chymistry? Were it not for This Art, Printing would fail, Nature of her self would never bring forth Linnen, nor Paper, nor Ink to Write, or Print with; neither should we have any Colours, of which this necessary and noble Art hath produced an infinite number; for Cinnabar, Ultramarine, Blew, Minium, Cerusse, Purple, * Aurum Musicum, and the temperature of other Colours, are the products of It: Yea, who can enumerate all the Benefits arising from this Art, for the use of Mankind? The whole Northern Region, as well as my own Country, owe much to this Art; for hereby is made a Drink out of Barley, which is called Ale, or Beer. Now Barley, as Galen teacheth, if it be a little boiled, causeth Windiness; if boiled to an higher degree, it occasions Obstructions. But our Ancestors being instructed by Hippocrates, through the help of this Art have excited the instruments of Nature in Barley it self, and have changed it into a new Seed, no longer called Barley but Mault. They boil this Mault after it is grinded, and again excite the inward Organs to Alteration, which action is called Fermentation, a Fervendo. After this manner, as Hippocrates instructs us, is this most wholesome Drink made of It.

But what do I speak of Beer? The Juice of Grapes, of it self, wine, would never be made Wine, unless Art did concur to stir up the Organs in it to Operation. The like may be said of Bread, Bread, which in the absence of this Art could never be compleated, unless the instruments of Nature in the Meal, by a proportionate degree of Fire and Water be excited from without? For when These begin to act upon one another, for want of new matter, the Lump or Dough first sours, then by degrees it putrefies, and at last breeds Worms: But Art retards, or hinders the Operation of those Instruments by vehement Heat or Cold; and so the Work is perfected, and Bread made, which is so necessary for the Sustentation of Man's life.

Neither do Aliments alone stand in need of this Art, but also the most Wholesome and Effectual Medicines cannot be made without it, as amongst others, We may see in Treacle; for unless the infinite Instruments of Nature in the Simples, which make up that Compositum, be united by Fermentation, and so suffered to rest, it would be altogether useless.

(b)

For

* An Artificial
Gold used much
in Italy by
Painters.

The Author's Preface to the Reader.

* Lib. De Viribus Cordis. Tract. 2. c. 4.

For *Avicensays, That, That Medicine is of double Vertue which hath suffered Fermentation. For which cause the Inven-
tor thereof, being well skilled in Chymical Operations, adds Wine, that the Work may be more readily done. For all Natural things are transformed by Fermentation, as is plainly seen in the Juice of Grapes, in Brewing of Beer, and in Making of Bread.

Obj.

But it is alleaged; though Reason and Truth it self do evidence these things to be so; yet notwithstanding the Novelty which you introduce into Philosophy and Physick, and the Mineral and Metalline Remedies prescribed by you, which are very contrary to Man's nature, and were unknown to Antiquity: These are the things which we implead and oppose.

Ans.

I answer. It is an impossible thing to introduce Novelty into the World; but to perfect, alter, thoroughly to mix and compound things introduced already by the Creator, is very possible. This Hippocrates teacheth, and it is allowed to Art. So Flax or Hemp, by various alterations is made Paper: Grass by the like Alterations is changed into a Glove, and also into Glew. The Juice of Flowers by a various Alteration is made Honey; and Honey in like sort is changed into Hydromel, (i. e.) Mead or Methegline (a most pleasant Drink in Lituania, nothing inferior to Spanish Wine) and at length it turns to Vinegar, which is afterwards easily reduced to Elementary Water. Bread-corn by Alteration is made Hot-water. Sundry Simples gathered together and mixt in one, by Fermentation become Treacle. So, since Hippocrates his time, Cassia, Sena, Mechocacan, Cremor Tartar, and infinite other things are found out, which he made no mention of; which yet are not new, but only retrieved and brought forth into use again by long Study and Experience. So that we may boldly say with the Wise Man, There is no new thing under the Sun. Whatsoever therefore the Followers of Hippocrates have handed out, and as it were Mid-wised into the World, the same was from the beginning, though our eyes were not so clear-sighted, as to discover it. But Stephen Pasquier answers this Objection very Elegantly,

Dicitur esse novus, nobis Paracelsus, ob idq;

Crimen, in obscurum pellitur exilium.

At novus Hippocrates, novus est Chrysippus, & ipsi

Rome Asclepiades, tempore quisq; suo.

Qui nova damnatis, veteres damnetis oportet,

Aut ista nihil est in novitate novi.

Englified

There is nothing made which was not before, but things thoroughly mixed and severed, are altered.

L. 1. De Diet.

Eccl. c. 1. v. 10.

The Author's Preface to the Reader.

Englified thus,

Some Paracelse of Novelty implead,
For which Judg'd Crime he erst was banished.
So Hippocrates, Chrysippus, and at Rome
Asclepiades too were New, They'd all one Doom.
They who condemn new things, condemn the old,
Or else do both mis-judge, and are o'r bold.

As for Mineral and Metalline Remedies, neither these were not newly introduced into Physick, but were in use among the Ancients. For Treacle that most ancient Compound, is altogether Ineffectual without Chalcitis; Alkermes takes into its composition Lapis Lazuli, and Gold, the perfectest and noblest of Metals. The same Mesue made Pills of the same stone of good use, in Melancholy and Madness; which latter Practitioners guild over with Gold or Silver.

Gold.

At Vilna, the Metropolis of Lituania; I knew a Silver-Smith, a lusty Fellow, a Batchellor, unlearned, yet of so happy a memory, that in his own Mother Tongue, he could repeat almost word for word whatsoever he had once heard. This man from his youth to that very time, which was the 47th. year of his age, had accustomed himself daily to eat a little of the filings of Silver, as he was at work, and he firmly believed that the use thereof encreased his memory.

Silver.

Emeraulds, Rubies, Jacinths, do they not enter into various compositions, which we call Cordial ones?

Gems.

Sulphur is daily prescribed in the Diseases of the Lungs, and is praised by Dioscorides a very Ancient Writer.

Sulphur.

Iron is commend'd by the Ancients in the Diseases of the Spleen, and we use it at this day with good success; Mineral Waters were in great veneration among the Ancients, and we also have recourse to them every year in desperate cases.

Iron.

But what will they say of Salt, without which Man's Life cannot be sustained; and which we use every day in seasoning our Meat? Is that a new Invention? or had the Ancients no knowledge of it? yet it is excotted not only from the Sea, and from Fountains, but there are besides Mountains and Mines of native solid Salt, like Marble; out of which it is hewn, and grows again, like Stones in Quarries.

Salt.

I my self have seen such in Valachia, and near Cracovia,

(b) 2

a

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a greater Revenue arising thence to the King, than from any other thing; which yet cannot be called a Vegetable, nor an Animal; it must therefore needs be a Mineral.

So for external Remedies, The Ancients never composed their Oyntments, Plaisters, Collyries, and such like, without Minerals and Metals.

Lead.

Of Lead, mix'd by Chymical Art, with Vinegar they made Cerusse for the Unguent and Plaister, which is called White; of Lead is made Litarge, of which is made the Emplastrum Tripharmacum: All these were found out by the Ancients.

Copper.

Of Copper and Vinegar by the same Art is made Verdigrease, which enters into the composition of the Egyptian Oyntment, so called from its Swarthy Colour, the invention also of the Ancients.

But why do I spend time in mentioning these things, there is not an Old-Woman in Italy, but will inveigh against the opposers of this Art? for without It, it is impossible for them to find out any thing to Colour and Dye their Hair.

In a word, whatsoever Famous and Excellent thing is performed by Art, it proceeds from the foundation of This Ancient Philosophy; though men know this well enough, yet they are ashamed to speak it out. The Old-Man, Hippocrates, admiring at this stupidity and turning to his Followers, says (Smilingly and with a low voice) The Divine Mind hath instructed men to imitate her Works; they know what they do, but are ignorant of what they imitate. They are Hippocrates his words. So that, Hippocratical Chymists do not endeavour to produce new things, but to recal from Oblivion, Things approved by the Ancients.

L. I. De Diet.

It is further objected, That the strong Remedies of Quick-silver, and Antimony do evince the ignorance of Chymists; The use of them being abominable, and taken at Mouth, they often endanger Life.

As if Lapis Armen, Lazuli, and Unguents of Quick-silver, were pleasant.

* De Lige.

As for the ignorance objected, I wonder not at it, for it is an Epidemical Disease in all Professions, and especially in Physick, which of necessity takes its original from this Ancient Art. This made Hippocrates to say, That Physick was indeed the noblest of all Arts, but it was depreiated by reason

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reason of the ignorance of those who practised it. 'Tis ignorance therefore which occasions all the Mischiefs in Physick; neither doth it raise greater envy any where, than amongst those who follow not the Chymical way of Practice, whose envy sometimes appears in their looks: So that now a-days a Physician is ordinarily despised, and exposed to the Scoffs and Taunts of Facetious Wits: Oh, where is the Majesty wherewith Physicians did once shine amongst themselves? What's become of the esteem and brotherly respect one towards another, which * Hippocrates so much commends? In our age one Physician undervalues another, carping at what he says or does; yea; he quarrels at, and opposes (behind his back) That which he understands not; extolling himself amongst the ignorant Vulgar, for the sordid hope of a little Gain. If such persons by the help of our Furnaces, had learned that the Principles of Chymistry (i. e.) The Instruments of Nature, according to Hippocrates, were the Foundations of Medicine, Physick had never been divided into so many Sects, as it is at this day. For now there is a Sect risen which divides Physick into two parts, Chymical and Galenical, against the mind of Old Hippocrates, who never mentioned but One, neither did Galen take notice of any such division. The opinions of Hippocrates and Galen seem too prolix to these men; for they are contented with a few Rules, and though ignorant of the instruments of Medicine, yet do pride themselves in being accounted and called the only Canonical Physicians by Old-Wives and Pl.icians. Galen, who was addicted to no Sect, yet most accomplished for Learning and Prudence, calls such men Servi, for He was willing to consult with all sorts of persons; Fisher-men, and men of the lowest rank, with rude and unskilful Pl.icians (why then doth Sennerthus in his Book De Consensu, chap. 4. impute This as a fault to Paracelsus) not only that he might scape the censure of Hippocrates (who also was not ashamed to ask questions of plain Country-men in the beginning of his Book of Precepts) viz. Ignorance, but also that he might be able to discern Truth from Falshood: For that quick-sighted person knew very well that nothing could happen more Calamitous to the Sick, than to lay credulity, presumptions, opinion, and uncertainties, at so many Syrres and Quick-sands for the foundations of Physick. And though

* De Decenti Ornatu.

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in Galen's time Natural Philosophy, which now we call Chymistry, was confined within a few mens breasts under an Oath of Secresse, yet for the sake thereof He travelled over all Egypt, where that Art most flourished at that time; which shews the wonderful Curiosity and Diligence of the Man: for returning into his one Country, he distributed divers rare Medicines, which he there learned, among several Physicians, his Friends; That so they might be approved by their Experience. Thus he wrote of the wonderful efficacy of Fire and of Treacle to Pifo, a Picc^omst worthy to be read: And he highly extols Æschiros, the Empirick, his Master, from whom he learned how to burn Crabbs.

Wherefore Galen's Praise remains entire, and He will always be accounted a most sagacious Person; To whom, as well as to Hippocrates, a Reverence is due, as to the beginners and producers of many, if not all Good Things.

So that Natural Philosophy (now styled Chymistry) according to Hippocrates, is a most Ancient Science, being derived from the Greek words 'Als, signifying Salt, and Cheo, to Melt: Hence came the word Alchymy, as much as to say, The Art of melting Salts. And 'tis rightly called so. For Nature herself can produce no fruit at all, unless the Internal Salts of the Seeds be dissolved in the Earth (as I shall Ocularly demonstrate:) And these once dissolved, do again act upon one another, and so arise into a Plant for its peculiar uses, and then they cease from their labour; for as Hippocrates affirms, One Spirit draws too, another thrusts from, both doing the same thing, and it inclines to either part (the Encreasing and Vegetating) and so they imitate the nature of Man.

The Chymical Philosopher, instructed by Hippocrates, takes these Seeds thus brought by nature to Maturity, and in them considers those Two (Salts) the Organs of Nature; viz. Fire and Water; and by Art, he urges them to action, by melting the Salts according to Natures Law, as Alchymy teaches, and then a new thing is produced, which was not before; for Example Bread, In This the Hyppocratist or Chymist again takes into consideration, the Instruments of Nature; which he further assists by his helping-hand, melting the Salts; and imitating Nature, he again brings forth a new Production, which

we

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we call Vinegar: Now the Chymist observing that in this Vinegar the Fire doth exceed the Water (our Master teaching, That no Sapor should overcome by its proper faculty:) He therefore consumes the Acid part by its contrary, and a n divides the Fire from the Water, and so a new Production called Hot-water is generated; which afterwards by the occult help of Art, is fixed into an Alcaly; and so the Curious Hippocratist goes on mixing and altering, till he obtains his intent: And at last he destroys both the Instruments or Faculties by repeated meltings of the Salts. And thou hereby he may seem to ignorant Persons to have produced some New things, yet there is no such matter, for the things are most Ancient, only he melts and re-melts the Salts as often as the Laws of Nature will permit; which is not beyond the fourth Repetition, as * Learned Men with reason say. But of this enough at present. Hippocrates shews that this repeated Fusion-melting, and Exaltation of Salts, honoured by the Ancients with the Title of Alchymy, hath place, not only in the Vegetable, but also in the Mineral Kingdome; for, says he, Gold workers do beat Gold, wash it, and melt it with a soft Fire, for it will not be made up with a strong. By which saying he discovers the ignorance and unskilfulness of Those, who write that Chymistry is exercised about the ignoble fusion of Metals and Minerals, as if these would be melted with a soft Fire; but the contrary is well known to such who have overseen either of them to be melted; for Gold requires not a gentle, but a very strong Fire; Wherefore the Philosopher doth not here understand this rude way of Operation, though he takes his beginning from it; which he presently clears by a plain familiar example: Man, says he, doth thresh, wash, and grinde Bread-corn, and baking it, he uses not a strong Fire to make it up in a body, but a soft and gentle one.

Wherefore the Fire of the Chymical Philosopher in the extraction of Animals, Minerals, or Vegetables (called Small Elixirs by the Modernes) must be moderate. Hippocrates teaches, All things to be like which were unlike. But as soon as Fire exceeds the degree of being moderate, 'tis no longer the Philosophers fire, but the Artists; for then things are not advanced by the intervention thereof, but are altered thereby, as our Master teacheth in the fore-cited Book.

Who-

De Simp. Med.
f. 18.

*Dee, Holland,
&c.

L. 1. De Diar.

Galen had no
knowledge of
Metals, or of
Quick-silver.

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Whosoever therefore do apply themselves to the Fusion or Li-
quation of Salts, either with a gentle or a vehement heat,
They all have their dependance on this Ancient Chymical
Philosophy; So that such persons are in a gross and ignorant
Mistake in the judgement of Hippocrates, who exclude Ap-
othecaries from this Art. For when Pharmacopœans do
pound Vegetables, and wring out their Juice, then it is that
they make a fusion of Salts, expelling and thrusting out the
Exotick and Forrain, not being of one and the same scmpcr
(they are Hippocrates his words) but when they condense the
melted Salts with Sugar into a Syrup, then they thoroughly
mix and alter them; So 'tis, says Hippocrates, with the na-
ture of Man, all Arts communicating with humane Nature.

Wherefore if Nature do precede Art, and Art doth but imitate
Nature, there is no man under the Sun, who hath not within
himself, as it were a Chymical and Salt-melting Shop; only the
Canonical Physician, who bears an hatred to the opinions of
Hippocrates, by reason of his ignorance of this Ancient Art,
excepts himself, as being altogether unacquainted with this di-
vinely inspired Science. And by means of such Ignoramus's,
Physick is accounted the meanest of all Professions, for it hath
no foundation to build upon: Of such Ignorants, Seneca speaks,
That they are always learning, but never attain to the
knowledge of the Truth.

Hence it is that Galen in his rich Writings approves and com-
mends Hippocrates to us, as the Guide and Author of all
Good, which Epithites he frequently bestows upon him; there-
by eternizing and consecrating his Name to Posterity.

This so well grounded opinion of Galen, hath moved me, ne-
ver, as long as I live, to admit of any other Doctrine in Phy-
sick but that of Hippocrates, which I believe will be Coævous
with Nature it self.

Ars Glaucou.
initio. and lib.
1. De Venz-
le&: adversus
Eras.

Otto



Otto Tachenius,

HIS HIPPOCRATES CHYMICUS.

The Occasion of writing the Ensuing
Treatise.

CHAP. I.

THe perfect knowledge of all Sciences is so diffi-
cult, that the Life of Man would sooner be at
an end, than he can attain unto the compleat
understanding of any one of them, (so as to
be put beyond all dispute) by the help only of * Paper-
books. Socrates having made a through disquisition in-
to almost all Sciences, was then judged the wisest of
men by the Oracle; when he openly professed, that
he knew nothing at all: This the Preacher seems to
confirm to us; I beheld, says he, all the Works of God, that
a man cannot find out the reason of the Works which are
done under the Sun, and the more he labours to find it out,
the further it is off; though a wise man think to know it,
yet shall he not be able to find it out. The Divine Hippo-
crates was not ignorant of this difficulty of obtaining
knowledge in our Art of Physick, which made him inge-
niously to confess it in his * Epistles to Democritus:
For, says he, though I am an old man, yet I am not arri-
ved to the true knowledge of Physick: And the same per-
son avers, * That our life is too short for the acquist of any

A man
knows on-
ly so much
as is cer-
tainly dis-
covered to
him, by ei-
ther Men-
tal or Ma-
nual Ope-
ration and
Experi-
ment.

* Which
yet are not
wholly to
be reject-
ed.

Eccl. Ch. 8.
v. 17.

* In Epist.

* 1. Apb. 1.
one

one Science, from the very Foundation thereof. Hereupon he advises us, to honour and esteem those which have endeavoured to search out the hidden works of Wise Nature; adding withal, that no one of them could be justly blamed, though he were not able fully to find them out. But it seems the Writer who reformed the *Auspurg* or (*Auspurg*) Dispensatory, was of another mind; his Book was printed at *Tergow* by *William Vorhov. n.*, A. D. 1657. Upon occasion of that Book, a few days since, my respected Friend, *John de Lanou*, a Famous Bookseller of this City, asked my advice, whether I thought it worth his labor to Print it here, &c. 'Tis true, I had heard of the Title before, but I had never seen the Book, for I had not so much leisure as to spend my time in reading such Pieces: Nevertheless, upon that occasion, at spare hours I read it all over, and could not but take notice of, and wonder at that corrupt Custom (so familiar to him and others, against the direct Precept of *Hippocrates*) that whatsoever a man had honestly found out by great Labour and Study, and had commended it to Posterity in writing for the good of the Publick, the same should presently be traduced, defamed, and spurned at amongst the Ignorant Vulgar, not by force of Reason and Experience, but by monstrous Calumnies and Reproaches, that so (like *Herostatus*) they might procure some fame to themselves, by the ruine of other mens Credit. The Reformer of the *Auspurg* Dispensatory treads in those steps, railing and declaiming not only against the Ancients, but the Moderns also; Followers of *Hippocrates* and *Galen*, in such sort, that there is hardly an Arrow in the Quiver of Slander, which he shoots not at them. I had formerly instructed this Man in the way of making *Viperine Salt*, but under a Metaphorical disguise (for I had denied to teach him in plain terms) and now he proclaims me for a Cheat, and that *I hinder by Imposture the making of it publick*: I ingeniously confess, that here, at least in part, the Reformer speaks truth; for whatsoever made Physicians who were lovers of Truth famous heretofore, the same things Impostors do craftily adulterate. Our *Hippocrates* was afraid

L. 1. de
Diet.

Pharmac.
f. 487.

fraid of such Cheats, which made him conceal his Antipestilential Medicament, by which he had procured so much Honour to himself, and had happily and securely cured that Disease; as his Epistles do testify.

Paracelsus did also dread Impostors, who by his wonderful Art cured the (otherwise incurable) Contagions of the Body, as his Epitaph speaks; which may be seen graven on a stone at *Saltsburge*, in the Hospital of *S. Sebastians*.

In our dayes *Lazarus Riverius* feared the like Cheats, and for that cause he published his *Specificque* against *Fearours* under a Metaphor. So *Helment* very prudently veiled the Liquor which (with *Paracelsus*) he calls by a corrupt Name *Alcabeft*; which yet is not free from Adulterators; but instead thereof the Reformer substitutes *Vinegar*; * hereupon, being instructed by my loss, I became my own School-master, and have often thought upon that Saying of *Eschewreuterus* to *Gratarolus*, *Those knowest on easier terms the Sentence passed at Bononia, that he was proclaimed a Traytor to his Countrey, and worthy to be hanged, who first made a Filatory at Trent in Germany*; which is an Engine whereby Raw Silk by Spindles is artificially drawn into Threads.

So that I have hitherto concealed That which might ennoble a Physician, being jealous, not without cause, lest by my sluggishness and neglect, it might fall into the hands of Impostors, and thereby the worthy and the unworthy should undergo the same Fate.

But the earnest importunity of this * Reformer hath caused me to select some things out of the heap of my Observations and Experiments (which I had designed only for my own use) and now to make them publick; yet still I keep to the Precept of † *Hermes*, *That the Wisdom of the Author ought to be greater than his Book*. But I must follow the Clew of inevitable Fate; and I undertake this labour the more willingly, that I may discover the right way to those that wander, and may bring back Straglers into it: As also, that those who have hitherto opposed this Art, might at length correct their mistakes, and begin to be wiser: And further also,

* In *Ap-
pend. f. 726*

* *Pharmac.*
487.
† *Libro*
Ra. sic.
None are
worthy of
the name
of Teach-
er, but
such who
teach by
sure Prin-
ciples and
causes.
Arist in
*Proem. Me-
taph.*

Otto Tachenius,

that they who practise it, may assuredly understand that it is founded on the Principles of Nature; and so for the future may be delivered from the crafts and deceits of Sophisters and Impostors. In this work, I mind more the Truth of the Cause, than the Ornaments of Elocution; for the speech of Truth, says *Euripides*, is plain, neither matters it therein what stile we use, especially since *Cicero* doth not require Eloquence in a Philosopher, much less doth *Celsus* in a Physician: For as *Plato* saith, when we dispute of things, the rudeness or the elegancy of words are not to be heeded, but only that satisfaction may be obtained, as to the Doctrine of the things themselves; neither have I inserted florid disputings, or odious altercations, but whatsoever offers it self more occultly to the Senses, that, Experience being my guide, I have despoiled of its coverings, and have exposed the truth of things naked to the eyes of all beholders, so that every individual man may know it; for Truth loves brevity, not disputation. By this Compass I have Steered: Draw near therefore, all ye Lovers of Truth, and you shall behold things (both admirable and pleasant) with your eyes, yea and handle them with your hands, which have hitherto stood remote from our sensation and knowledge. Now to the work it self.

Qui nimium properat, serius absolvit.

Or,

No more haste, than good speed.

CHAP. II.

* *Pharmac.*
L. 481.

THE * Reformer begins with a lofty Brow: Now, says he, let us come to the examination of the Salt of Treacle of the Ancients, whose preparation was so Childish and absurd, that their simplicity did no where more appear than about it, &c. And a little after, *Animals only have Volatile Salt, and in a violent Calcination, leave commonly nothing behind them, save only Terra Mortua; yea, the rest*

of

His Hippocrates Chymicus.

of these absurdities are not to be passed over in silence, in that they substituted Sal Armoniack in the place of Common Salt, not at all, as I perceive, understanding the matter, because all the Sal Armoniack is vanished into Air, and so there remains nothing to them, neither of the Vipers, nor of their added Salt. Thus he.

Do not rashly condemn the guiltless, not having thoroughly weighed their cause.

But for my part I cannot see that the Ancients deserve to be accused of absurdity or simplicity in this thing, so as to incur the undue reprehension of the Reformer: so that before we judge, we are to hear, and that both sides; and we ought to find out what the *Sal Armoniack* of the Ancients was, and for what reason they substituted it in the room of Common Salt? and for what end? and wherein their offence lay? so as to merit the rash anger and bitter despiht of this Reformer.

To make these things more plain, it is necessary that we dive into the secret nature of certain Salts, in order to the examination and understanding of them, and of the differences between them, by accidents proper to them, and known to Sense, and that not by Logical and convertible Syllogismes, or imaginary Non-Entities, but by an Experimental and Natural History: I say then, and am ready to prove, that not Animals only have Volatile Salt, but, against the Opinion of this Reformer, that all Vegetables also have not a grain of fixed Salt by Nature, unless they acquire it by Art. But first I will speak of things more known, proceeding afterwards, by degrees, to those which are more occult. *Pliny* witnesseth, that Natural *Sal Armoniack* was in great use amongst the Ancients; It is found, says he, in Africa, in the Country of Cirenia, till you come to the Oracle of Jupiter Hammon in lumps, somewhat long, and under the Sands. *Diascorides* confirms the same, that *Sal Armoniack* is praised from the Country where it is found. This Salt endures constant in the fire, being, after its manner, of a more Salt-acid relish, than our common Trencher-salt, as I shall shew; and therefore the Ancients found it more advantageous for Medicines, and for that cause have more commended it to us: But that which is brought to us is not in longish lumps, neither

No imaginary things here.

L. 1. Ch. 7.

is.

* All things nec-
essarily
consists of
that into
which they
can be re-
solved.

L. 28. 1. 8.

Obj 1. 6.
from v. 1. f.
85. to 96.

* L. 1. de
Diet.

Sal Armo-
niack.

† Hip. 1. 1.
de Dist.

is it Natural, but is made by Art, viz. of the Natural, and of the Volatile Alcaly of Animals, as the resolution of it shews, according to the Axiom of * Aristotle, for it is divided into an Acid Spirit of Salt, and also into a volatile Alcaly (all salt things are divided into two substances, viz. Alcaly, and Acid, as I shall shew by degrees) both which being separated, and again reunited, become the *Sal Armoniack* which it was before. The Acid part or Spirit, hath all the properties of that which is distilled from Common Salt; but the Alcaly is of the same nature with that which is sublimated from Mans Urine, only 'tis not so stinking: Whence I conjecture, that they chose Camels Urine, not Mans, for the composition: For the Urine of Camels, as *Pliny* observes, is more profitable for Fullers, than the Urine of other Animals, from whence there must needs be a richer Alcaly; perhaps because they eat no Salt, as other Animals do, for common Salt doth not wash out, or cleanse; therefore *Nansicca*, the Daughter of *Alcinous*, wash'd her Linn. in a Fountain on the Sea-shore, as *Homer* records.

But Artificial *Sal Armoniack* is made after the same manner as *Sope*; for Nature works alike in every thing, as * *Hippocrates* says, to wit, of the Acid part of *Sal Armoniack*, and the Alcaly of the Urine of Camels (or of other Animals, 'tis all one) I have made the like Salt from the Alcaly of Soot, and the Acid Spirit of Salt, (for want of other) for the Urine doth dissolve the Salt by Maceration; and the Alcaly of the Urine, which otherwise in a few days would vanish, here being delayed and stop'd, finds the Acid which it imbibes; and so of the Acid part of the Salt, and the Alcaly of the Urine, a new Artificial Creature is produced of a salt relish: But that which is not of the same nature, nor † accords with this new Salt, of its own accord is severed, and sinks to the bottom. The clear Salt liquor swimming at top they boil and scum, and again suffer the *Faces* to settle, and at last coagulate it into a Cake. This is the *Sal Armoniack* which is brought to us, but it is not that which the Ancients chose for Salt of Treacle, as the Reformer guesses; but

but that is the Natural which is found under the Sands (*ἀυωσ*) as *Pliny* shews in the fore-cited place, of which I shall speak more clearly in the Progress of this Work; but before I proceed, I must explain more fully what *Alcaly* is.

CHAP. III.

Sal Alcaly, what it is.

IT is not my purpose here to deduce the matter, *ab ovo*, as they say, or from the very Elements, but to manage a Demonstration concerning things Physical, Natural, Material, and known by our Senses. Know then, that *Salt-Kaly* is made of the Herb *Kaly*, coming in great quantity out of *Egypt*, which is there burnt whiles it is green, and so brought over to us, and is called by some *Soda*, and *Alumen Catinum*, but the right name is *Sal-kaly*. This Salt is not found in Natures three Kingdoms, unless it be produced by Art, through the help of Fire; whence it is that this *Virgin* is said by the Ancients to have three Fathers, viz. Nature, Fire, and the Philosopher.

This *Sal-kaly*, as other Salts, is part of the *Compositum*, yet deprived of its seminal vertues, only it hath an absorptive, *Sope*-like, and resolving property; and by reason of this inanition, being as it were without form, it sucks up and imbibes all sorts of Acids, (the Ancients call it impregnation.) Hence it is that all Salts which do mortifie Acids are called by one general name, *Alcalies*, which are found not only in the vegetable, but also in the Animal and Mineral Kingdoms: And in these three, there are several sorts of them, viz. fix'd, volatile, manifest, occult, and of a middle nature, taken from parts of Animals which are to be demonstrated to the eye. But first I shall begin with that which is more known, which is found in a Flint, which considered, *quatenus*, a Flint, is thought by the unskilful to be under the Regiment only of one Rector; but the skilful

I call the
Senses the
Guides of
Life, and
of all its
Operations

Alcaly is
inane and
empty.

Glas-

* *Cosmopolita* says, that the occult Food of Life is in the Aire.

† *L. 1. de Diat.*

* *Acid* and *Alcaly* the instruments of Nature.

That the Fire is *Acid*, the Water *Alcaly*, I will shew in its place.

Pharmac.
f. 485.
Contraries are coagulated by contraries.

Glass-men of *Murano* have observed, that though taken from its Native place, it weighs 100 *l.* yet it yearly acquires 10 *l.* or * thereabouts, to its weight. Hence the *Hippocratist* learns, that *fovis omnia plena*, yea that it receives nourishment from the ambient Air, but as soon as the External and Artificial Fire supervenes, then the skilful Operator sometimes converts it to Glass, and sometimes to *Calx* or *Lime*: So that the *Hippocratical* and *Chymical* Philosopher comprehends two different Faculties in a Flint (being so instructed by his † Master Fire and Water so called, for the two reasons which constituted a Flint:) These Faculties the Chymists alter by the help of a due Fire, which alteration is called *In-cineration*, for of its own accord it turns to a Powder, whence it is called by a common name, *Calx* or *Lime*.

In this *Calx* or *Calcinated Ashes*, the Chymist again comprehends the above-named Faculties, which for our better understanding, we will now once for all, * and at all times hereafter, call the *Acid* and the *Alcaly* from their effects.

Calx then, or *Lime*, hath two Salts, or (as *Hippocrates*) two Faculties in it self, the *Acid*, and the *Alcaly*, both most constant in the fire, and one contrary to the other; and when the *Calx* is sprinkled with water, then the Salts are dissolved, and act upon one another. The *Alcaly* sucks in, and acts upon the *Acid*, and this again assumes the *Alcaly*, not for the destruction of either, but for the Production and Generation of a new thing, and whatsoever they lay hold on in that Generation, not being too heterogeneous from their natures, is concreted with them into the hardness of stone; so one contrary is coagulated by another.

This knowledge of *Calx*, if the Reformer had learned out of *Hippocrates*, the Poor Man had never gone about the fixation of viperine *Alcaly* with *Calx*, as with a lamentable voice he declares in his Discourse concerning Salt of Treacle. After the *Hippocratist* hath learned, that according to the Laws of Nature, *Calx* is petrified by contrary Faculties, then he reminds the Lesson of his Master and Instructor, *viz.* that like is to be dissolved

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ved by like, and that not only in Artificials, but in Naturals, especially in Physick, and Humane Bodies, as will anon appear; for *Arts do imitate Humane Nature*: they are *Hippocrates* his words, who also teacheth, *That agreeable things adhere to one another.*

Hip. l. i. de
Diet.

CHAP. IV.

Alcaly and Oyl are made Soap.

C*Alx*, or Lime, as I have said, hath two different Faculties, *Acid* and *Alcaly*: I have shewed before, that *Alcaly* hath at least a Soap-like and abstersive vertue, which *Hippocratists* have taught to extract and separate by its like: Therefore Soap-men add to the *Calx* a factitious *Alcaly*: burnt out of Vegetables in a triple proportion, because it mortifies the *Acid* part in the *Calx*, and melts the other part by its like; wherefore they moisten a little the Alcalized Ashes, with which they cover over the unslacked *Calx*, and so leave them, until the Lime or *Calx* falls asunder, as a sign of mutual action; then they mix them together, and pour on water, that the Mass may become moister (according to the Rule, *Salts act not unless they be dissolved*) then with a sufficient quantity of water they extract the Lixivious Fiery *Alcaly*; (I call it Fiery, because this boiling *Lixivium*, or Ley, consumed in a moment a Drunken Man with his Woollen Cloaths, so that nothing of him was found but his Linnen Shirt, and the hardest Bones, as I had the Relation from a Credible Person, Professor of that Trade) which Fiery *Lixivium* they call *Magistra*, which is glutted with so much *Alcaly*, that an Egg will not sink in it. Of the same mixture is made also another *Lixivium*, less saturated, which will not bear up an Egg; with this last Lye (for certain reasons) in boiling of Soap, they first mingle Oyl or Tallow, (which is contrary to *Alcaly*, as containing an occult *Acid*, as will appear by degrees) but they boil it with a soft fire till they wax white, then they add the *Magistra* in a triple proportion

Likethings
are dissolved
by
like.
Hip. de lo-
cis in ho-
mine.

Of Lime
and Honey
is made a
mixture
good for
the braw-
niness
of the
Feet.