A COMPENDIUM

OF

ALCHEMICAL PROCESSES

Extracted from the writings of:
Glauber,
Basil Valentine,
and Other Adepts

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Contents

Prefatory Note

This unpretentious selection from the experiments of the old chemists will, it is thought, fulfill another purpose besides affording to the practical student of Hermetic Physics an insight into the processes by which the great secrets of alchemy were claimed to be achieved in the past. For more than forty years a certain school of interpretation has discerned in the literature of alchemy far other objects than the transmutation of the so-called base metals into gold, or the application of metallic elixirs to the cure of human diseases, and the prolongation of human life. This school recognizes under the veil of these physical designs a deeper end in view - the investigations of spiritual potencies, the development and conversion of the soul, the laws which govern the influxes of eternal life, and so forward through the whole gamut of transcendental possibilities. In a word, the true alchemists were not chemists, and Thomas Vaughan was right when he protested against the application of that narrow name "to a science both ancient and infinite." The hypothesis was large and suggestive; it appealed to the imagination; it possessed all the romance which attaches to the vague and indefinite; and as few persons knew anything at that period of the literature which it pretended to explain, so it obtained a certain favour and credence amidst that large class of persons who are interested in Hermetic subjects without being sufficiently in earnest to have recourse to the fountain-head.

In this respect a great change is in progress, the old books are being rapidly re-published, and are making clear, at least up to a certain point, what was thought and meant and done by their writers. But at the same time the mystery affected by the alchemists, on the one hand, and the mystical philosophy which was combined with their physics, on the other, seem to lend themselves to every species of commentary with such equal readiness, that it will be to many persons a source of altogether new light to see for the first time the processes of alchemy without the speculative setting in which they are commonly imbedded. So, then, as they may be read over, even by a person who is little acquainted with experimental chemistry, it will be as obvious that they belong to the sphere of physics, and thereto only, as it is that the latest metallurgical text books are not manuals in secret concerning the life of the world to come.

When this fact is once recognized there will be no longer any room for the misplaced spirit of imagination which has hitherto shaped so many matters connected with alchemical problems to a wholly false issue; but at the same time it is another question whether the masters of transmutatory secrets may not have possessed an insight into other arcana than those of a physical kind. The Hermetic philosophy covers all issues of life, and has its highest interests in eternity, but its applications on the material plane should not be confused with its more exalted departments.

A Method for the Potable Gold

(GLAUBER, part II., p. 212, a.)

Take of the filings of gold, or thin beaten gold, one ounce: put it into a small but strong glass; pour upon it two or three ounces of our best Alkahest; fit to the vessel an air-tight head, and to this apply a large recipient, carefully luted, for, when the spirit comes over, it passes with great violence, and searches everywhere for vent, being the most fiery of spirits, and very subtle withal. Wherefore take care that your lute be good, or else you will never be able to retain this corrosive, fiery spirit. The vessel must stand in sand, and a very gentle fire must be administered at first, so that our secret spirit may by degrees grow warm in the glass, and not be too suddenly heated, for in that case it would fly away without its prey. But if you proceed as directed, then our moist fire will lay hold of the gold, and

carry it over in the form of a spirit, but leisurely, and by degrees, at first only of a yellow colour, which then becomes higher and higher. Towards the end the fire must be increased, till the bottom of the glass be red-hot, at which time the heavy spirits will come over, bringing the heavy corporeal gold over with them, a red fixed salt remaining behind, which is of great use in physic and alchemy, as we shall see hereafter.

The yellow spirit, as well as the red salt, may, without further preparation, be used outwardly as well as inwardly, and will perform all that can be expected of a true "potable gold."

The Same Process Modified

(GLAUBER, part II., p. 212, a.)

Take of gold one part, and of the martial regulus of antimony two parts. Melt them together, pour them forth, and the gold will be white and brittle. Pulverize the mass, put it into a glass, pour upon it three times as much of our fiery Alkahest, and by degrees abstract the same, when you will have a higher and better tincture than from the gold alone. For antimony is the "Aries" of chemists, wherein Sol has its exaltation. This red oil of gold and antimony may readily be changed into an universal medicine or tincture, by means of our "catholic coagulator" (lead).

The Preparation of Martial Regulus of Antimony

(See process above.)

Regulus Martis is prepared by submitting two parts of antimony and one part of iron to a red or white heat, in a strong crucible, in a wind furnace, and separating the reguline product.

A Great Medicine of Gold

(GLAUBER, part I., p.265, a.)

Take three or four parts of sal mirabile, and one part of gold (rightly prepared for this operation): Mix them, and put the mixture into a strong glass or hardware retort, well luted, which place in an open fire, increasing the heat by degrees, until the retort be red-hot. Urge the fire and continue it stronger for an hour. Then cease, and let all cool. Take out the retort, and free it from the lute, that it may not be mixed with the matter contained in the retort, which must remain pure, and must afterwards be accurately separated from the retort, and, together with what is sublimed in the neck of the retort, put into a clean glass, which matter will look of a greenish colour. To this matter put some distilled water, that it may be dissolved at a moderate heat, and that the salt, with part of the gold, may be mixed with the water. Filter this grass-green solution, and draw off some part of the water by distillation, that the green liquor may remain, not corroding nor tasting sharp, nor yet too urinous, but fit to be drunk in all vehicles. The portion of gold not dissolved by the sal enixum can be used again for a fresh experiment, while the green liquor may be put to advantageous use in medicine as well as in alchemy.

By evaporation of this liquid a green salt is obtained, which may be digested with strong alkalizate spirit of wine, and will then acquire a ruby-red colouration.

By a repetition of the process upon the pure green mass, Aurum Potabile, or a great Medicine of Gold, results.

How to Prove a True Aurum Potabile

(GLAUBER, part I., p.245, a.)

Rub some mercury upon a small silver plate; whatever is superfluous and does not adhere, wipe off with a linen cloth, after the manner of goldsmith, (or gilders), who gild with the amalgam of gold and quicksilver. Digest the silver plate in my aurum potabile for the space of half-an-hour, or one hour. Then take it out, and you shall see with how fair a golden colour it will be gilt. For in this digestion the mercury is not so heated that it can vanish in vapour; it therefore adheres to the silver plate, and is tinged by the aurum potabile into the best gold.

A Most Excellent Medicine out of the Carbuncle of Gold

(GLAUBER, part II., p.51, b.)

This carbuncle is to be beaten to powder, and the best spirit of wine is to be poured thereon, so as to extract the tincture.

This tinged liquor is to be drawn off into another glass, and more fresh spirit is to be again poured upon the matter, that, in the heat, it may extract yet more tincture. The like labour is to be repeated so often until all the tincture be extracted, and the spirit be no longer coloured. Then the spirit, being drawn off by distillation per balneum, leaves behind a most red tincture at the bottom, in form of a liquor named C O S - for here are present colour, odour, and taste: the colour and odour from the gold and sulphur, the savour from the salt. The residue which remains after the extraction of the tincture is to be converted with new or fresh sal mirabilis and coals made of vine (or other) wood into a red stone, by fusion, and to be so long extracted till all the gold be converted, with the vegetable sulphur or carbon, into a medicine. For one only labour serves to extract the whole gold by the spirit of wine, but repeated labours attain to the end proposed.

Thus hast thou, friendly reader, a medicine of great moment and great efficacy, in which the most pure parts of the gold and of the vine are conjoined; nor can this be other than a most profitable medicament for men and metals.

A good Sol of sal mirabilis may safely be made of equal parts of salt (common) and oil of vitriol (both as strong and pure as possible).

The Golden Carbuncle of the Ancients

(GLAUBER, part II., p. 51, b.)

Take one quinta, or small weight of gold (more or less) ; reduce it into thin leaves or plates; bow them in the fashion of a cylinder, and add thereto six, eight, or ten parts of sal mirabilis, which mixture must be melted in a crucible, with an accurate and strong fusion. When they flow, throw some pieces of coals (carbon) into the salt and gold, as they are melting in the pot, so that the sal mirabilis may dissolve the gold and coals in the melt, which is usually done in half an hour, or thereabout.

The matter, being poured out, will show whether or not the work has proceeded well, for all the gold, as likewise the sal and coals (carbon), will be dissolved and changed into a red stone, that bites the

tongue like an alkali (when so applied).

This fiery, red stone is the golden carbuncle of the ancients, "for it shines in the dark like a burning coal," and produces such wonderful effects in medicine and alchemy as we have no mind at present to reveal.

For this gold, being thus conjoined - contrary to its nature - with salt and sulphur, is by that means unlocked, opened, and prepared, so that it may, by easy labour, be made spiritual, and that divers ways by divers menstruums, either acid or urinous, and may be distilled over the helm, the pure separated from the impure, and things will be thus brought to a most happy and wished-for end.

The True Tincture of Gold (Aurum Potabile)

(GLAUBER, Part I., p. 97, b.)

Take of; living gold one part, and three part; of quick mercury (not the vulgar, but the philosophical, everywhere to be found without expense); of living silver, one part may be added with advantage; then put the mixture into a philosophical vessel to dissolve. In the space of one-quarter of an hour these mixed metals will be radically dissolved by the mercury, and will give a purple colour. Afterwards increase the heat gradually, and then the colour changes to a very fine green. Hereon, when taken out, pour the "water of dew," to dissolve (which may be done in half-anhour). Filter the solution, and abstract the water through a glass alembic in balneo, which pour out again fresh, and abstract; repeat this three times. In the meanwhile, that greenness will be turned to blackness, like ink, stinking like a carcass, and therefore odious. It behoves sometimes to take away the water, re-affused and digested when the said black colour and stench will depart in the space of forty hours, and will give place to a pure and milky whiteness, which appearing, remove the water by evaporation to dryness. Divers colours now appear, and the remaining white mass is to be affused with highly rectified spirit of wine, when the dissolved green gold will impart to it a quintessence as red as blood or ruby.

Dose: from two or three to ten or twelve drops, or more.

The Manner of Testing Aurum Potobile

(GLAUBER, Part I., p.211, b.)

Take of my potable gold one ounce, and one scruple (or half-drahm) of common quicksilver. Put them in a strong glass, and so small that it may be half full with the mixture. The said glass must have a round bottom, whether it be a piece of some small bolt-head, or a small phial, that so the mercury may gather itself into one ball in the bottom. Now place the glass with the potable gold and mercury in sand, to the height of the liquor, then heat it, and leave it for about one hour in a sufficient temperature, so that the moisture being exhaled, the potable gold may stay behind in the form of a white salt. This done, pour again upon that salt so much pure water as is evaporated in the boiling, that so lying awhile upon the said salt, it may dissolve it, which is hereby again turned into the same potable gold, having the same colour and taste, and the same virtues that it had before. The mercury, being freed from the said potable gold which is to be poured off, is found to be hard, and fixed in the bottom like the best gold. It is also of the same size or quantity as when first put into the glass. If, by some error committed, the quicksilver be not tinged enough, nor yet brought to a due degree, but shall have contracted some blackness, it is to be taken out of the glass, and put into a small crucible, where it

must be heated to redness, so that it may receive its due golden colour; which colour it will get, and it will then resemble the best ducat gold, and will abide good and firm in all trials. The aurum potabile used for the coagulation of the mercury may be employed again and again, but less mercury must be used each time.

The Testing of Potable Gold

(GLAUBER, Part I., p.212, b.)

Take of my potable gold, or lac virginis, one ounce, and put it in a glazed dish; which done, and the dish being placed in sand, evaporate all the humidity until there remain about half an ounce of white salt. Put this salt in a crucible with one scruple (or half a drachm) of the plates of silver, or copper, or iron (tin and lead need not be laminated). Place the crucible, together with the salt and metals, over a gas burner, and the salt will presently melt, like wax; it will penetrate the whole metal, and will transmute it into gold. This operation is effected in one-quarter of an hour, or half an hour at the utmost. The molten salt, being poured forth out of the crucible, the plate of metal remains that was first put in, but now thoroughly transmuted into pure, good gold.

Potable Gold

Aurum potabile, when brought to a due perfection, has the appearance of a bright, clear water it is of a burning, hot, and fiery taste, and it gives out a sulphurous, but yet pleasant odour.

Potable gold being coagulated by means of fire, and reduced to a stability therein, is converted into a stone of a blood-red colour, and yields not in melting any corporeal gold unless a metallic body be adjoined to it, into which the spiritual and philosophical gold betakes itself, that, so clothing itself with a body, it may become corporeal.

How to Extract a Tincture from Gold by the Aid of Liquor of Flints or Sand

(GLAUBER, Part I., p. 47, b.)

Take of that gold calx which is precipitated by the oil of sand, one part, and three or four parts of the liquor of crystal or flints. Mix the gold calx in a sound crucible with the liquor, and expose this mixture to a gentle heat, so that the moisture may evaporate from the oil of sand (which is not readily done), the mixture rising like alum or borax when heated, for which reason the crucible must not be more than half filled. Now increase the heat till the pot be red-hot. The mixture standing fast, put a close fitting cover to the crucible, and heat it so strongly in a wind-furnace that the liquor, together with the gold, may melt like water. Keep it fused so long until the liquor and gold together be like a transparent ruby, which will take about an hour's time. After this, it is to be poured forth into a clean mortar, allowed to cool, reduced to powder, and then treated with strong and pure spirit of wine, or alcohol. This spirit thus acquires a blood-red colouration.

Another Tincture and Medicine of Gold

(GLAUBER, Part I., p. 79, b.)

Dissolve gold in aqua regia. Filter the diluted solution, and with liquor of flints precipitate the gold out of the solution. Then add the excess of the precipitant to the solution of gold. Next place the solution

on a sand-bath at a boiling heat for some hours' time, when the liquor of flints will extract the tincture out of the gold, and will be dyed with a fine purple colour. Add pure water, raise to a boil, and the flint will be precipitated (the tincture, of an excellent colour, remaining with the salt of tartar). Evaporate the solution to dryness, and a very fine salt of a purple colour will remain at the bottom of the vessel, out of which may be drawn by alcohol, or spirit of wine, a tincture as red as blood, and little inferior in virtue to potable gold. This golden salt may, in a very short time, viz., in an hour, be perfected with small labour, and transmuted into a wonder of Nature - thus confuting the slanderers of the noble Art of Alchemy.

The Use of the Tincture of Gold

(GLAUBER, Part I., p.26, a.)

The extracted tincture is one of the chief of those medicines which comfort and cheer the heart of man, renew, and restore to youthfulness; and cleanse and purify the blood throughout the body, whereby many horrible diseases, as the leprosy, the pox, and the like, may be rooted out.

Whether this tincture, by the help of fire and art, may further be advanced into a fixed substance, is a question for Alchemy to determine.

How to prepare a Famous Universal Medicine of Gold

(GLAUBER, Part II., p.169, a, b.)

Take three or four ounces of the coagulated and irreducible blood of the Lion, of which the Book of Dialogues treats. Dissolve them, in the dry way, by the help of sal mirabilis, into a red stone, from which, reduced to powder, extract its tincture, by the aid of alcolizate spirit of wine.

This tincture is a famous aurum potabile against many diseases.

It also coagulates living mercury into Sol.

The Philosophers' Water of Life

Take one pound of the pure and clean filings of steel. Put them into a glass retort, so that they may occupy a twelfth part of it. Then pour upon them a well-rectified spirit of wine, alkalizate, viz., to every pound of filings from four to six pounds of spirit of wine.

Care must be taken that the glass vessel is sufficiently capacious, or else, when the spirit of wine begins to work upon the steel filings, it will run over. The retort then being placed in sand, and the recipient being ready, add, for each pound of spirit of wine, one ounce of our Alkahest, which will actuate the spirit, so as to dissolve the steel, in which solution the sulphur of philosophers, or the purest tincture of Mars, is let loose, and immediately taken up by the spirit, being assumed with it to the philosophic heaven. But because this soul of Mars has not yet attained to that height of purity which the philosopher desires, therefore it must enter its purgatory, there to put off all the impurities it has brought over with it, that is to say, the spirit of wine must, under a large refrigeratory head, be burnt away, in which flame the anima martis, or soul of iron, becomes purified to the highest degree, the flame carrying the tinging medicine over in the form of a clear, pellucid water, which is the true water

of life of philosophers, healing all curable diseases, if daily taken in small quantity. For this medicine renews the body of man, and makes old age youthful and again blooming. Neither do I believe that a better medicine can be found in the whole world than this.

It likewise tinges Lune, and coagulates Mercury into fixed Sol.

How to Make and Prepare the "Atoms" of Gold

(GLAUBER, Part II., p.149, b.)

Dissolve an ounce of pure gold in strong spirit of salt, or in aqua regia, and pour upon the solution a pound or two of pure water, with which must be combined about one pound of Rhenish wine. Mix them together in a close glass, so that no dust fall therein. Put it aside for some days in a warm place, that the gold may precipitate out of the water, and may settle to the bottom of the vessel in the shape of most curious stars. But if all the gold shall not be precipitated in this time, then set the glass in balneo, and let the solution boil awhile. Then when it is again cool, put by the vessel some-where that the gold may settle, after which the precipitated gold is to be well washed with pure water.

These most fine and subtle atoms of gold may well be made use of in Medicine as well as in Alchemy.

How Gold is to be Levigated and Made Fine

(GLAUBER, Part 11., 131, b.)

Gold does not by any way more easily admit of being turned into most tender and most subtle atoms than by the following process.

Dissolve pure gold in aqua regia, and, being dissolved, pour thereto as much of the water of tartar as is sufficient; so the clear gold, clothed with a golden colour, will precipitate itself to the bottom of the vessel; nor will it be a darkish powder, as it is wont to be when precipitated by lixiviums, or by the spirit of urine, but it is light and tender, and shews in brightness like little golden stars; yea, it becomes so very tender and subtle, that it swims, as it were, in the water, and settles to the bottom very leisurely, and is, therefore, so much worthier than all other calxes of gold, how subtle soever they be, that they may be accounted of small value compared to this.

These shining little golden stars are made so tender and so subtle that they may easily discover and demonstrate their virtues in medicinal use very notably, by the help of other things, and by being dissolved in sundry ways.

The Proof that Gold Takes Increase from Other and Baser Metals

(GLAUBER, Part I., p. I97, b.)

Take a small piece of silver, freed from its gold by aqua fortis, that there may be no doubt about the absence of gold from it. To this, in fusion, adjoin so much copper and antimonial regulus, as, being reduced into scoriæ by saltpetre, and again separated from the silver, may leave it malleable and ductile. This, being dissolved in aqua fortis, will leave at the bottom, undissolved, a reddish powder of gold, which it has attracted to itself from the copper and regulus of antimony.

This increase of the gold results so long as fresh copper and martial regulus of antimony and saltpetre are added to the silver (or gold) which is first put into the crucible.

[The use of gold in this operation affords far greater profit than when silver is employed, according to the statement of Glauber.]

Lastly, the greater the quantity of these metals thus employed, and the longer the time they are allowed to remain in flux with saltpetre or nitre, the greater is the profit.

A Process for the Calx of Gold

Put fine gold into a crucible; let it become intensely hot, and flow by the blast. Project, gradually, philosophical lead upon it, and blow the fumes away with a small pair of bellows. This must be continued until the lead has carried away the body of the gold in white fumes, and lastly there remains "our fire" and "incombustible sulphur," transparent like a ruby. This is the last and first matter of gold - the sophic fire, our sperm and sulphur. This also transmutes silver into gold.

Evaporation

All the antimony has to pass off by evaporating before the gold can in any way be converted into a calx, which calx is regarded by some as the whole secret of the thing.

A Preparation of the Calx Auri

Take very fine gold, and pass it through antimony. (By passing through antimony is to be understood the process, given above, of projecting the philosophic lead on gold in fusion, and blowing away the fumes.)

Having passed it through antimony, now divide the gold into very delicate leaves, cut into small pieces, and for one part of gold take six parts of mercury, highly purified, and passed through chamois leather several times. Put the gold into a crucible, and let it get red-hot, but take care that it does not melt. When very red, pour the mercury, made hot likewise, over the gold. Then stir the whole with an iron rod, till it gets red, and the gold is ground, amalgamated, and incorporated with the mercury. Then pour the amalgam into a glass of clear water. Take it out and dry it, and again pass the amalgam through chamois leather, pressing the leather very hard, so that the mercury overflows strongly, and so that the mass remains sufficiently hard, which mass must be worked for a long time in a glass mortar with a pestle of the same material, and with double its weight of prepared common salt, till there no longer remains anything of the said amalgam. Then put the whole into a crucible, covered with another, through which there is a hole above, well luted one with the other. Reverberate and calcine the matter well for the space of twenty-four hours, taking care that the gold does not melt. This done, the gold will be found calcined, and the salt and mercury will be evaporated. Then re-amalgamate as before. Then put it, with double its weight of flour of sulphur, into a red-hot crucible, stirring the amalgam till the flowers are burnt. Then take the crucible from the fire, and let it cool. Wash the amalgam with rain water, distilled many times till it be well cleansed. Finally, put it in a glazed earthen pot; pour S. V. R. upon it, then set fire to the mixture, and burn it two or three times.

Then the gold will be very spongy and attenuated, and will become much more so if the process be repeated two or three times.

The Preparation of a Calx of Gold (Aurum), of a Beautiful Scarlet Colour

When three parts of a regulus of antimony and iron, with one part of gold or silver, are melted together in a crucible, a gold or silver regulus is obtained, but neither gold nor silver is destroyed or separated here, like iron, copper, tin, or lead. But if a regulus of gold or silver be treated with Monte Schnyder's "Fulmen" (see "Digby's Chymical Secrets"), there can be separated the solar or lunar sulphur and mercury, and a sharp wine vinegar, or rectified spirit of salt (hydrochloric acid), will make them appear by extraction. In the case of gold there ensues a gold-coloured vitriol, like a topaz; but from silver there follow crystals like to transparent nitre. In the fæces is contained a gold or silver salt, which can be extracted with water.

When the calx of gold or silver thus produced is put to digest in a bolt-head (mixed with highly purified mercury), it is said that it will turn it to gold in about six weeks time.

The Golden Purple of Cassius

Dissolve a little gold in common aqua Regis. Into the solution pour a little of our mercurial water, and mix by stirring or shaking the vessel well. Then the mercury of Jupiter, in a magnetic way, continually attracts to itself the gold from the solution, and tinges the water a blood-red colour. At length the gold with the mercury of Jupiter conjunctively precipitate to the bottom of the vessel in the form of a purple powder. This being washed and reduced with borax, the greater portion of the mercury dissipates, but a small portion remains with the fixed gold, and renders it snow-like and friable: by which it may be seen how great an affinity gold has for tin.

Fixation

Yet this is not the way of preparing anything eminent, having efficiency for both. Therefore, if anyone expects a noble product from both, he must with gentle fire fix this purple gold, that the mercury of Jupiter may not fume away, but may remain with the gold.

The Oil or Liquor of Gold

(GLAUBER, part I., p.7, a.)

Dissolve the calx of gold in the spirit of salt, which should be very strong. From the gold abstract half the solution, and there remains a corrosive oil, upon which pour the expressed and pure juice of lemons, when the solution becomes green, and a few fæces fall to the bottom, which may be reduced in melting.

This being done, put this green liquor in balneo, and draw off the water. That which remains take out, and put upon marble in a cold, moist place, and it will be resolved into a red oil. This oil may safely, and without danger, be taken inwardly, curing those that are hurt with mercury, etc. There is not a better medicine in the exulceration of the glands, and in the ulcers of tongue and jaws, or which does

sooner mundify and consolidate. Neither must we neglect necessary purgings and sudorifics, for fear of a relapse, the cause not being taken away.

Neither will there any danger follow, whether it be given inwardly, as in the accustomed use of other medicaments and gargarisms, for it may daily and safely be used at least three times, with a wonderful admiration of a quick operation.

How Gold may be Greatly Increased in Weight

(GLAUBER, Part I., p. 178, a.)

Take one part of gold mixed with five or six parts of lead, and drive away the lead again upon a good test until the gold sparkle and shine, when the gold will be found to weigh much heavier than it did at first, the increased weight being from the lead solely.

The Solution of Gold

(GLAUBER, Part I., p.264, b. *et seq.)*

Gold is stated to be dissolvable by sal mirabilis, and thence a sort of aurum potabile ensues on distillation, but the addition of a certain vegetable sulphur, or carbon, is said to be quite essential to success.

Extraction of Gold or Silver from Lead

(GLAUBER, Part II., p.29, b.)

Dissolve lead in aqua fortis, and precipitate the lead by salt water. Decant the water, and wash and dry the resulting precipitate. To four parts of this substance add one part of pure gold, or its calx. Melt the mixture of the two substances in a crucible, so that the lead may become a fusile stone; but the gold calx by this operation is rendered much heavier, and puts on a white appearance.

This whiteness is nothing else than pure and good silver, drawn out of Saturn by Sol, sympathetically, and made visible, whereas previously it lay hidden in the lead in a spiritual and invisible manner.

A Good Arcanum

(GLAUBER, part I., p.194, a, b.)

Take of copper one part, of gold or silver two parts, and of regulus martis three parts, all which melt together in a well-covered crucible.

When they are melted, and the cover has been taken off; yet warily, that no coals may get into the crucible, cast in as much well-dried and powdered nitre as there is of copper and regulus in the crucible, care being taken that the salt-petre does not boil over the crucible, a thing that may easily happen, as the mixture swells and rises with the heat.

After the saltpetre has acted on the regulus and copper, and has turned them into reddish scoriæ, which occurs in a quarter of, or half; an hour, the heat must be so increased that the scoriæ will melt completely.

The fused mass is then to be poured into a smelting-cup or cone, which is to be first heated and well smeared with wax on the inner side. In the bottom of such vessel, when cold, there will be found a regulus of pure gold, which, being freed from the scoriæ, will be increased in weight by so much as it has attracted from the copper and regulus martis, or the 50th part of the weight of Sol.

The Presence of Gold and Silver in Sea-Water

(GLAUBER, Part I., p.17, b., p.18, a.)

Fill a great copper kettle with sea water, and pour thereon a little dissolved lead. The resulting white precipitate of lead chloride is to be frequently stirred and moved about, in order that the solution of lead may everywhere be in contact with the sea-salt water. Through this action a spiritual gold adheres to the leaden powder, and subsides to the bottom of the vessel together with it.

This powder, being freed from its salt by washing with water, being then dried, and melted in a cupel, leaves a small grain of gold, as a remainder.

For this extraction silver has the advantage over lead.

The Philosophic Stone: How Prepared

Dissolve gold in aqua fortis; add the same weight of our sal ammoniac, and then, by its menstruum, bring the gold into solution.

Gold, being once dissolved with our sal ammoniac, admits not any more melting, nor does it of itself return again into a malleable metallic body, but gets a reddish scarlet kind of colour in the trial (or crucible), and remains an "unfusile" powder. Borax added to this substance, and then exposed to a red heat, melts the gold to a red glass - a clear proof that the gold has been inverted and transmuted by the power of our sal ammoniac.

The So-Called Philosophers' Stone

I. Prepare a quantity of spirit of wine, so free from water that it is wholly combustible, and so volatile that when a drop of it is let fall the same evaporates before it reaches the ground. This constitutes the first menstruum.

II. Take pure Mercury, revived in the usual manner from cinnabar. Put it into a glass vessel, with common salt and distilled vinegar. Agitate violently, and when the vinegar acquires a black colour, pour it off, and add fresh vinegar. Again agitate, and continue these repeated agitations and additions till the vinegar ceases to acquire a black colour from the mercury. The mercury is now, after washing and straining, quite pure and brilliant.

III. Take of this mercury four parts, and of sublimed mercury (corrosive sublimate), prepared with your own hands, eight parts. Triturate them together in a wooden mortar with a wooden pestle, till all the grains of running mercury disappear. This process is tedious, and rather difficult.

IV. The mixture, thus prepared, is to be put into an aludel on a sand-bath, and exposed to a subliming heat, which is to be gradually raised till the whole sublimes. Collect the sublimed matter, put it again into the aludel, and sublime a second time. This process must be repeated five times. Thus a very sweet and crystalline sublimate is obtained. It constitutes the salt of the wise, and possesses wonderful properties.

V. Grind it in a wooden mortar, and reduce it to powder. Put it into a glass retort, and pour upon it the prepared spirit of wine, till it stands about three finger-breadths above the powder. Seal the retort hermetically, arid expose it to a very gentle heat for seventy-four hours, shaking it several times a day. Then distil, also with a gentle heat, and the spirit of wine will pass over, together with spirit of mercury. Keep this liquid in a well-stoppered bottle, lest it evaporate. More spirit of wine is to be poured upon the residual salt, and, after digestion, it must be distilled off, as before. The same process must be repeated till the whole salt is dissolved, and distilled over with the spirit of wine. A great work has now been performed; the mercury has been rendered in some measure volatile, and it will gradually become fit to receive the tincture of gold and silver.

VI. Take this mercurial spirit, which contains our magical steel in its belly. Put it into a glass retort, to which a receiver must be well and carefully luted. Draw off the spirit by a very gentle heat, and there remains in the bottom of the retort the quintessence or soul of mercury. This is to be sublimed by applying a stronger heat to the retort, that it may become volatile.

VII. Take common gold, purified in the usual way by antimony; convert it into small grains or fine powder, which may be washed with salt and vinegar till they become quite pure. Take one part of this gold, and pour on it three parts of the quintessence of mercury. Let both bodies be thoroughly well mixed.

FERMENTATION: - Take of our sulphur, already described, one part, and project it upon three parts of very pure gold fused in a furnace. In a moment you will see the gold, by the force of the sulphur, converted into a red sulphur, but of an inferior quality to the first sulphur. Take one part of this, and project it upon three parts of fused gold. The whole will be again converted into a sulphur, or a friable mass: by mixing one part of this with three parts of gold, you will have a malleable and extensible metal.

Project this upon ten parts of mercury and you have a perfect metal.

Alchemical Processes I, II, III

I. Take of crude antimony 16 oz., of small iron brads 6 oz., and ignite to whiteness in an earthern crucible. When in full fusion, inject, gradually, every quarter of an hour, two spoonfuls of pure, dry, pulverised nitre *(*2 oz. altogether).

II. Take of nitre 1 oz., or 2 oz., of potassa carbonate 1 oz., of martial regulus of antimony 4 ½ ozs., of common salt 1 ½ oz., of tartaric acid in crystals 1 oz.. Pulverise each separately, and mix all well together. Put the whole into a large crucible, and let it melt gently in a wind furnace. Stir it with a red-hot pipe stem, and thoroughly unite the ingredients. When well mixed, pour it into an iron cone.

III. Take of crude antimony 3 scruples (6o grains), of fine gold 1 scruple (20 grains), of steel filings 16 scruples (320 grains). Melt together in a wind furnace. Project, gradually, of Part II., as above, 3 drachms (two spoonfuls at a time, every fifteen or twenty minutes, from a small iron spoon, till the whole 3 drachms are used). The "projection" may have to be repeated ten or twelve times, but nothing should remain except a substance which is red and transparent as a ruby.

Multiplication

Dissolve this transparent ruby stone with common purified mercury, and multiply it *ad infinitum*.

The Alchemical Process, Part II

Take of crude antimony 1 ½ oz., of fine gold ½ oz., of iron or steel filings ½ oz.; the crude antimony must be powdered. Melt these together in a crucible in a wind furnace, and every quarter of an hour project from an iron spoon, or the bowl of a tobacco pipe, about two teaspoonfuls of "sphera Saturni," or "philosophical lead." Continue this projection until the residue at the bottom of the crucible remains as a ruby-red, transparent glass.

The Further Treatment of the "Sphera Saturni"

These pitch-like scoriæ must be changed into amber-coloured scoriæ, by fresh powdering them again finely. Being powdered and weighed, they must be put into a roomy crucible.

Then three times their weight of purified and dried nitre must be projected gradually every quarter of an hour, and the cover put on the crucible.

By this means the pitch-like scoriæ are changed into amber-coloured scoriæ.

The scoriæ must now be "vitrified," which is done by gradually adding the nitre, as above.

The glass which results will then vitrify more aurum in the crucible, and increase it in power.

After this the purified running mercury must be added, and the whole put into a "bolt head," sealed hermetically, and then subjected to a gentle or moderate heat for some length of time.

A Practical Process in Alchemy, Part III

Having made the "sphere of Saturn," powder it, fuse it in a crucible in a wind furnace, and put to it in fusion the proportionate quantity of gold required. This is supposed to make the gold into a "calx."

The gold will melt entirely, and be no more visible, but the sphere of Saturn is then said to be animated with the "soul" of Sol.

Next weigh what remains to be taken out of the crucible, and then powder it while warm. Now take three times its weight of pure, dry nitre (warm), and project this (two teaspoonfuls at a time) on the powdered and animated sphere of Saturn in fusion (every quarter of an hour) till it is all gone. This operation changes it into amber-coloured scoriæ.

Vitrifaction is the next process, which is done by taking equal parts of orpiment and red sulphur, in certain proportions. Put this mixture into a crucible, and lute a cover on it with a hole in it. The mixture must be fused gradually for eight hours. When the vessel is cool there will be found in it a blood-red glass, which has to be powdered and mixed with purified mercury for the next process.

The Alchemical Process, Part IV

No. IV. is hardly likely to prove a complete success at first, and may possibly have to be begun again from the beginning.

When the ingredients mentioned in No.III. are in full fusion, projection is made by putting 3 drachms of Sphera Saturni (II.), by two teaspoonfuls at a time, every fifteen minutes, into the crucible. The projection of the 3 drachms (A ½ W ½) will probably be accomplished only after eleven or twelve times. This part is said to be the most difficult of the process. The contents of the crucible have to be brought to a ruby-coloured glass.

One MS. says that orpiment and red sulphur must be added to effect it. Red sulphur is said to be the "chloride of sulphur" (?).

The proportions recommended are "equal parts of antimony, orpiment, and red sulphur."

If this does not succeed at first, then a repetition of this part of the process is advised (the proportions being altered at this stage).

It is of little use attempting to multiply till the ruby-red glass be made (or, at least, the saffron-coloured).

By putting No. III. again into a crucible, and, when fused, projecting warmed nitre (two teaspoonfuls at a time) every quarter of an hour, the amber-coloured scoriæ may, it is said, be readily produced. But the production of a glass might require another continued fusion.

THE RUBY-RED TRANSPARENT GLASS, described in the alchemical process, above may possibly require for its preparation the addition of a very pure yellow or red sulphur, and also arsenicum in crystals. These two must be well rubbed into each other, and then put into the crucible, together with the other materials.

According to Paracelsus, it is sufficient to continue projecting the philosophic lead till the mixture turns ruby-red, after which it should transmute silver into gold.

Multiplication is then to be effected by the addition of more gold to the vitrum, when the gold itself becomes changed to vitrum. Then the vitrum is to be dissolved by purified mercury, and this mixture put into a bolt-head, and gentle heat applied for a certain time, when it becomes a red powder, which, being put up in a very small quantity, enveloped in wax, and projected on silver fused in a crucible, transmutes it into the purest gold.

There is a strict connection between the Sb. process and the Hg. process. One is a sequel to the other, and the completion of it.

The gold must be made spermatic, and the production of a calx of aurum is quite essential to success in the prosecution of our Art.

When gold is added to the sphera Saturni, it makes it spermatic.

Vitrification is the next essential step. This is done by first powdering the product, then melting it in a blast-furnace, and projecting, every quarter hour, two teaspoonfuls of pure and dry powdered nitre (the whole quantity of nitre used being three times the weight of the sphera used). This is intended to vitrify it, and it should come to a ruby-red and clear glass, or, at the least, to an amber-coloured glass.

This glass must then be powdered; when powdered let the purified mercury be mixed with it; let both together be placed in a bolt-head, and a gentle heat of from seventy to ninety degrees applied, and this for the space of perhaps three weeks, or a full month.

Powdering the sphere of Saturn (to be safe) demands some care; so, like-wise, does the preparation of the purified mercury (by all accounts). The application of a handkerchief to the nose and mouth is by some folk strongly recommended

The Quintessence of All Metals and Minerals

(GLAUBER, Part I., p.6, b.)

Dissolve gold, or any other metal (save silver), in the strongest spirit of salt, and draw off the water in balneo.

To that which remains pour on the best rectified spirit of wine, and put it to digesting, until the oil be elevated to the top, as red as blood, which is the tincture and quintessence of that metal, being a most precious treasure in medicine.

A Golden Aqua Vitæ, Etc.

(GLAUBER, Part II., p. 150, a.)

Take of the best and purest saltpetre, and of white and pure tartar, each one pound; of yellow sulphur, half-a-pound. Bring all to a powder, and, having well mixed them, put them into a crucible, and by putting thereto a live wood coal, kindle them, that they may take fire and burn up, leaving a yellow mass behind in the crucible. This, being molten in the fire, and turned forth into a mortar, will yield a fiery, sulphureous Stone, biting the tongue by reason of its sharpness. Now, whilst it is yet warm, powder it, for it presently attracts (when cool) humidity from the air, and admits not of pulverization. Being powdered, pour thereon two or three pounds of the best spirit of wine, and set it by for some days in a cool place, but with this proviso, that you daily shake or stir your matter in the vessel with the spirit of wine. By this means will the alcohol attract a red tincture out of the sulphur, and will withal actuate itself with the salt, by the calcined tartar. Then, let this spirit of wine be filtered, and draw off two-third parts by distillation in a balneum, that so you may have your spirit again, but this time of a very pleasing taste and smell, which it gets from the sulphur, as out of the centre of all odour.

The Preparation of the Volatile Spirits of Metals

(GLAUBER, Part II., p.162; b.)

Take of the steel wires which the needlemakers cannot use, one pound, which so heat in the fire that all squalidness and filth may be burnt away. Afterwards put them in a glass body, and pour on them of the elsewhere-described dissolving water, a quantity of four or five pounds. Place the vessel in balneo or in sand, and so apply heat that the water in the glass surrounding the steel may wax hot but not boil. Then the water preys upon the iron to be dissolved. For in this operation the steel is dissolved and fermented like new beer or wine. In this fermentation a certain most subtle spirit of Mars ascends, without any corrosive, breathing a very strong odour, and endowed with a taste vehemently penetrating. For such a spirit so penetrates the tongue that the taste long remains, although a man wash his mouth; yet this taste is not unpleasant. By penetrating the body of him that takes it, it provokes a sweat copiously, opens obstructions of the liver, spleen, and lungs and comforts the vital spirits and stomach. Likewise it is admirably conducive to the health of such as are accustomed to drink wine mixed with water, because it gives the wine a grateful taste, and that far better than the best of bitter springs are able to perform. This spirit is much improved by rectification.

The Tree of Gold

(GLAUBER, part I., 7, a.)

Dissolve thin plates of iron in rectified spirit of salt; filter the solution, which is of a green colour, and evaporate to dryness on a sand-bath at a moderate heat. A blood-red mass then remains at the bottom of the vessel, and its taste is sharp and biting to the tongue. It is to be kept in a glass, close-stopped from the air, lest it be resolved into an oil, which then becomes of a yellow colour. That red mass, being put upon the oil of sand, or flints, makes a "tree" to grow in the space of one or two hours, having root, trunk, and boughs. This being taken out and dried, in the test yields good gold, which that tree extracts from the stones or sand. Thou mayest, if thou pleasest, more accurately examine this matter.

The "White Work" or Lunar, or the Silver Process

It is recommended by some teachers to begin by trying this process first, repeating the experiment of projection with the addition of silver, till the process can be well made sure of, and then trying the gold process (as performed and recommended by Flamel).

Silver Exalted to the Nature of Good Gold

(GLAUBER, Part I., p.177, a.)

This gradation of silver is performed by the help of a certain mineral sulphur, to wit, of iron and antimony, and that in this manner:

Adjoin to silver as much regulus martis, and again let it be separated from it by nitre, which labour is performed in the space of an hour. To the remaining silver adjoin again as much regulus, which is again to be abstracted, and let this labour be repeated 5, 6, 8, or 10 times, which may be done in one day. Afterwards let the silver be dissolved in aqua fortis, for then the gold which the nitre, by means

of the silver, has obtained from the regulus, will remain at the bottom, and is to be edulcorated and corporified with borax.

The gold will prove of an excellent quality.

An Universal Menstruum

(GLAUBER, part I., p.163, b.)

Take two or three pounds of menstruum (nitre?) whereof the corrosive nature transmutes, by force of fire, into a nature non-corrosive, and the menstruum is prepared, with which this medicine is to be elaborated, in the following manner.

Dissolve in this menstruum as much of the first ens of gold as it will attract in the heat, and so that a red solution may be made, which digest for some days with its own weight of the dissolving wine. Make separation of the pure parts from the impure by removing the fæces which sever themselves from the medicine by falling to the bottom. This, being concentrated by an easy heat, will be a red pellucid stone, very like to a soluble salt, and is to be carefully preserved.

This medicine will be found second to none, except the Stone of the Philosophers, and will be of the same goodness after a hundred years that it possessed on the first day it was made.

The Preparation of a Most Efficacious Medicine

(GLAUBER, part II., p. 152, b.)

Take of new and strong-smelling myrrh, of the purest and clearest aloes, and of the best English saffron, of each one, two, or three ounces. Beat them all into powder, and pour thereon the strong, operative, and volatile spirit of Mars, dissolving as much thereof as will dissolve. To the solution add a little of "my secret ferment," which will cause it presently to ferment. The alembic or retort must be air-tight with the receiver.

As soon as ever the ferment is added to the solution it presently begins to ferment, and the glass being placed in balneo, and heat applied, the volatile spirit of iron ascends readily and nimbly, like spirit of wine, much inferior thereto as to its heat, but yet of a far more penetrating efficacy. The spirit being all ascended, evaporate to the consistence of honey, but yet so gently that the remaining juice may not smell of burning. This done, take out the glass, let it cool, and pour upon the juice, after cooling, the same volatile spirit of Mars which was at first separated by distillation, which spirit will dissolve that thick juice, and this, being dissolved, will become a balsam of a strong odour, of penetrating efficacy, and of a red colour like blood. It must be kept well shut, and may be truly accounted as a balsam of life, for it takes away the obstructions of the whole body, does mightily corroborate and strengthen all the internal vessels and members, and preserves them safe from all corruptions. No other balsam can compare with it.

Dose (after purging and short fasting): One, two, three, four, to ten or twelve drops.

The Preparation of the Dissolving Water for Metals

(GLAUBER, part II., p. 162, b.)

Take of common salt one pound, which dissolve in four or five pounds of common water, and pour upon it half a pound of oil of vitriol, to which superadd some steel wire, fragments, or turnings, and thence, by distilling, separate the water. Then no sharp spirits will ascend with the water, but all the corrosivity will remain with the Mars, and nothing ascend but a subtle spirit, void of corrosion. This moves to admiration, namely, that of such a hard and fixed metal, with the help of so gentle a heat, should ascend such a flying and penetrating spirit. But it is more to be admired that this white, volatile, and penetrating spirit, in a few hours space, is able to change itself into a fixed red tincture.

Fill a glass body above half-full with our spirit of Mars, yet take no more of it than five or six pounds, as that would be more than is needful for probation. Place the body, with its head well luted, in sand, and distil almost all the water by ascent, so that only half a pound may remain in the bottom. Take what ascends out of the receiver, and it will be found to have little more taste than rain-water, and that because the volatile spirit in this abstraction or decoction is separated from the water, and again converted into a fixed body, viz., a most red powder, which red powder is, indeed, a true tincture, yet it has no ingress into metals - unless that be procured to it by the aid of gold.

Hence is fulfilled the precept of the philosopher's teaching: "Make the fixed volatile, and the volatile fixed."

N. B. - Ten pounds of the water yield but one scruple of our sulphur.

A Preparation of the "Alkahest"

(GLAUBER, Part I., p. 153, b.)

Take three parts of pure and pulverised nitre, to one part of regulus martis. Place the mixture in a clean glass vessel, and, by a prudent increase of temperature, make it boil gently in a fixatory furnace; in this degree of heat leave it five or six hours. Then take it out that it may cool, and pour on it pure water and the nitre, which by the regulus of antimony comes out fixt. Wash out, and, lastly, abstract the water; so there results a fiery liquor, fit for use in metallic operations.

N. B. - This fixation may be as well made in covered crucibles as in glasses, and is good enough, only the management of the fire must be regulated, and the heat at first must not be too intense, lest the nitre evaporate before it be brought to a fixation, in conjunction with the antimony.

The Praxis

All metals in their proper corrosive menstruums must be dissolved, precipitated, washed, and dried, and then, lastly, with the alkahestic liquor poured on, must be digested, dissolved, and with spirit of wine, separated and reduced into, or brought to, a potability.

A Preparation of the Alkahestic Liqour

(GLAUBER, Part II., p.98, b.)

Take of pure saltpetre, and such as is free from all common salt, one pound, put it into a well-burnt pot or crucible, and set the cover on; place it in a wind furnace, urge it so long with coals that it may attain unto redness, and all the nitre flow. Now throw in a little powder of good charcoal, so that it burns

away at the expense of the saltpetre.

This coal-powder being consumed (converted into carbonic acid), throw in some more of the same, and proceed thus by casting on coal-powder till the said coal-powder no longer shall make fire with the nitre, and the nitre shall appear of a greenish and sky colour. Then pour it out molten into a heated recipient, and allow it to cool. Beat this salt to a powder, and put it into a glass, or else set it in some moist, cool place, and in a short time it will run to a clear and fiery liquor, which bottle and keep for use.

The Preparation of the So-Called Alkahest

Take freshly prepared caustic lime, and, if possible, still hot or warm. Powder it quickly in a dry place, and put it into a retort. Add as much absolute alcohol as the powder will absorb, and distil the alcohol at a moderate heat, until the powder in the retort is perfectly dry. The distilled alcohol is now to be poured again upon the lime, and distilled, and this operation is to be repeated ten times.

Mix the powder with the fifth part of its weight of pure carbonate of potassa. This must be done very quickly, and in a dry atmosphere, so that it may not attract any moisture. Insert this mixture of the two powders in a retort, and heat it gradually, after putting about two ounces of absolute alcohol into the recipient. White vapours now arise from the powder, and are attracted by the alcohol, and the heating is to be continued as long as this takes place. Pour the alcohol from the receiver into a dish, and set it on fire. The alcohol burns away and the alkahest remains in the dish. It is an excellent medicine, and is used in the same manner as is the primum ens melissa.

NOTE:

On account of the great powers contained in the limestone, Paracelsus says that many a man kicks away with his foot a stone that would be more valuable to him than his best cow, did he only know what mysteries were put into it by God, by means of the spirit of Nature.

Spirit of Wine of the Wise (Alcohol)

(The Physician's Commentary on Basil Valentine)

Take four ounces of thrice sublimed salt of ammonia, and ten ounces of the Spirit of Wine distilled over salt of tartar, so that it is quite clear. Place in phial over digestive fire, until the spirit of wine is filled with the fire or sulphur of the salt of ammonia. Distil thrice, and this constitutes our spirit of wine.

And over a circulatory fire, it may become a useful and efficacious medicine.

The Preparation of a Golden Spirit of Wine

(GLAUBER, Part II., p.139, b. 140, a.)

Take white or red tartar, dissolve it in water, and separate all its gross sulphur by a certain precipitating matter (Lixivium). The impurity, thus abiding in the water is to be separated from the precipitated tartar by pouring out the water. The tartar remaining at the bottom like a snowy sand, is to be well purged by repeated washings with water until the powder itself puts on a snowy whiteness. This

process of precipitation and washing must be repeated until the addition of fresh lixivium to the clear solution no longer gives rise to any more black feces.

Dissolve some pounds of this pure and acceptable tartar in cold water, so as to make it sufficiently acid. Put this solution in some warm place, or in horse-dung, or in a warm balneum, that the tartar may begin to putrefy, may lose acidity, and acquire a sort of sweetness, for which, before it come to be, there is required the time of some months.

After it has lost its acidity, all the water present is to be evaporated per balneum, until it become a thick and black juice, like honey. This being set in the glass in sand, and being urged with a stronger heat than was made in balneo, will yield a fiery spirit, such an one as will mix with gold dissolved in spirit of salt, will separate the pure parts by digestion, attract them to itself from the more gross parts, and so will perform its office in medicine even to most high admiration.

Fixation and Purification of Sulphur

(GLAUBER, Part III., p.3, a.)

Take common yellow sulphur and reduce it to a fine powder. Mix it well with powdered salt in excess. Then distil it, and from it abstract, three times, a most strong aqua fortis, or spirit of salt. So the sulphur remaining in the bottom will be of a black colour. This wash with pure water, and frequently distil the water thence until the same comes off wholly pure, and smells no longer of sulphur.

Then take the sulphur, and reverberate it in a close reverberatory, with antimony. In reverberating it will shew itself first white, then yellow, and then red, as cinnabar.

Having brought it to this pass, thou mayst rejoice, for this is the beginning of thy riches. For this reverberated sulphur, in tinging, renders every silver into the best gold, and the human body into perfect health, more excellently than can be described. Of such great virtue is this reverberated and fixt sulphur.

The Tincture of Silver

may be exhibited in all diseases, for comforting the heart, the brain, and all the internal members of the body, because it is most excellent, especially in affections of the lungs. Also it is the most penetrating and salutiferous of balms for curing everybody internally hurt, and for restoring all vitiated members to their pristine sanity.

Lastly, it may very well serve instead of an aurum potabile.

How to Fix Common Combustible Yellow Sulpher

(GLAUBER, Part II, p.214, a.)

The whole art of this royal work consists solely in uniting the said sulphur with spirit of wine, and then burning it away under a helm, to catch the incombustible heavenly salt, or permanent water of life, which, with gold, becomes coagulated and fixt to a tinging stone.

This heavenly salt, as soon as, by the flame, it is separated from the sulphur, is true universal medicine against all the diseases of mankind. But, when united with gold, it obtains ingress into and tinges Lune, and coagulates Mercury into Sol.

Now, to join sulphur with spirit of wine (wherein the whole art and mastery consists) is an easy thing, and may be effected in this manner.

For aqua fortis, or for spirit of salt, to have any ingress into sulphur, that is first of all procured by the aid of salts. For then the artist's endeavour will succeed well, and the sulphur in abstraction of the acid spirit will be fixt, and also wax white. But redness is afterward given to it in an open fire, or fire of reverberation. And it will never wax red in a close vessel, how long soever it stands in the fire. When it is thus red, every common spirit of wine extracts not its tincture, because it has no ingress into it, but the fixt red sulphur must first be melted with fixed salt of tartar in a very strong fire. In this way there is given it such an ingress that any spirit of wine can extract from it its tincture.

The Fixation of Sulpher

(GLAUBER, Part II., p. 27, b.)

Take one part of yellow sulphur, beaten into powder and four or five times its weight of concentrated nitric acid, which spirit pour upon the said powder in a glass cucurbite, or retort, and abstract it therefrom several times by distillation. This done, the sulphur gets a red colour, and becomes pellucid or transparent.

If it resolves, in the air, into a fat oil, the operation is well conducted; if not, the process is to be repeated.

How To Fix Sulpher with Saturn

Take one part of common sulphur; mix it with three or four parts of lead ashes; put this mixture into a strong earthern cementing box, and lute it with a good strong lute that will not crack.

When the lute is dry, put it into a cementing furnace, or into such a fire that in the beginning will only melt the sulphur, so that it may penetrate the lead ashes, and hide itself in them, and thus be initiated to the fire. Then by degrees increase the heat from day to day, till at last the crucible comes to be of a dark red. Then further increase the heat, and continue thus till the sulphur becomes quite fixed with the lead ashes, and constant in the fire.

This requires from eight to ten months' time: during which time the sulphur becomes fixed, and has tinged and fixed its body, the lead, as much as it can, for it is not possible for it to fix all the lead after this manner into gold and silver, but only part of it, yet so that a hundred-fold profit is made out of it by proceeding rightly in the matter.

The Purification of Mineral Sulpher

(GLAUBER, Part II., p. 124, b.)

Take common brimstone, sublime it in the usual way (flowers), or by itself in a coated glass retort, or

let it be mixed with decrepitated salt, for so will it be freed from its most crude terrestricity, and be rendered fit for a further mundification by an acid spirit.

Take one pound of these flowers of sulphur, and put it into a strong glass body, coated; then pour in one or two pounds of the spirit of nitre, or of the spirit of common salt, and place it in an earthen vessel in sand. Then put it under a fire, increasing it gradually, until the spirit of salt boils in the retort, and the sulphur melts, when there will swim somewhat like oil on the top of the water.

N. B. - An alembic is to be put on the glass body, lest the spirit of salt, ascending up, disperses in fume, but in the alembic it will be refrigerated, and condensed, and may thus be saved.

This boiling or digestion is finished in some five or six hours, and so the sulphur is mundified, and becomes as clear and transparent as glass.

A Process for the Purification of Mercury

The purest mercury revivified from cinnabar is to be dissolved in as much aqua fortis as is necessary.

Into the solution pour gradually as much solution of sea salt or hydrochloric acid as is necessary to precipitate the mercury, and the result is a white calx of mercury. Wash this well with water, and dry the calx.

Mix the dried calx with one, two, or three parts of its weight of stone lime, and half a part of rye or wheat flour. Then distil the mixture by means of a retort.

The distilled mercury, unless perfectly clean, may be passed two or three times through chamois leather.

This revivified mercury is bright, like the firmament, and dissolves gold in a very short time, even by rubbing, and without heat. The whole process may, with advantage, be repeated two or three times. Such mercury will be wonderfully pure. The aqua fortis solution must always be diluted with clean water before precipitating. Ordinary mercury contains crudities which it deposits in the water. Weigh the purified mercury, and it will be observed to have diminished by the quarter part or more of its weight, because whatever impurity there was in the mercury (though it be virgin running mercury) remains in the water, and cannot be precipitated.

But, to prove this truth, evaporate the water which was poured off from the precipitate, and there remains a sediment as black as ink. Purify, therefore, the mercury, and it is fit for all operations, and is a master over all metals.

Common Mercury Purified, and then Fixed

(GLAUBER, part III., p.70, a.)

Take of crude mercury and fine Jupiter each one pound. Melt the Jupiter in a crucible, and when it begins to cool pour the mercury upon it, when the heated Jupiter will take to itself the mercury, and become an amalgam, which amalgam must, with dried and purified nitre, be ground upon a stone.

This done, take of the strong fluxing powder the same quantity as the amalgam and nitre; grind them well together, and then the mixture is ready for kindling. But the operation must be so conducted that the poisonous fumes shall be carried away from the operator into the open air. The mixture may be put into a strong earthern pot, and after detonation there remains a mass difficult to flux, which being cupelled, and separated by aqua fortis, affords a considerable quantity of Sol and Lune, abundantly recompensing the cost and labour of the operation.

After the mixture is kindled, the matter must be often stirred with a red-hot iron, so that no part may remain unkindled, but that the whole may be red-hot throughout.

The Fluxing Powder

Take of sulphur one part, tartar two parts, and nitre three parts; mix them well together. The different substances must be as pure, dry, and fine as possible.

The Mercury of Metals, and its Preparation

(GLAUBER, part III., p.13, a.)

Take of tartar, calcined to whiteness, one pound, which, reduced to powder, put into a glass retort, well luted. Then apply a receiver, and lute the junctures exactly. When the retort is placed in warm sand, through the tubulure pour about an ounce at a time of the sharp spirit of vitriol upon the calcined tartar, whence will be caused so great an ebullition that, by its own proper power, the spirit will ascend from it. Repeat the injection in the same small quantity till complete neutralisation ensues. When this occurs, administer fire, and by degrees draw forth all the humidity, until the vessel and matter are red-hot. The water that ascends must be rectified, by which the mercury of the vitriol is rendered more subtle and more pure. This pure mercurial water bears in itself, invisibly contained, a living metallic mercury, which is made manifest thus:

Dissolve common gold in aqua regis, and separate the dissolved from the undissolved. Then, leisurely, and drop by drop, pour the subtle and mercurial water upon the solution of gold, until the spirit of the mercury has no more action upon the solution of gold, but ceases, and all the gold is precipitated from the water; in which precipitation the gold attracts to itself the mercury of the vitriol, from the mercurial water, in such manner that it settles to the bottom of the vessel in the form of slime, or a yellow powder. Next proceed to filter, wash, and dry. The mercury of vitriol is now united with the gold, and both suffer themselves to be fixed into a true tincture for human and metallic bodies.

The Fixation of Mercury with Gold

(GLAUBER, Part III., p. 13, a.)

Before the Mercury is put in to be fixt with the gold, it must be proved whether it be prepared duly or not. For, if the mercurial water was rightly prepared, it will contribute mercury enough for the gold, and by this mercury the precipitated gold is so augmented that it is no longer common gold. But if the mercurial water was not legitimately prepared, and consequently could not contribute much mercury to the gold, the gold remains poor, and, as soon as it is sensible of any heat, fulminates, and so is altogether unfit for fixation, being destitute of tinging mercury, which should have converted the whole body of gold into tincture.

Wherefore, after precipitation of the gold and mercury, a small portion of the precipitate must be heated in a small crucible, by way of trial. For, if it fulminates, it is a sign that the mercurial water was not perfect, and could not yield the gold mercury enough. But if, after it be red-hot, it comes forth with a delicate purple colour, it is to be supposed that the gold has imbibed mercury enough, and that they are both fixt together into a tincture.

The fixation is to be effected by placing the matter in a small glass phial in sand; the heat must be moderate and well sustained, and must be continued for the space of several weeks.

If well prepared, this mercury of metals should tinge a silver plate of a purple colour, when the plate is properly heated.

The Mercury of the Philosophers

(GLAUBER, Part II., p.182, a.)

Take of the filings or raspings of a metal, as Mars, Jupiter, or Venus, one pound, with which mix half pound of our salammoniac. If these be well combined, and distilled by retort, the metal will be corroded by the acidity, and the mercury thereof will be freed from its bonds, or be separated by distillation, because the spirit of urine carries that up with itself, invisibly, but, when the Spirit is extracted from it, it then becomes visible.

The Mixed Mercuries of Mars and Jupiter

(GLAUBER, Part II., p. 182, a.)

Whenever the spirit of Jupiter (most subtly rectified) is poured upon the spirit of Mars, the mercuries, both of the iron and tin, will suddenly combine, and be so strongly attracted together that, quitting the water, they will conjunctively settle to the bottom of the vessel, in the form of very small golden atoms, which golden atoms, at the moment in which they are formed of both the mercuries, shall be seen to be converted into constant and fixt gold.

This I take to be one of the greatest wonders that ever came to hand in all my chemical labours.

Mercury out of Metals by Tartar Only

(GLAUBER, Part III., p.14, b.)

Take of filings of steel, one pound; tartar, two pounds: common water, twenty pounds. By strong boiling in sand, separate all the water. The tartar in the act of boiling dissolves the iron, and so will volatilise the mercury set at liberty, in such wise that it ascends with the water as a subtle spirit, which, concentrated and made fit by rectification, may be rendered corporeal, by means of solution of gold, or by other means.

By adding to the tartar half as much sal ammoniac, the tartar the more readily preys upon the mercury; also much more mercury issues thence than by tartar only.

The Common Mercury made Tinging

Take of common mercury, one pound. Dissolve it in aqua fortis. Neutralise with ammonia, evaporate to dryness, and then heat more strongly. The mercury then sublimes in the neck of the retort. Such a sublimate is readily dissolved by water. This mercurial water is endued with a power of extracting tinctures from metals, gems, and other stones.

In this work even Proserpine, the wife of Pluto, can scarcely elaborate anything more excellent. Therefore, when this mercury has drawn so much blood from the red lion as to change from white to red, then, indeed, it has acquired the amelioration of a higher degree, but as yet it is able to perform no miracles in tinging. That it may be exalted to so great perfection, the whole process must be repeated ten times, and fixation effected.

A Tinging Mercury out of Antimony

Take of antimony, saltpetre, and tartar, each one pound, which, pulverised and mixt, put into a crucible, and kindle the mixture with a coal. When the deflagration ceases, melt it, and pour it into a cone. After it is cold, separate the regulus from the scoriæ, which reduce to powder, and dissolve by boiling in water. A red lixivium results, to which add half its weight of sal ammoniac in powder, and put the mixture into a glass retort, tight-fitted to a receiver, and now distil, when a certain most subtle and volatile spirit ascends, in which the mercury is latent, which also, in a solution of gold, may be precipitated, edulcorated, proved, dried, and fixt, as with the mercury of vitriol, and over which antimony has the advantage in point of quantity and of ease of manipulation.

A Tinging Mercury by Resuscitatives

Take six pounds of vitriol, to which, dissolved in urine, add of sal ammoniac one pound, crude tartar, two pounds, salt of tartar four pounds. Distil from these, in a strong glass vessel, a subtle mercurial water, which, according to the method prescribed, may be made corporeal, and may be fixt with gold into a tincture.

This way of working is easy, and of small expense, so that it may well satisfy the desire of those who are content with what may be acquired by the use of glass vessels.

The Fundamental Process of Art

(GLAUBER, Part III., p.46, b.)

Take one pound of steel wire or filings, more or less, as is convenient. Dissolve it in spirit of salt. Filter the solution, and abstract the water until an oily appearance ensues. Add a like proportion of corrosive oil, or butter of antimony, well mixt together. Distil the mixture, by a sand-bath, in a coated glass retort. When yellow oily drops appear, increase the heat till they shew blood-red. This blood-red oil of Mars and antimony (Proserpine) is the golden branch of Virgil, plucked from the obscure tree, which may be fixed into tincture. When we pour our alkahest upon this red oil, and again draw off the liquor by retort at a gentle heat, and at length give a stronger fire, then the most subtle and purest part of the tincture comes over, and the grossest part remains behind, which is a universal purge.

The subtle portion may yet be made purer and nobler by rectification, and then may afterwards be

dulcified from its salt.

Dry the anima martis and antimony. Put them into a strong glass, and with an easy sand heat melt into a red stone. This stone melts as quickly as wax, and has an easy ingress into all metals, even as oil has into dry leather.

This stone has not its equal, for it is better than the fire stone of Basilius, and it is better than Butler's Stone, to which Helmont has ascribed such wonders.

(N. B. Our secret sal ammoniac answers better than corrosive oil.)

The Coagulation of the Red Oil of Mars and Antimony

(GLAUBER, Part III., p.49, b.)

Take a pound or more of raspings or filings of lead, and put them into a glass retort, well coated. Pour on to them half the quantity of the red oil of Mars and antimony. Set in a sand cupel, and give fire gently by degrees, when there will come over no red oil, but only a clear and insipid water, for all the sharpness, with the red tincture, will remain with the lead. In the retort will be found no lead, but this red, tinging, and easily melting stone, of such virtues as those already described.

The Final Process

(GLAUBER, Part III., p.50, a.)

Take three or four ounces of our oil of Mars and antimony, coagulated into a red stone by the aid $_{9}$f lead. Grind it to an impalpable powder, and draw off from it ten or twelve ounces of the strong aqua fortis which has been first abstracted from decrepitated sal, and in which is dissolved half an ounce of gold.

Secondly, and thirdly, abstract from it again fresh aqua regis, but without gold. Then the gold radically unites itself with the tincture of the Mars and antimony, and they are constantly fixed together by means of aqua regis. When this is done, pour upon it a good quantity of common water. Let it boil for some hours, and it draws out the sharp spirits which remained with the tincture. This may be once or twice repeated; then dry it, and it is fit to tinge silver into gold.

This tincture melts as easily as wax. The lead does not hinder it, it is true: it goes into the silver with the tincture, but is easily separated by the cupel. This tincture of antimony and iron, by the help of our Alkahest, might be made into a constant tincture, so that in three or four days' time the said tincture would graduate Luna into Sol.

How Tartar is Rendered Pure and Soluble

(GLAUBER, Part II., p. 160, b. ; p. 161, a.)

By burning two pounds of tartar, reduce it to a white salt, which, dissolved in water, forms a lixivium. This lixivium, poured upon one pound of tartar, and boiled together with it, dissolves the tartar, and separates the binding or fixing sulphur from the salt. Then pour on one part of common tartar, boil them together yet once, and filter the boiled liquor through paper. Then in the bottom will remain the

sulphureous fæces, and the water of tartar will pass through yellowish. Upon this water pour distilled vinegar, to neutralise the lixivium. This being done, the vinegar will also be coagulated with both salts, and will be changed into one salt, which salt is of great use and benefit both in medicine and alchemy.

That feculent slime which adhered to the sides of the filter should not be cast away, but endeavour made to fix it. For then some admirable discovery may possibly be made, because that is the genuine coagulator of running waters, which it hardens, and it is joined in a singular familiarity with metals, especially with Sol, as has, with admiration, been experienced. For, in a few hours, it tinges Sol with whiteness, and turns it into brittle glass.

Sulpher Transmuted into Gold

Dissolve common sulphur, or any vegetable carbon, in common salt. This solution will make the sulphur of a red colour.

Keep this solution for at least one hour's space in the fire, and a little of the sulphur will be found changed into gold. To the red salt adjoin the calx of Saturn. Melt them by fusion into one body, and reduce the lead by cupel, when a grain of gold remains.

How to Imitate Natural Precious Stones

(GLAUBER, Part I., p. 412, b.)

Adjoin to the red salt, made of wood or carbon, a little of the powder of white flints. Put them into a crucible, and melt them in a fire that they may become a red glass, resembling almost the colour of a ruby. By continuing the fusion the red colour changes to green, and has the likeness of an emerald. After this comes a sky colour, resembling a sapphire. Then follows a yellow, not unlike a jacynth. Then, after a long continued heat, it becomes black, and like to an agate.

The Preparation of the So-Called "Primum Ens Melissa"

Take half-a-pound of pure carbonate of potassa, and expose it to the air until it is dissolved (by attracting water from the atmosphere). Filter the liquid, and put as many fresh leaves of the plant melissa, or balm, into it as it will hold, so that the liquid will cover the leaves. Let it stand in a well-closed glass, and in a moderately warm place, for a period of twenty-four hours. The fluid may then be removed from the leaves, and the latter thrown away. On the top of this liquid absolute alcohol is to be poured, so that it covers the former to the height of one or two inches, or until the alcohol becomes of an intensely green colour. This alcohol, or spirit of wine, is then to be taken away and preserved, fresh alcohol is put upon the alkaline liquid, and the operation is repeated until all the colouring matter is absorbed by the alcohol. This alcoholic liquid is now to be distilled, and the alcohol evaporated until it becomes of the thickness of syrup. This is the primum ens melissa. But the alcohol which has been distilled away may be used again and again.

The liquid potassa must be of great concentration, and the alcohol of great strength, else they would become mixt, and the experiment would hardly succeed.

A Vegetable Elixir

In the proper season of the year, when the herb is at its full growth, and consequently its juices are in their highest vigour, gather, at the fit time of the day, a sufficient quantity of balm. Wipe it clean, and pick it. Then put it into a stone mortar, and, by laborious beating, reduce it into a thin pap. Take this glutinous and odoriferous substance, and put it in a bolt-head, which is to be hermetically sealed, and then place it in a dunghill, or some gentle heat equivalent thereto, where it must digest for forty days. When it is taken out, the matter will appear clearer, thinner, and have a quicker scent. Then separate the grosser parts, which, however, are not to be thrown away. Put this liquid into a gentle bath, that the remaining gross particles may perfectly subside. In the meantime, dry, calcine, and extract the fixt salt of the grosser parts, separated as before mentioned, which fixt salt is to be added to the liquors when philtered. Take next, sea salt, well putrefied; melt it, and by setting it in a cold place, it will run and become clear and limpid. Take equal parts of both liquors, mix them thoroughly, and, having hermetically sealed them in a proper glass, let them be carefully exposed to the sun in the warmest season of the year, for some six weeks. At the end of this space, the primum ens of the balm will appear swimming at the top like a bright green oil, and this is to be carefully separated and preserved. Of this oil, a few drops taken in a glass of wine, for several days together, will bring to pass those wonders that are reported of the Countess of Desmond, and others; for it will entirely change the juice of the human body, revive the decaying flame of life, and restore the spirits of waning youth.

A Golden-Yellow Tincture from White Nitre

(GLAUBER, Part II., p.169, a, b.)

Take of the hairs of a sound man, or of any animal, well washed and cleansed, four ounces. Upon which pour of most strong and well rectified spirit of nitre, one pound, and the spirit will totally dissolve the hairs. Upon this solution pour by degrees so much oil of tartar as will be sufficient to neutralize the spirits of nitre, and totally deprive them of their corrosive power. But the addition of oil of tartar should not cease till the acid spirit acquires a rich golden colour. This being so, filter the solution through paper. If now from this liquor, in a glass vessel set in balneo, all the water be extracted, in the bottom of the glass will remain a red salt, from which, if there be added good, strong spirit of wine, an almost clear solution results. Further, if one-half of the spirit be abstracted from the tincture, then a yellow oil is obtained, which, if it be rubbed upon good silver, the metal acquires the yellow colour of Sol.

The fixation of this tincture will amply repay the time bestowed upon it.

A Species of Sophic Stone from Carbon

(GLAUBER.)

If any mercurial salt be added to charcoal in a due weight, and be closed with it in a crucible but one day, and kept in the fire, the coal will be changed into a red, fiery, and heavy stone, more metallic than vegetable, and possessing admirable virtues which the tongue cannot declare.

The White Swan of Basilius, or the Fulmen of Jove

(GLAUBER, Part I., p. 201, b.; p.202, a.)

Take one part of tin, melt it in a crucible, and when it is melted, take the crucible out of the fire. Pour out the melted tin into another earthen vessel, and mix therewith one part of quicksilver, which will be presently absorbed by the tin, but the tin will become so brittle and friable, that it may be ground to fine powder upon a stone.

With this fine powder mix two parts of pure and dry saltpetre, by grinding them well together, till the amalgam cannot be known from the nitre, but one white powder is made of both.

This fine powder, or impalpable mixture, divided into equal portions (not exceeding one oz.) is to be cast into a red-hot vessel, or retort, the resulting vapours allowed to condense, and then another powder follows. The mass remaining in the bottom of the retort may be brought to metal by reduction with carbon, the process with nitre being repeated, till half the original regulus be brought to scoriæ. But if now gold be added to the metals thus employed, then a purple anima of gold and mercury results, which, digested to fixation, may be made to furnish the salamandar constant in the fire. The purple anima of gold and mercury, which has passed into the receivers, I free from the flowers of tin by washing with water, filtering it through paper, coagulating it, and then fixing it into a tinging stone. And I doubt not but that some good thing will thence proceed.

The Preparation of the Oil of Sand or Flints

(GLAUBER, Part I., p. 44, b.; p.45, a.)

Fuse together (at a red heat) one part of powdered sand or flints, and three or four parts of pure and dry potassium carbonate, until the mixture comes to be a clear, transparent glass, wherein lies hidden a great fire and heat. As long as it is kept dry from the air, the same cannot be perceived in it, but if water be poured upon it, then its secret heat discovers itself. If this fused and transparent clear glass be powdered in a warm mortar, and then exposed to the air in a moist place, it melts and runs into a thick and fat oil. This fat liquor or oil of flints, sand, or crystal, may not only be used inwardly and outwardly by itself, but it also serves to prepare metals and minerals into good medicines, or to change them into better by chemical art.

Tincture of Venus appears in the form of a deep red salt, which tincture performs whatsoever has been attributed to the tincture of Mars. In the same way a fixed tincture may be had from common combustible sulphur in three days' time.

A Rapid Fulmen, Changing Iron and Steel into Good Gold

(GLAUBER, Part III., p. 71, b.)

Take of fluxing powder four or five drachms; mix with it an ounce of aurum fulminans, precipitated from aqua regia, not with salt of tartar, but with salt of ammonia. With this fulmen and steel needles make S S S in a crucible.

Let not the needles be above one ounce weight, else the fulmen will not be able to graduate them wholly into Sol, or gold.

A Red Tinging Stone

(GLAUBER, Part III., p.3, b. ; p.4, a. and p.82, a.)

Take either sea coals or wood coals, powdered; good saltpetre; common salt; and oil of vitriol, of each a like quantity. Put these four things into a glass retort, well coated. Fit a receiver to it, and in an open fire distil off all the humidity. Urge it at length with the strongest fire, and a green liquor of sulphur comes over, which the ancients called the "Green Lion," and the same dissolves gold. When they are digested a good while, or the green liquor is often abstracted from the gold, then they are fixed together, and the liquor of sulphur, together with the gold, turns into a red tinging stone.

Is It Carbon, Or is it Only a Vegetable Sulphur?

(GLAUBER, Part II., p.48, b.)

Put the green or white juice of the wood or coals extracted by the sal in a glass retort, with some sal ammoniac; draw off all the water by distillation, and the spirit of the sal ammoniac brings over the vegetable sulphur of a golden colour. It is a most penetrative spirit, and of wonderful efficacy in medicine and alchemy.

Being very volatile, it must be carefully secured.

A Red Carbuncle Prepared from Charcoal and Sal Mirabile

Melt two or three ounces of sal mirabile in some pot or crucible, and throw in a piece of wood-coal or charcoal. Put on the cover, and let the mixture flow for half an hour, or an entire hour, so that the salt may dissolve as much of the coal as it can, and may leave the rest of it undissolved. Then pour out the matter, and there appears a red stone of salt, which has a hot taste, as most alkaline salts are found to have.

This red carbuncle, being dissolved in water, yields a green solution, which, being filtered and let stand for some hours, appears of a white colour, and, on further standing, acquires a yellowish colour. One drop thereof gilds over an imperial even as sulphur does, if it be therein put.

If any acid be poured into the white solution of the coals, and that little by little, until the alkaline salt be neutralised, a sediment will precipitate in the form of a white powder, which, separated from the salt, and washed and dried, burns away, and answers exactly to the mineral sulphur.

Another Mode of Demonstration

Take the red carbuncle out of the melting-pot, beat it into a fine powder, and mix therewith half its weight of sal ammoniac, powdered. Draw off by a glass retort, so that the sal ammoniac may bring over with it the said sulphur. Wash off this red matter with ordinary water.

Yet Another

First of all, exactly melt the coals by the sal mirabile in a melting-pot, so that the salt be accurately alkalizated by the coals, and taste sharp. Now treat the powdered mass with anhydrous alcohol, and put the glass to digest in hot sand. Well shake the vessel now and then, so that the spirit of wine may

extract the sulphur, and leave the salt untouched. The alcohol becomes as red as blood. Exhaust the matter with fresh spirit. Now distil the extract, and there results a sweet oil of a blood-red colour, an excellent medicine of sweet odour and taste, and little inferior to that named potable gold. This oil has its use in Alchemy as well as Medicine.

The Preparation of the Sweet Oil of Vitriol

(GLAUBER, Part I., p. 21, b.)

Commonly in all fat soils or clayey grounds - especially in the white - there is found a kind of stone, round or oval in form, and in size like to a pigeon's or hen's egg, and smaller also, viz., as the joint of one's finger. On the outside this stone is black, and is therefore not esteemed when it is found, but cast away as a contemptible thing; but if it be cleansed from the earth, and beaten to pieces, it looks within of a fair yellow, having streaks, like a gold marcasite, or a rich gold ore, but there is no other taste to be perceived in it than in other ordinary stones, and although it be made into powder and boiled a long time in water, yet it does not alter at all, nor is there in the water any other taste or colour than there was at first (when it was poured upon the stone) to be perceived.

Now this stone is nothing else but the best and purest minera (or ore of vitriol), or a seed of metals, for Nature has framed it round, like unto a vegetable seed, and sown it in the earth; out of this there may be made an excellent medicine, as follows:

Take this ore, beaten to pieces, and for some space of time lay or expose it to the cool air; within twenty or thirty days it will magnetically attract a certain saltish moisture out of the air, and grow heavy by it; at last it falls to pieces as a black powder, which must remain there further still until it grow white, and until it do taste sweet upon the tongue like vitriol. Afterwards put it in a dry vessel, and pour on so much pure water so that it shall cover it by one or two inches. Stir it about several times in a day, and after a few days the water will be coloured green. This you must pour off. Add more pure water, and proceed as before, stirring it often until that also come to be green. This must be repeated so often till no more water be coloured by standing upon it. Then let all the green waters poured off run through filtering paper, to purify them, and then, in a glass body, cut off short, let them evaporate till a skin appear on the top. Hereupon set it in a cool place, and there will shoot out little green stones, which are nothing else but a pure vitriol. The remaining green water evaporate again, and let it shoot as before, and this evaporating and crystallising must be continued until no more vitriol will shoot, but in warm and cold places there will remain still a deep green, pleasant, sweet liquor, or juice, which is the true, sweet, and green oil of vitriol, and has all the virtues elsewhere related.

But now this green oil may further be reduced (many fair colours appearing meanwhile), without fire, to a blood-red, sweet, and pleasant oil, which goes far beyond the green both in pleasantness and virtue, and is, by comparison, like a ripe grape to an unripe one.

It is to be admired that this ore or metallic seed, which may justly be called the gold of physicians (as so good a medicine can be made of it), is not changed or altered in the earth, like other things that grow in it, but always keeps the same form and shape until it comes to the air. For first it swells and grows as a vegetable seed does in the earth, while this grows out of the air. For within four weeks at furthest it turns black, and a fortnight after it becomes white, and then green, and lastly the fairest red, and a most pleasant medicine.

Our Secret Sal Ammoniac

(GLAUBER, Part II., p. 178, b.)

Take of oil of vitriol, excellently well deflagrated and rectified, one pound, upon which oil of vitriol leisurely pour so much highly rectified spirit of urine as may completely neutralise the acid spirit.

In this conjunction, from two contraries, arises a neutral salt.

This operation being rightly performed, there results a sharp and penetrating liquor, in which there is a power of carrying upwards with itself the purest essences of animals, vegetables, and metals, which is what no other entity in Nature is able to perform, as remains to be shewn. Therefore, if a pure, dry salmiac be wished for from this salt liquor, then the solution is to be evaporated at a gentle heat, and the water abstracted, when a fair white salt remains at the bottom of the dish, which is our secret sal ammoniac. By benefit of this wondrous works may be performed, both in Medicine and Chemistry.

To Make All Corrosives Sweet

(GLAUBER, Part II., p.69, b.)

Vitriol, distilled with salt, yields a corrosive spirit, but if coal dust be mixed with them they give a sweet spirit, which graduates Luna into Sol, when digested therein.

A Sweet, Graduating Spirit, for Bettering Metals

The various metals mixed with coal dust and sal mirabilis, yield, by distillation, a sweet spirit, exalting some metals into Sol.

The Volatile Salt of Animals

The volatile salt of animals, and especially of man, purifies all things by its volatilising virtue, as appears in our most secret sal ammoniac.

The Tinctures of Mars and of Antimony

If we precipitate these tinctures of Mars and antimony with the solution of Sol, and then edulcorate and dry the same, we do by this means obtain a dry graduating water, which, being molten with any white or red metals, makes them yield good gold and Luna on the cupel, to the great profit of the artist.

The Signed Star of Antimony

Take one part of the regulus of antimony, and four parts of pure tin. Melt them in a crucible, pour them out, and let them cool. The said mass makes all iron and steel fusible. This alloy of tin and antimony, added to twice its weight of iron or steel, heated to redness in a crucible, quickly brings out fusion on still further urging the heat to perfect whiteness.

This substance is hard enough to strike fire with flint.

A Panacea of Antimony (Stibium)

(GLAUBER, Part II., p.107, a.)

The preparation does for the most part consist in the calcination by nitre, which corrects and changes the venom and immature quality of the antimony. Then, subsequently, the pure part is extracted by spirit of wine, and becomes a tender and light red powder, which can effect those things that have been ascribed to it. It should be taken of a morning fasting, some hours before meals.

Dose: one, two, three, or four grains.

A Good and Useful Medicine of Antimony

Pulverise antimony, and put it in a clean and dry glass retort. Distil it over a strong fire, three or four times, till it be a red powder. Extract it with vinegar, and circulate extract ten days over a gentle fire. Then remove vinegar by distillation. Transfuse what remains, by a skilful process, into the oil.

N.B.-This extract must be made volatile with spirit of wine.

Let the humidity of this oil be removed by circulation, so that it becomes a dry powder.

Four grains of this oil, taken with St. Benedict's Cordial, cures quotidian, tertian, and quartan fevers, if the patient be well covered and perspire freely.

The same dose is an efficacious remedy against the plague, when it is taken with vinegar or with spirit of wine, according as the disease makes itself felt by an excess of heat or cold.

The Praxis, Etc.

Mingle and melt so much regulus of antimony with the imperfect metals as may render them friable and brittle, that they may be pulverised.

With this mix three parts of the purest nitre, and put the mixture, closely stopped up, upon a fire, in glass or earthen vessels, for some hours, in order to fix. Afterwards take them off, and, as they are melted, pour them out that they may yield the regulus, which is to be taken away, and put with lead (plumbum), into a cupel, and reduced to dross. Then that gold and silver which the imperfect metal or mineral got in the fixation stays in the cupel, and may be examined by the lesser weights of probation, whence it will appear how great a fixation so little time will produce.

An experiment with Mercury of Antimony

(GLAUBER, Part II., p.183, a.)

Take of antimony, pulverised, one pound; of our sal ammoniac, half a pound. These, well mixt, distil by retort, and our salmiac will come off, and, by the alembic, will carry with itself the most pure mercury and sulphur of the antimony, of a black ash colour, which sublimate is named the head of the crow. For, if a little of it be thrown into pure water, the sal will melt, and the mercury and sulphur will

remain in the vessel as a grey powder, which, when dried and then touched, appears as thin, light feathers, whence it has acquired the name of the crow's head. Heated to redness in a crucible, it melts into a red stone.

Put the grey sublimate, or crow's head, which did ascend, into a glass body, and upon it pour so much of my tartar as is needful for neutralisation; then lute a head thereto, closely fitting a receiver, and administer fire in sand until all the humidity shall ascend. This being done, the acidity remains with the salt of tartar, and the spirit of urine ascends alone, carrying upwards with itself the most pure invisible mercury of antimony, which then, by the aid of Sol or Lune, becomes fixt and visible.

From one pound of the mercurial water scarcely three or four grains of the corporeal mercury will ascend.

Nevertheless, the subjects whence it is extracted are cheap, and enough of them may always be had.

The Crow's Head

(GLAUBER, Part II., p.183, a, b.)

Now, returning to our crow's head, let us see whether it may be made white, by a lotion of a sharp lixivium. If you take the glass out of the sand, after you have once thence extracted the mercurial water, you will find your black crow turned into a white swan. For, in the glass you will find a snow-like salt, which, if you take out and put into another round glass, or philosophic egg, and set it in a fixatory furnace to be fixt, then the white colour in twenty-four hours waxes yellow, and a little after puts on a blood-red colour. Yet it is not then so well fixt as that it may be taken out, but must be suffered to stand for some time in burning coals, with this caution always, that the fire be no stronger than that by which the red stone may be liquefied, like an oil. For it melts as easily as wax, and neither the mercury, nor the sulphur, nor the salt, will evaporate. Which is that which affects the mind with admiration. Whence it may be concluded that the same operation may be done, and such fixation made, in an open fire, in a covered crucible.

After it is fixt, it may be used with admirable profit in Medicine and Chemistry.

Trial.

Put an iron wire into the liquefied mass, and take up a small quantity for proof. Wash away the salt from it, and cast the red powder upon a silver plate red-hot. If it fume not, but enters and tinges the silver, not with a black, but with a yellow colour, then the mercury with its sulphur is fixt.

Triumphal Car of Antimony

(The Physician's Commentary on BASIL VALENTINE.)

Take best Hungarian, or other, crude antimony. Pulverise it. Spread it on an earthenware dish, provided with a low margin. Place dish on a calcinating furnace over the fire (which must be at first moderate). As soon as the antimony begins to fume, stir it about with an iron spoon. Continue the stirring until the fumes entirely cease, and the antimony adheres together in the form of small globules. Remove the whole from the fire, pulverise it again, place on fire, and stir until there be no more fumes (as before).

This calcination must be continued till the antimony gives out no more fume, does not conglomerate into globules, and has the appearance of pure white ashes.

Place the calcined antimony in a crucible, such as goldsmiths use for melting gold and silver. Set it over a violent fire till the antimony becomes liquid like pure water.

To prove whether antimony has acquired its proper glassy transparency, dip into it an oblong piece of cold iron, and examine the antimony which cleaves to it carefully. If it be clear, pure, and transparent, it is all right, and has attained its due maturity.

Glass, whether prepared from metals, minerals, or any other substance, must be subjected to heat, until it has attained to maturity, and exhibits a clear and pellucid transparency, else it is unprofitable for any other medicinal development.

When antimony has become vitrified in the way described, heat a flat, broad, copper dish over the fire, pour the antimony into it in as clear and thin a state as possible, and there results a pure, yellow, pellucid glass of antimony.

This preparation of what is called glass of antimony is the best, simplest, and most efficacious known.

A Safe Medicinal Preparation

(Ibid.)

Take the above-mentioned glass of antimony. Melt it in a crucible until one-third part evaporates. Pound it fine. Pour on it rectified spirit of wine. Close, and allow to circulate for three months. Extract spirit of wine by distillation, when it will be red, and may then be kept as an excellent medicine.

This substance, dissolved in a glass of wine, acts as a gentle purgative, or as an emetic.

The dose must be adapted to the strength of the patient.

The Extractor: The Balm of Antimony, Etc.

(The Physician's Commentary on BASIL VALENTINE.)

Take pure glass of antimony, prepared in the best way. Pound it as fine as the finest flour. Place it in a broad-bottomed glass vessel. Pour over the antimony some highly-rectified vinegar. Subject it to digestive fire, or in summer time expose it to the sun. Shake and agitate it several times a day.

Let this slow digestion be continued until the vinegar assumes a red or yellow colour, like unto that of purified gold. Now pour off this clear and pure extracted substance. Add more vinegar. Repeat the process till no more gold-coloured tincture can be extracted.

Mix all the extract; place it in a vessel; put on the cover; distil off the vinegar, till there remains at the bottom a gold-coloured powder.

Pour on this powder distilled rain water; let it evaporate by distillation; add more pure water; repeat this till all the acidity is washed out, and there remains a sweet and pleasant powder.

N. B. - The size of the vessel should not be larger than the quantity of the extract requires.

When two-thirds of the tincture have evaporated, change the vessel, and distil the remaining tincture in a smaller vessel, till there remains a thickish paste. If the powder be drained altogether of moisture, it is better.

The method by which it may be known whether the powder is as sweet and free from acidity as it should be, is to take and taste a little of the water which has been drained off by evaporation. Great care must be taken to distinguish between the acidity of the vinegar and that of the antimony, which latter constitutes the strength of the same.

This sweet powder should be pounded in a hot mortar, put into a glass vessel, and highly rectified spirit of wine poured on to it. Expose it to a gentle digestive heat, as above and there then results a beautiful red tincture, with an earthy sediment at the bottom of the glass.

The extract is sweet and pleasant to the taste.

The sediment still retains its poisonous character, but the tincture is a wonderfully potent external remedy.

Dose: Three or four grains of this medicine cure leprosy, and the French disease. It purifies the blood, dispels melancholy, resists all poison, removes asthma and all chest complaints, and relieves the stitch in the side. It restores the whole organism to the most perfect health.

NOTE. The tincture described in the text has all the virtues attributed to it, but its use should be continued for some time, in order to secure its full benefits.

The yellow powder mentioned above, from which the extract has not yet been made by means of alcohol, should be pounded on a stone (hot) and placed in an egg, boiled hard, from which the yolk has been taken out.

Leave the powder in a humid place till it is dissolved into a yellow liquid. This tincture, used as a liniment, is an excellent remedy for all wounds and bruises. After application, bandage with clean linen.

Glass of Antimony Brought to an Oil

(Physician's Commentary on BASIL VALENTINE.)

Take glass of antimony, and pound it to a fine powder. Extract the tincture by means of distilled vinegar. Remove all traces of acidity by washing and distillation of the water. Add to the residue some of our spirit of wine. Circulate the solution in a pelican vessel for the space of a month; dextrously distil it, without the addition of anything else. The result is a red oil, from which the fire

stone is afterwards formed. It is a sweet, pleasant, and wonderful sort of medicine. This oil is the quintessence, or the highest form, of antimony.

There must be four preparations before antimony is perfect. The first preparation is calcination and liquefaction into glass; the second is digestion, by which the extract is perfected; the third is coagulation; the fourth is its distillation into an oil (separation of subtle from gross).

Then follows fixation by the last coagulation, and thereby there results the pellucid fiery stone, which can operate on metals only when it is fermented and rendered penetrative.

The distilled oil accomplishes all purposes for which it can be employed by the skilful physician.

This oil, if properly used, is truly a universal medicine.

The said medicine acts like magic, especially in all kinds of fevers. Dropsy is completely cured by it, if two doses of the said oil be taken in daily doses of four to eight grains, morning and evening.

It restores youth, dispels melancholy, and the hair and the nails are renewed.

Glass of Antimony Brought to an Oil of Great Value in So-Called Elliptical Cases

(Physician's Commentary on BASIL VALENTINE)

Pound the glass of antimony to a fine powder; add omphacium; digest for some days in a broad-bottomed vessel, well closed from the air. Continue this until all the moisture is abstracted. Pound it with a double quantity of clarified sugar, moistened with spirit of vinegar. Put the mixture into a retort, and distil, at the end, with a strong heat. Then there appears a red oil, which must be clarified with spirit of wine.

To this oil add a little spirit of salt, and pour the whole into a subtle preparation of calx of gold (described in my other works: B.V.).

When they are distilled together it assumes the tincture of gold, and it leaves the body intact.

This is How the Operation was Carried Out in the Year of Grace 1665

The red oil in the retort was rectified, and a white oil was obtained, of a pleasant acid taste. To it was added half as much spirit of salt. The mixture was next digested together in a retort for the space of a month, and then still further amalgamated by distillation. It was afterwards poured on the calx of gold, and digested for one month's time, until it was of a golden colour.

Thereupon I removed the liquid, sweetened the powder with distilled rain water, and again extracted the tincture with spirit of wine.

Then I restored that winged red dragon, gave him his tail to eat for six entire months, and obtained a most sweet and pleasant tincture, eight grains of which remove, by means of perspiration, the morbific matter of every curable disease.

The solvent which is employed must not only be sweet and free from corrosive properties, it must also be of a nature homogeneous with that of the substances on which it is poured, in order that it may extract from the mercury thereof a good and pure sulphur. Rectified spirit of wine is the most congenial to the sulphur of our substance, which does not amalgamate with the spirit of salt.

The tincture is very precious; but it has mostly the colour and little of the weight of the potable gold of the sages.

When the fermentation (described in the text) has taken place, the medicine which results is wonderfully efficacious.

When you have brought antimony to this pass, you may justly boast that you have solved the enigma of the sages, and that you have learnt the Magistery - a Magistery known but to few.

Triumphal Car of Antimony

(Physician's Commentary on BASIL VALENTINE.)

Take one part of pulverised antimony, and one part of Armenian sal ammoniac. Mix, put into a retort, and distil together.

(Note, that the retort should consist of A, furnace; B, retort; C, receiver; D, tube between receiver and alembic, E. F is a furnace which sublimes by its moderate heat all that is in the receiver into alembic E. Thus the substance which is distilled from the retort (B) is immediately sublimed by the heat of the furnace (F).

On the product of the distillation now pour hot distilled rain water, and so remove every salt and acid taste. Then the antimony will be of a pure, feathery white. Dry with subtle heat, and place in the circulatory vessel called pelican. Pour on it highly rectifed spirits of vitriol, and circulate till they be properly amalgamated.

(Note, that this union should be so close that, in distillation, the two shall rise together. Amalgamation in alchemy is not merely mixing two liquids. The union must be inseparable, and the ingredients must really change and modify each other. The union should, in fact, be like that of male and female seed, which produces a real organism, and that is something more than a mere mixture of the two ingredients.)

Then distil together; add to mixture spirit of wine, and circulate again. Remove the sediment, and you will have the antimony thoroughly amalgamated with the spirit of vitriol and of wine.

One drop of this tincture, mixed with rose-water, has greater medicinal efficacy than a whole pot-full of herbs. It proves a good appetiser and digestive, purifies the blood, and cures colic as if by magic.

The Elixer of Antimony of Basilius

(Physician's Commentary on BASIL VALENTINE.)

Pulverise some good (mineral) antimony with half as much salt of ammonia; put all that is sublimed into a glass retort; distil three times, always removing sediment. Remove salt by means of water, and reverberate the antimony over a moderate fire in a well-closed vessel, till it becomes red. Add strong distilled vinegar of wine; extract its redness; remove vinegar, till there remains a powder (by means of the water bath). Extract with spirit of wine, so as to remove the sediment. You will then have a clear and pure tincture. Place the spirit of wine with the tincture in a broad-bottomed distilling vessel; add some tincture of corals and quintessence of rhubarb, and administer a dose of three or four drops.

It acts as a painless purgative, and has an exhilarating effect on the animal spirits.

An Arcanum of Antimony Fully Described

(Physician's Commentary On BASIL VALENTINE.)

FIXATION.

Pulverise some antimony, and put it in a broad-bottomed distilling vessel. Pour upon it aqua fortis, to the height of some inches. Close stop the vessel, and expose to gentle heat for a space of ten days; decant the extract thus obtained; free it by filtration from all fecal impurities; place it in a glass vessel, and remove the aqua fortis by means of distillation.

There will then remain at the bottom a dry, yellow powder of antimony. Pour on it distilled rain water; expose it in a glass vessel to moderate heat, and there results a red tincture, or extract.

Filter; distil the water gently in a water bath, and there remains a red powder. Pour on it strong distilled vinegar, which in time is coloured red, like blood, and deposits a sediment.

Distil this vinegar, and again there remains a red powder. Reverberate this powder continuously for three days over an open fire, and extract from it the tincture with spirit of wine. Strain off the sediment that remains from the spirit of wine or tincture. Again separate, by distillation, the alcohol, by water bath, and there now remains a fixed red powder of wondrous efficacy.

This fixed red powder proves a most useful medicine in chronic diseases, especially where it is important to excite perspiration, and in such cases it is said to produce the most wonderful effects.

Dose: half a drachm, thrice daily. It renovates the whole man.

The Blood-Red Oil of Antimony, Etc.

(Physician's Commentary on BASIL VALENTINE.)

Take good, friable (not crude) antimony. Pulverise it, and pass it through a fine sieve. Place it in broad-bottomed distilling vessel (cucurbita). Add to it vinegar distilled from its own proper mineral, and digest it, at moderate heat, for thirty or forty days.

The vinegar will then be tinged, as it were, with blood. Pour this red tincture into a retort; gently separate the vinegar by distillation; and make extract of the remaining powder with spirit of wine. The extract now appears of a blood-red colour.

Pour it into a circulatory vessel, which is most suitable for this purpose. Digest the extract in the water bath, until the tincture is seen to rise and pass, in a volatile state, through the alembic.

Place the whole substance in a glass cucurbite; distil the spirit, and when it passes through the alembic it will be of a blood-red colour.

Remove the spirit, and there remains a thick and heavy oil.

This oil proves a most efficacious universal medicine. It utterly consumes all sorts of morbific matter.

Hence the physician should not grudge the time and care which must be given to the preparation of this remedy.

The True Balm of Life, or Royal Red Oil of Antimony

(Physician's Commentary on BASIL VALENTINE.)

Place pulverised Hungarian antimony in a glass cucurbite, or retort; add true vinegar of the sages, rendered more acid by means of its salt; close cucurbite, and plunge it in horse-dung, or the water bath, for forty days. The vinegar then turns a deep red colour.

Decant the vinegar, and keep adding more, till no more red colour can be extracted. Strain all the vinegar, and pour it into a clean vessel. Again plunge in horse-dung or use the water bath, as before. Allow the digestion to continue for thirty or forty days.

Then the body is again dissolved, and the substance becomes as black as ink. This is the sign that true solution has taken place, which will ultimately effect a separation of the elements.

Place this black substance in another cucurbite, and put on its alembic. Distil over the vinegar at a moderate heat. The vinegar now rises as a clear fluid, and there remains at the bottom a dirty-looking substance. Pulverise this; wash with distilled rain water; dry gently, and place it in a long-necked circulatory vessel.

(The circulatory should resemble three hollow balls, placed one on the other, and communicating by means of tubes, with a long neck at the top.)

Add highly rectified spirit of wine, so that it covets the substance to a height of two or three inches. Close the vessel well, and expose it to gentle heat for two whole months. The spirit then becomes of a bright red colour. Pour out the extract; filter; place in cucurbite, and remove the black sediment.

Place the alembic on the cucurbite; distil gently. The spirit of wine carries the tincture of antimony upwards; the elements are separated, and the alembic and receiver both present the aspect of bright gold.

Place the red substance, which by distillation has passed into the receiver, in a circulatory vessel, for a space of ten days. By means of this circulation, separation has taken place, for the oil has thereby acquired gravity, and sinks to the bottom, while the spirit is limpid, as at first, and floats at the top.

Then separate the oil from the spirit, in a separatory.

This is the substance of which all the sages and alchemists have written. This is the goal of all alchemists - the oil of antimony - the great, coveted treasure. This oil is of remarkable sweetness, most pleasant to use, and free from all corrosiveness.

No one can understand or comprehend the incredible virtue and potency of this royal oil. I call it the balm of life, because it can help those whom all physicians have given up.

It renews a man's system, just as though he were born again, purifies the blood, and, in conjunction with tincture of corals, casts out leprosy, drives away melancholy and sadness, braces up the joints and the heart. It improves the memory, and is our great sheet anchor in consumption.

The Mercury of Antimony Elicited

(The Physicians Commentary on BASIL VALENTINE.)

Take eight parts of the king of antimony, one part of salt from human urine, clarified and sublimed; one part of sal ammoniac, and one part of salt of tartar. Put the well-mixed ingredients into a glass vessel, add strong vinegar, close up with the lute of wisdom. Digest salts with vinegar a whole month over gentle fire; put the whole into a cucurbite; distil vinegar on sand, and mix with salts thus dried three parts of Venetian earth. Distil, at a strong heat, the contents of the retort, and there results a marvellous spirit, which add to the pulverised regulus of antimony. Let them digest for two months, then distil the vinegar gently, and mix with what remains a four-fold weight of steel filings.

Distil, at a strong heat, the contents of the retort. The spirit of salt then carries the mercury with it in the form of vapour. Let it be drawn into a large glass receiver containing water; the spirit of salt mingles with the water, but the mercury is precipitated to the bottom as true mercury.

This is the way in which running mercury is prepared from antimony.

The Mercury Resolved into Oil

(The Physician's Commentary on BASIL VALENTINE.)

Take one part of this mercury, and four parts of strong oil of vitriol. Extract the oil, and there remains its spirit with the mercury. Sublime at a strong heat, and place all that is sublimed again at the bottom of the vessel. Pour on it as much of the oil of vitriol as before, and repeat the process three times. At the fourth time, place all that is sublimed with the sediment. Pound, and it is pure and bright as crystal. Place in circulatory, add the same quantity of oil of vitriol, and three times as much spirit of wine; circulate till mercury be resolved into oil, floating on the rest like olive oil.

Separate this oil from the rest, place it in a circulatory, pour on it some strong distilled vinegar, leave it for twenty days, whereby the oil recovers its gravity, and drops to the bottom, while all that is poisonous in it remains in the vinegar.

This oil itself possesses marvellous efficacy in the amelioration of metals, and yields only to the King of Kings Himself.

This oil of mercury is the fourth pillar of Medicine. It stimulates the vital action of the brain, makes men active, and cures leprosy and paralysis.

If anyone has been suffering from chronic disease, and uses this oil daily for some time, his nails and hair drop off and grow again, and his whole frame is rapidly renovated, his blood purified, and all morbid matter radically expelled.

A Certain Balm, or Oil, of Antimony

(Physician's Commentary on BASIL VALENTINE.)

Sublime one part of antimony with a fourth part of sal ammoniac. The salt raises the sulphur of antimony to a bright red colour.

Pound the sublimed substance, and to each pound of antimony, add six more ounces of antimony. Sublime, as before, and dissolve the sublimed substance in a moist place. Wash the salt added to it, dry gently, and there results a sulphur which burns away like that of the apothecary.

Extract its tincture with distilled vinegar. Separate the vinegar gently, at a moderate heat, transtil the remaining powder very gradually, and, if no error have been committed, there ensues an excellent oil, sweet, pleasant, and grateful in its use, without danger or corrosivity.

This oil cures consumption and all pulmonary complaints. It relieves asthma and difficulty of breathing.

Dose: Take two grains in spirit of wine in the morning, and in the evening before retiring to rest. It purifies the chest, purges out all phlegm, and clears away every obstruction.

The So-Called Vinegar of Antimony

(The Physician's Commentary on BASIL VALENTINE.)

Pulverise the ore of antimony, place it in a round glass vessel with an oblong neck, pour on distilled rain water, so as to half fill the cucurbite, close well, and plunge in horse dung for putrefaction, or make use of a steam or water bath, until the ore begins to effervesce, and produces a foam on the surface. Then it is time to take it out, as it is a sign that the body has opened.

Place again in a cucurbite; close well, extract water, which has an acid taste. When all the water is distilled, increase the heat, and the substance will be sublimed.

Pound again with the sediment, add the same water, and again extract, when it will be much more acid.

Repeat the operation until the water be as acid as ordinary vinegar. The oftener the operation is repeated, the less there is of the sublimed substance.

Pour this vinegar over some more of the raw ore, to the height of about three inches. Digest, in pelican, for twelve days, till the vinegar becomes red, and more acid than before. Decant, and distil by

sand heat or water bath, when the clear vinegar will rise, while the red powder will remain at the bottom.

If an extract be made with spirit of wine, it forms an excellent medicine.

Rectify the vinegar once more, in balneo, to free it from its oiliness; dissolve it in its own salt, *i.e.*, one ounce in four ounces; sublime in ash, and the vinegar will be more acid, and acquire greater strength and efficacy.

The Star of Antimony

(The Physician's Commentary on BASIL VALENTINE.)

Take two parts of Hungarian antimony, one part of steel, and melt, with four parts of burnt tartar, in an iron ladle or basin, such as is used by goldsmiths for refining gold.

Allow all to cool; take out the regulus; purify; pulverise; add to it three times as much burnt tartar; melt; pour into basin as before.

Repeat this three times, and the regulus becomes highly refined and brilliant. If the fusion has been properly performed - which is the point of greatest importance - there results a beautiful star of a brilliant white colour.

N.B. - In the third fusion the fire should be most intense, so as to remove any remaining impurity. The star is as distinct as if a draughtsman had traced it with a pair of compasses.

This star, with sal ammoniac, is brought to a red sublimate, for the tincture of iron ascends.

The said sublimate may be dissolved into a liquid of highly medicinal quality.

This sublimate, before being placed in a cave or cellar for dissolution, should be purged of its salt with pure water.

The alchemist has, then, a hot and ignitable substance, in which wonderful possibilities are latent.

It is dissolved into an oil, which should be purified by transfusion and distillation.

The Fire Stone Prepared from the Oil of Antimony

(The Physician's Commentary on BASIL VALENTINE.)

Take equal parts of the ore of antimony and of nitre; pulverise; mix well; place over a gentle fire, and bake dextrously. There remains a blackish substance. Out of this prepare glass; pound; extract its red tincture with strong distilled vinegar (made of the same ore). Separate the vinegar by distillation.

There remains a powder, from which should be made a second extract with highly rectified spirit of wine. We then have a beautiful, sweet, red extract, of great medicinal value. This is the pure sulphur of antimony.

If there be two pounds of this extract, take four ounces of salt of antimony; pour over this the extract; circulate, for at least a month, in a well-closed vessel, when the salt will unite with the extract of sulphur. Remove sediment; extract spirit of wine in balneo; sublime the powder which remains, and it will be distilled in the shape of a many-coloured, sweet, pellucid oil.

Rectify this oil in balneo, and when it is perfect it will be of a deep red colour.

Then take living mercury of antimony; pour on it red oil of vitriol; separate, by distillation, the viscidity of the mercury, and there results a precious precipitate of a glorious colour, which is of the greatest medicinal value.

Take equal parts of this precipitate and of our oil of antimony; put the mixture into a well-closed phial. If exposed to gentle heat, the precipitate will gradually be dissolved, and fixed in the oil. For the fire consumes its viscidity, and it becomes a red, dry, fixed, and fluid powder, which does not give out the slightest fume.

This is the great medicine.

The Preparation of the Tincture of Gold and Antimony

(GLAUBER, Part I., p. 78, b.)

Take of pure gold ½ oz. Dissolve it in aqua regia. Precipitate the solution with liquor of flints, and wash and dry the same. Take regulus martis, beaten fine, with which mix three parts of the purest nitre. Place the mixture in a crucible heated to low redness. Let the heat be now much increased, till the mass becomes rich purple. Grind the cooled mass very fine, and to four parts of this mixture add one part of the aforesaid golden calx. Put the ingredients into a strong crucible, with cover on, and give a heat of fusion, when the calx of gold will assume the antimonial nitre, and a mass of an amethyst colour will result. Allow this substance to remain fused till it puts on the clear redness of a ruby. Nitre or tartar may now be added, in a small quantity, in order to promote fusion.

Lastly, pour forth the matter, when it shall have come to the utmost redness of a ruby, and suffer the heated mass to thoroughly cool. The oriental ruby-coloured mass is now to be powdered, while still warm, and the tincture extracted by the addition of spirit of wine. The gold, together with the antimony, will remain very white (like the finest talc), and may be washed with water and recovered by precipitation.

The coloured tincture proves a sovereign remedy in many respects.

THE END.

SOME MODERN ALCHEMICAL EXPERIMENTS.

The Preparation of Magnesium by Electrolysis

The metal may be readily obtained from a fused mixture of four at. chloride of magnesium, and three at. chloride of potassium, with a little sal-ammoniac.

A simple and convenient mode of effecting the reduction is to fuse the mixture in a common clay tobacco pipe, over a lamp: the negative electrode being formed of an iron wire passed up the pipe stem, and the positive electrode of a piece of gas coke, just touching the surface of the fused chlorides.

The Preparation of Certain Metals by Means of Electrolysis

The positive electrode is formed of the inner concave surface of a carbon crucible, filled with muriatic acid, and standing within a porcelain crucible. The liquid to be decomposed is contained in a small porous cell, standing in the carbon crucible, and the negative electrode is formed of a wire or narrow slip of platinum dipping into the liquid. The whole is heated over the sand-bath.

A concentrated solution of chrome, or of manganese chloride, subjected in this manner to the action of a four-pair Bunsen battery, quickly yields large lumps of the metal, chemically pure.

Deposition of the Earth-Metals by Electrolysis

Corbelli has deposited aluminum, or other earth-metal, by electrolysing a mixed solution of rock alum, or sulphate of aluminum, and chloride of sodium, with an anode of iron wire, coated with an insulating material, and dipping into mercury placed at the bottom of the solution, the negative pole of zinc being immersed in the solution. Aluminum is then deposited on the zinc, and the chlorine set free at the positive pole unites with the mercury to form calomel.

Deposition of the Earth-Metals by Electrolysis

Aluminum, or other earth-metal, is deposited by the single cell method from a dilute solution of the

chloride. The liquid is to be placed in a jar, in which is immersed a porous cell containing dilute sulphuric acid. An amalgamated zinc plate is immersed in the acid solution, and a plate of copper in the chloride solution, the two metals being connected by a copper conducting wire. At the end of some hours the copper plate becomes coated with a lead-coloured deposit of the earth-metal, which, when burnished, presents the same degree of whiteness as platinum.

Electro-Depositions of the Earth-Metals

An American process consists in depositing the earth-metal from a solution of a double salt of the earth in question, and potassium, of the specific gravity 1:161, employing a current from three or more Bunsen cells, the bath being worked at 140 Fahr.

Preparation of the Earth-Metals by Reduction

This process consists in forming a solution composed of freshly precipitated earth, dissolved in a boiling solution of cyanide of potassium.

A Modification of this Process is Thus Described

Calcined alum is dissolved in a solution of boiling cyanide of potassium.

Reduction of the Earth-Metals by Means of Potassium-Cyanide

The chloride, iodide, or bromide of the earth-metal to be reduced is brought in contact with either the melted cyanide or its vapour. A portion of pure anhydrous oxide may be added to increase the product.

Reduction of the Earth-Metals from the Sulphide

The earth-metal may be reduced and obtained from the sulphide, either by heating it in hydrogen, or by heating it with the pure earth of the metal to be reduced; or with its sulphate in such proportion that the oxygen contained in that compound is just sufficient to convert the sulphur into sulphureous acid.

The earth-metals may also be obtained by decomposing the sulphide with an ordinary metal, such as iron, copper, or zinc.

Electro-Deposition of the Earth-Metals

Aluminum is deposited upon a plate of copper in a solution of the double chloride of the earth and ammonia, by using a strong current, the deposit being susceptible of a brilliant polish.

Electro-Deposition of Certain Earth-Metals

A strong current of electricity will deposit magnesium from an aqueous solution of the double chloride of magnesium and ammonium, upon a sheet of copper, in a few minutes; the deposit will be homogeneous, strongly adherent, and readily polished.

Electro-Deposition of Aluminum or Glucinum

Bunsen electrolised the fused chloride (or fluoride) of aluminum and sodium in a deep, covered, porcelain crucible, divided by a partition of porous porcelain which extended half way down the vessel. Carbon electrodes were used, and these were introduced through the opening in the cover. He used a current from ten cells of his zinc and carbon battery. The salt will be fused at the boiling point of mercury, and readily yield the metal. The temperature of the liquid should then be raised to near the melting point of silver, when the particles of liberated aluminum fuse and unite together into globules, which, being heavier than the fused salt, deposit at the bottom of the crucible.

Separation of the Earth-Metals from their Salts (Aluminum)

Cryolite (fluoride of Al. and Na.)	5 pts.
Sodium chloride	2 ½ pts.
Sodium	2 pts.

The pulverised mineral is well mixed with half its weight of well-dried common salt, and the mixture is arranged with sodium, in alternate layers, in an earthen crucible (lined with pure carbon), a layer of pure cryolite being placed at top, and the whole covered with a stratum of "decrepit" salt. The mass is rapidly heated till it melts completely, and is then left to cool, after being stirred with a clay or iron rod.

The aluminum is generally found in large globules.

Separation of the Earth-Metals from their Salts (Glucinum)

Fluoride of glucinum & potassium	5 pts.
Sodium chloride	2 ½ pts.
Sodium	2pts.

The pulverised double fluoride is mixed with half its weight of well-dried common salt, and the mixture is arranged in alternate layers with clean sodium in an earthen crucible, lined with pure carbon, a layer of pure double fluoride being placed at top, and the whole covered with some well-dried common salt.

The mass is thoroughly heated to the point of fusion, and then allowed to cool, after being stirred with a clay or iron rod.

The glucinum is generally found in large globules.

Separation of the Earth-Metals from their Salts (Aluminum)

Chloride of aluminum and sodium	10 pts.
Fluor spar, or cryolite	5 pts.
Sodium	2 pts.

The different ingredients, perfectly dry and pure, and finely powdered, are placed, together with the sodium, in alternate layers in a carbon crucible, which is moderately heated till the action begins, and afterwards to bright redness, the mass being stirred with a rod of iron or clay, and afterwards poured out.

If the process goes on well, the aluminum is obtained in a compact mass, and partly in fused globules encrusted in a hard mass.

Separation of the Earth-Metals from their Salts (Glucinum)

Chloride of glucinum and sodium	10 pts
Fluor spar	5 pts.
Sodium	2 pts.

The different ingredients, perfectly dry and pure, and finely powdered, are placed, together with the sodium, in alternate layers in a carbon crucible, which is moderately heated till the action begins, and afterwards to bright redness, the melted mass being stirred with a rod of iron or clay, and then poured out.

If the process goes on well, the glucinum is obtained in a compact mass, and partly in fused globules, encrusted in a hard mass.

Preservation of Kalium, Natrium, etc. with Bright Metallic Surface

Place the pure metal in a basin containing absolute alcohol, till it acquires a perfectly bright surface: then quickly transfer it to a basin containing chemically pure petroleum ether, and finally to a third containing a saturated solution of chemically pure naphthaline in petroleum ether. In this last solution the sodium or potassium remains unaltered.

Preparation of the Tri-Oxide (Calx) of Gold

Gold tri-oxide is a blackish-brown powder, obtained by heating the hydroxide to 100 degrees (C). If this be more strongly heated, it gives off oxygen, and is converted into a brown powder of metallic gold.

Gold tri-hydroxide is obtained by heating a solution of gold tri-chloride with an excess of magnesia, and well washing the precipitate with nitric acid.

The gold solution may also be treated with caustic potassa, till the precipitate formed is re-dissolved, and then the dark brown solution is boiled till it becomes of a light yellow colour, a slight excess of sulphuric acid being added, and the precipitate washed. The hydroxide thus prepared always contains a little potassa, and for this reason it is dissolved in strong nitric acid, again precipitated by water, and then dried (in vacuo).

A better plan, perhaps, is to warm a dilute solution of gold tri-chloride with caustic potash, and

precipitate the brown solution by Glauber-salt, when it is obtained in a form resembling precipitated ferric hydroxide.

A solution of gold with muriatic acid in excess yields, with an excess of potash bi-carbonate, an olive green precipitate. If, however, the gold solution contains excess of nitric acid, then an orange-red precipitate separates out of the solution.

Silver Transmuted into Gold by the Action of Light

In the focus of a burning-glass, twelve inches in diameter, place a glass flask, two inches in diameter, containing nitric acid, diluted with its own volume of water.

Pour into the nitric acid, alternately, small quantities of a solution of nitrate of silver and of muriatic acid, the object being to cause the chloride of silver to form in a minutely divided state, so as to produce a milky fluid, into the interior of which the brilliant convergent cone may pass, and the currents generated in the flask by the heat may so drift all the chloride successively through the light.

The chloride, if otherwise exposed to the sun, merely blackens on the surface, the interior parts undergoing no change: this difficulty, therefore, has to be avoided. The burning-glass promptly brings on a decomposition of the salt, evolving, on the one hand, chlorine, and disengaging a metal on the other. Supposing the experiment to last two or three entire hours, the effect will then be equal to a continuous midday sun of some seventy-two hours. The metal becomes disengaged very well. But what is it? It cannot be silver since nitric acid has no action upon it. It burnishes in an agate mortar, but its reflection is not like that of silver, for it is yellowish, like that of gold.

The light must therefore have so transmuted the original silver as to enable it to exist in the presence of nitric acid.

THE END.