

ON REMEDIES IN THE SLOANE COLLECTIONS, AND  
ON ALCHEMICAL SYMBOLS.

By F. C. J. SPURRELL.

The collections of Sir Hans Sloane which formed the commencement of that national collection called the British Museum were very numerous and the individual objects multitudinous. Together with books, pictures, and objects of art were mathematical and other instruments, and odd and pretty things from everywhere. The natural history specimens were innumerable if we include the Hortus Siccus, in which every page of every volume was crowded as full as possible with plants. Most of these things have found their proper places, in the improved classification of to-day. But there was one collection or set of things for which the nation has provided no proper home, in consequence of which it has suffered severely; this is the collection of *Materia Medica* and the chemical preparations used in the arts of the time, such as salts, colours, metals, &c. The greater part of this, consisting of roots, fruits, and leaves of plants, went bodily to the herbarium—the herbarium, however, being scientific and taking little heed of economic preparations found it an encumbrance and so the things have been stowed away in the smallest space for generations and many are looked on now as having no business there, and many are lost.

Lately I have been examining the gums and resins found among them. In search of these I had to overhaul the greater part of the miscellaneous mass of specimens which had become confused and mixed, and I have to thank Mr. Carruthers for the facilities which he gave me. While doing this I took a few notes of the trays containing the curious remedies and preparations met with. This especial collection is the earliest Sloane made, and is undoubtedly most interesting from that point of view. He entered as medical student in 1679 and from the dates

of some of his acquisitions it is seen that he began collecting at once. He also bought collections of this nature from the executors of the gatherers before his time and from contemporary collectors. There is evidence that not a few of the objects were gathered together in the sixteenth century.<sup>1</sup>

Consequently in looking at them we find ourselves among the relics and works of the alchemists with their mystical symbols in actual use. The older preparations belong to a period older than Sloane's time. Sloane himself was not untouched by the opinions astrological and mystic held by his contemporaries. A few preparations mentioned in his catalogues clearly show this, and occasionally the money value of his faith, thus we find "790 A penknife the end of which is gold, pretended to be made so by dipping it so farr into the Great Elixir £1 1s. 6d." There are numerous entries of charms some of which still remain, even the philosopher's stone itself occurs, Dr. Dee's famous crystal, elfs' arrows, spiritus phlegmaticus, the arcanum duplicatum, and elixir vitæ! But Sloane knew too much to believe all, and in his catalogues his entries are made without bias and in accordance with the name received with the object; they are very amusing. A large number of the substances remain in their proper places and can be readily identified, but some have been disturbed and removed, with which, however, their labels often remain and to which the catalogue number is frequently found attached. I have taken the names in the accompanying list from the labels and placed a star against all the substances which answered to the names if met with in any part of the collection.

I have identified the substances by means of the recognised authorities of the sixteenth and seventeenth centuries, this is necessary, as frequently substances differed so greatly from the names they go by now as to suggest accidental displacement. I do not propose to go through the whole list, which would be very long, but to remark on

<sup>1</sup> Some of the labels are of that date, one is 1568. Some are mentioned of that date in the catalogue. Some resins

have still adhering to them the pages in which they were wrapped—vellum choir books with music as old or older.

a few as they come—omitting the botanical things and the resins and gums.

Sloane appears to have arranged some of the drugs with the assistance of the *Pharmacologia* of S. Dale, of which valuable work he had a copy, thus described in the MS. catalogue of B.M. :—

“*Samuelis Dale Pharmacologia interfoliat cum plurimis additamentis auctoris meum scriptis in 4 vols. 8vo.*”

The original work was in one volume and first belonged to Petiver. It is not now in the Museum and is a great loss to students.

Those who are acquainted with the medical books of the period will have read with amusement how this and that is prepared or collected, at what hour and with what ceremonies, and what things, rich or rare, filthy or disgusting, are good for various ailments or conditions of life; and in what manner they are to be administered; they will perhaps have thought, all this is very fine in books and plays but I do not believe such nastiness was administered or these mysteries were really enacted. Here, however, such things may be seen in reality. It is a collection of simples, for none of the compounds now remain.

The *use* of “simples,” that is the simple herbs or natural productions of the earth, as medicines by themselves, was rare. This is the way that compound medicines grew:—Everything, however much it was extolled as a remedy, was liable to failure at times; as an outcome of this was the compilation of lists of simples, one or more of which was used as an alternative in the case of failure to benefit or inability to procure it. Then to secure success these alternatives were given together, Also many simples were given with materials to make them palatable and as vehicles.

Remedies were dignified with certain qualities, they were hot or cold, debilitating, astringent, cephalic, or hepatic, and such like. Each quality was divided into degrees, and each degree into parts. Galen, and his works were recently closely followed, tells us that if a remedy is cold in the fourth degree a medicine of corresponding warmth must be given with it to correct its excessive

coldness. That a simple remedy, of great credit theoretically, should not fail it was not left unguarded; as Beckmann says of such—"that their force might not be impaired by digestion, remedies were defended by some ingredients from the action of the stomach, to those that operated too quickly they added something to occasion delay, to others rather sluggish they added a stimulant, and others that were to act on certain parts were accompanied by some medicine that was to perform the office of a conductor." These and other reasons together added greatly to the number of ingredients, it was a sort of hedging—if one failed another of the party would be sure to hit the trouble.

All the old physicians were prone to this compilation; Paul of Ægina gives numerous remedies composed of 4 or 5 dozen simples. Beguinus at this period (Sloane) ridicules some remedies and says of one that it was "laboriously concocted according to a description (prescription) of I know not how many feet long." (J. Beguinus, *Tyrocinium Chymicum*, 1669) and this habit did not decrease. A physician of note not very long ago compounded sundry prescriptions each consisting of over 400 ingredients. [Paris' *Pharmacologia*].

Among the remedies in the collection are some which are not dogmatic nor empiric but held their place by "signature," the idea embodied by which word was, that very many things carried in their form, appearance, colour or other quality, a mark called the "sign," by which they could be identified as good for certain ailments.

Precious stones, hard rocks, bezoar, magnes, and other inert things were mostly applied externally to wounds or worn as charms, they were administered internally in the hope that if the trouble was internal they would come in contact with it. Emerald, gold, &c., were given as tinctures and it was really believed that spirit of wine dissolved such things even if the amount could not be perceived by the eye of man. Powdered garnet, glass, and other sharp stones were given by the faculty, the harsh results of which could have been of no advantage to the persecutor or patient.

I have omitted mention of what the things were good



the same as at present, but the symbol for gold had both the flame and the dotted circle. I have confined the examples to those used in the list of *Materia Medica* of Petiver and Sloane as sufficient for illustration.

Perhaps the most remarkable change seen in this table is that of electrum. At first that metal, originally found native, was assigned to Jupiter. But the early manufacture of it was known, and in time doubtless caused its deletion from so noble a list. Tin was assigned to Jupiter then, and quicksilver, which was recognised as no longer liquid silver, was appropriated to the mobile god Mercury.

The alchemic signs for the third century were placed there on the authority of Berthelot, *Introduction à l'étude de la Chimie*, but I find the authority he gives is doubtful.

The lists of signs are chronologically very imperfect, but sufficient for the purpose in view.

The following works were used in compiling figure I, but symbols have been collected from many other works as well:

III century. From Berthelot Coll. des Anciens Alchemistes. On comparing Berthelot's remarks with Wessely's publication I find the symbols magic not alchemic.

X and XV centuries. Berthelot Collection des Anciens Alchemistes.

XIII and XIV centuries. MS. Sloane 976. This contains a few old signs and others explaining them in XVth or XVIth century hand.

XV century. MS. Sloane 830. Alchemic alphabets and signs.

XVI century. MS. Sloane 2327, and others.

XVII century. MS. Sloane 997, and the *Materia Medica* collection.

XVII century. Lemery Cours de Chimie.

XVIII century. Macquer Elemens de Chimie, Bergmann Elective Attraction.

The alchemical symbols are adaptations of

- I. Older signs and ciphers used in astronomy, astrology, and magic, with the last two of which alchemy was always closely connected.
- II. The contractions of written names of substances.
- III. Arbitrary marks.

They were not at their earliest originated for or by the art; nor were they exclusively used for its purposes at any time or place when the things they meant were required to be symbolised elsewhere. For instance the alchemical signs for the sun, heaven, earth, the moon, a stone, and others are found in Psalters of the tenth and fifteenth centuries.<sup>1</sup>

<sup>1</sup> See Astle on writing.

It does not appear that particular chemical signs were needed for several centuries after Christ. At first they were comparatively few in number and partook of the nature of alphabets which varying amongst each other necessitated the collection of many such by the student for comparison; and it was long before anything like a general system prevailed.

The selected signs by degrees became specially adapted to the art, increasing in number and complexity until it was possible, by their aid, to construct diagrammatic representations of the interaction of substances, which remind us somewhat of the methods in use by chemists to-day; and to write whole formulæ.

Contracted symbols were used for the names of metals and chemical products and for any name. Contractions were formed from the Greek, Latin, French, and English languages. Some Greek contractions follow:

FIGURE II.—CONTRACTIONS.

Κ	=	ΚΡΟΚΟΣ
Χ	=	ΩΧΡΑ
Σ	=	ΣΩΡΥ
Π Π	=	ΠΥΡΙΤΗΣ
Δ	=	ΣΑΝΔΑΡΑΪΗ
Μ	=	ΜΙΣΥ
Λ	=	ΛΙΘΟΣ
Π Π	=	ΣΙΝΟΤΙΣ ΠΟΝΤΙΚΗ
θ. θ.	=	ΘΕΙΟΝ
Θ	=	ΟΞΟΣ
Υ	=	ΥΠΕΥΘΙΟΝ

The symbols are here formed from the black letters, the fainter ones being omitted in contraction.

Bad copying and ignorance of Greek gradually caused many signs to be modified and become incomprehensible even to adepts; then the changed form had to be retained or a new one invented—this was done freely, thus the older sign ( $\theta \nu$ ) for sulphur had the triangular one substituted for it. Other substances lost their proper sign which became attached to something else, as that for pyrites to alum and to vinegar,<sup>1</sup> a change which shows that the original meaning was utterly lost.

The loss of the original meaning of a contraction brought it to the category of arbitrary marks. In this category I include all those which are not astrological or reducible to contractions. It was very numerous, and the symbols having no meaning were peculiarly liable to go astray, especially when, as was generally the case, they were ill conceived and carelessly written. One sign sometimes stood for two and even three utterly different things in the same list!

The symbols of the seven metals are mythological adaptations. The earliest purely alchemic and complete table of them we have is given in a papyrus of the tenth century A.D. from Thebes, it is at Venice. [Berthelot, *Collection des Anciens Alchimistes.*]

In the relative position of these four columns is seen the true connexion of the symbols. They are placed first, next to the gods to which they belong. The asteroid names are the sun, the moon, and the names of planets derived from their qualities of shining. These last are said by some writers to be the names of the Greek gods, this, however, could only be so as far as that they were representative of planets, they are said to be older than the names in the first column. It is noticeable that Apollo and Artemis are not included as standing for the sun and moon.

In the third column are the metals.

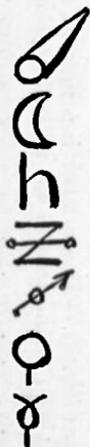
It will be seen that none of the names in the three columns are reducible to literary contractions, resembling those of the metals, with perhaps a partial exception in the Z of Zeus.

<sup>1</sup> MS. Sloane, 976.

FIGURE III.

GODS

PLANETS



ΚΡΟΝΟΣ

ΖΕΥΣ

ΑΡΗΣ

ΑΦΡΟΔΙΤΗ

ΕΡΜΗΣ

ΗΛΙΟΣ

ΣΕΛΗΝΗ

ΦΑΙΝΟΝ

ΦΑΕΘΩΝ

ΠΥΡΟΕΙΣ

ΦΩΣΦΟΡ

ΣΤΙΛΒΩΝ

# METALS

Χρυσος  
αργυρος  
μολιβδος  
ηλεκτρος  
σιδηρος  
χαλκος  
κασσιθηρος

Therefore in default of a derivation from contraction, or any other plausible source; and setting aside the chance of their being arbitrary marks it seems to me certain that the symbols were really accepted signs by which the gods were made to do duty by their emblems for the metals.

Sculpture and painting, whether rude or refined, relied largely for the right understanding of the personages represented, on the presence of certain attributes, the ruder the work the more necessary the sign until the sign is equal to the god. According to the numerous characters which a god fulfilled he had appropriate symbols, but each god had one particular symbol by which he was best known, and it was by these that the presence of a god was shown or his aid sought, on coins, in sculptures, on magic hands, terra-cotta plaques, and gems.

For the purposes of ready representation these symbols were robbed of ornament and expressed simply, and reduced in size from want of space.<sup>1</sup>

The alchemic signs have suffered still further and become attenuated, linear, and adapted to use along with the letters employed in writing.

Some symbols also were unsuitable for writing, as the best known sign for Venus, the dove, which necessitated a special selection capable of ready representation, though not the best known.

*The Sun (Fig. 3).*—The Sun as a crown to Helios or Apollo was many rayed, often seven, in magic two or three were shown. Only one ray is retained in alchemy, this ray was retained until the fifteenth century, but before this had given place to a dot very often.

*The Moon (Fig. 3).*—The crescent is obviously natural.

*Saturn (Fig. 3).*—This is the reaping-hook or sickle with which Kronos performed a notorious operation. He is represented with it on coins of Tarsus and Corinth, on paintings and many gems. This is his only distinctive sign. The dot in the centre and the hook to the right are superfluities. It is not the scythe of Saturn.

*Zeus (Fig. 3).*—This symbol is a squared form of the thunder-bolt, the horizontal bar is the bolt, the Z is a combination of

<sup>1</sup> Collections of these simple signs are found on Mithraic gems such as the famous one in Montfaucon *Antiquité Expl.*, T. I. pt. II., pl. 217, a plaque in B.M. figd. Jahn *Berichte über d. Ver-*

*handl.* d. K. S. Gesell. 1885, pl. 5. See also Lajard, *Culte de Mithra*, Gori *Thesaurus Gem, Astriferarum* and other like works innumerable.

the lightning or the wings and the name of Zeus. The later form still retains the small zeta for Zeus, but the cross bar has changed its place and become vertical, that it may be more like a Christian cross. The eagle symbol was unsuitable for writing.

*Mars* (Fig. 3).—This is irresistibly suggestive of the shield and spear by which nearly the whole figure of a warrior was hidden. Ares was so represented and there is no other symbol for him.

*Note*.—If *Thouros* were accepted as a name alone standing for Ares, the Theta might well be the symbol, as suggested by Saumaise, Berthelot, and others (but it would be necessary to add the contraction for *lithos*, a suitable conjunction when we recall the meaning of *sideros*); but *Thouros* is not a name and the derivation is unsupported.

*Aphrodite* (Fig. 3).—It is obvious that the dove was unsuitable for writing, consequently another symbol was sought that was convenient. Of the numerous signs attributed to this goddess, those which resemble the sign are, the mirror, myrtle wreath and flower. In the Asiatic representations which preceded those of Greece, the latter is distinctive and was never superseded altogether in Greece or Rome, the early and late representations accord well with the sign. The mirror also was suitable and resembled the flower in outline.

*Hermes* (Fig. 3).—The caduceus of Hermes. The sign closely resembles the simple herald's wand of early representations, before the transformation of the two upper branches into serpents; which old form was retained on magic plaques and gems, also in a scriptive form in papyri. There can be no doubt that this sign is the caduceus.

The Christian element which has been added may be traced in these symbols in the cross bars of lead, copper, iron, and quicksilver. The cross of tin is changed in position and emphasised. It is wanting in early examples.

I add notes on the opinions of three authors holding different views on the origin of the signs and on Beckmann's.

In the sixteenth and seventeenth centuries, writers commonly attributed the symbols to those of the gods.

Fayus gives, for instance, the symbols as we use them and places the meaning opposite, thus to that of Saturn, *falx*; Jupiter, *fulmen*; Mars, *hasta cum clypeo*; Sol, *rota*; Venus, *speculum*; Mercury, *caduceum*; Luna, *semicircularis lucis*. M. Fayus, Manilii Astronomicon, note to lib. I, line 809.

Salmasius has an article on the origin of the signs directed against the opinion. He finds, after giving sundry quotations showing that *thouros* and *thouras* is an

epithet of Ares, but not independent of his name, that the sign is contracted from the first letter and a something else which he does not understand. That Venus is represented by a Phi. Kronos is represented by the first two letters of his name, and the sign for Mercury he gives as an upright stroke with a modern letter S wound round it which stands for the Sigma of *Stilbon* and so on. The symbols he employs in illustration he says are early and later Greek, and for the remarkable examples on which he founds his opinion he gives no authority or reference! But these examples are all mediæval and some which he takes to be early are but little removed from his own day and cannot be considered ancient. See Salmasius' *Plinianæ Exercitationes*, p. 874.

Boerhaave attempted their elucidation—but he rejects Greek contractions from a belief in their purely alchemical origin. Boerhaave *Elementa Alchemiæ*.

Beckmann considers the matter but sums up by saying that none of the suppositions are of any value.

He uses for the purpose the symbolic forms in vogue in his time. In that for lead there is certainly no resemblance to the scythe of Saturn and he omits to consider Kronos whose harpe is the real instrument. Neither was it possible for him to see in that of tin any resemblance to the thunderbolt of Zeus. These obvious difficulties probably made him distrust the remainder.

His origin from contractions is clever, he certainly succeeds in showing that his contractions have no resemblance to the actual symbols, but whether this misrepresentation was intentional or no is doubtful. J. Beckmann *Beyrage zur Geschichte der Erfindungen*.

The astrological signs are practically the same from the earliest time they appear and are still used in the *Nautical Almanack*.

They may still be seen in chemists' and apothecaries' shop windows together with other bastard signs; as, however, they are not understood through ignorance, they are considered silly and are going out of fashion.

There is one point indirectly connected with the signs deserving a word. The mark which English physicians place at the commencement of their prescriptions is an R with a dash through the tail. I have examined a large

number of English prescriptions for this letter and find no variation of importance for over 500 years. It is always an R with a flourish or an e after it, which is the contracted form of the word Recipe, often also written in full. Dr. Paris claimed that the downstroke was an innovation and that without it the R becomes the symbol for Jupiter. In the first place, he does not show that such was the case by authorities, and in the second, the omission of the downstroke has not the result he claims. There is no evidence that the Continental custom as now in use was employed here. I have seen in a German prescription of old date the sign for Mercury, and an English one by R. Skelton, sixteenth century. The French use the sign for Jupiter where we write Recipe.

## LIST OF DRUGS.

The following list of *Materia Medica* is made out from the labels attached to the compartments of drawers, and from loose labels with the substances. It very often happens that the substance is far from its right place. I have taken all the names and the star signifies its presence somewhere. The substances at the end were found without labels.

It is noticeable that very many specimens are wanting to a collection of this kind for its completion and according to the catalogue. Cat. means an extract from Sloane's Catalogue.

The letter (S) means that the symbol was used instead of the name I have given, such as a circle and dot instead of "Sol" for Gold.

These symbols are given in the line marked "Sloane" in fig. III.

The letter (D) stands for Samuel Dale, on whose pharmacologia the things were ordered. (L) is for Lemery.

- |                                |   |
|--------------------------------|---|
| * Flos Sulphuris (S) ....      | Sublimed sulphur.   |
| * Sulphur (S) Trans. Ind. .... | Crystalline transparent Native of a greenish colour.<br>Cat. 190. Green Brimstone from the East Indies.   |
| * Sulphur (S) Citrinum ....    | Bar sulphur.  |
| * Sulphur Vivum ....           | <i>Cafe au lait</i> -coloured masses.   |
| * Alum (S) Plumosum ....       |   |
| * Alum (S) Rupeum ....         | Common or Rock Alum.  |
| Alum (S) Ustum ....            | Burnt Alum.   |
| * Tartarum Vinis ....          | White and red. Argol.   |
| * Chrystall Tartar (S) ....    | Cream of Tartar.  |
| * Vitriol (S) Roman ....       | Cat. 136 Chalcantum Vitriolum Cerulæum Romanum<br>off. Colcothar is made from this, which is the<br>caput mortuum of Vitriol or Chalcitis. D. This<br>is called Red Vitriol by J. Beguinus. Tyrocin.<br>Chym. |
| * ....                         | Green vitriol. Cat. Chalcantum Vitriolum Viride<br>off.   |
| * Vitriol (S) Album. ....      | Cat. Chalcantum. White Vitriol off.   |

- \* [Star Symbol.] Sal Armon .... ..  
 \* Vitrum .... ..  
 \* Pompholix sive Albanil. ....  
 Mercury (S) Vivum ....  
 \* Cinnabaris N. .... ..
- Aquila, lapis Aquilinis, Cancer, Sal Allocoph, &c.  
 Brown pot metal. Drunk with wine for the Stone.  
 Pompholix sive Nil, Nihil, Nihili Album, Tutia preparata, Capnites, onyehntitis, ostracitis, &c. L. a late preparation.  
 Quicksilver.  
 A label has Cinnabaris factita. It is nitric oxide of mercury. Arcanum Corallinum Paracelsi. Red precipitate. It gets the name cinnabar because the mercury used was previously obtained from native cinnabar before treatment with aqua fortis. Lemery.
- \* Mercury (S) Dulcis ....  
 \* Mercury (S) Sublimatus  
 Mercury (S) Precipitatus.
- Calomel. Invented by Crolius 1609.  
 Corrosive sublimate.  
 A neighbouring compartment to that marked "Cinnabaris N." This was probably white precipitate.
- Foliatum.... ..  
 Sol (S) Fulminans .... ..
- Symbol uncertain, apparently that of Mercury.  
 Fulminating Gold. Calx or Crocus of Gold. This was discovered apparently in the 15th century; as it brought itself into notice by blowing out doors and windows, it was concluded that it was a powerful medicine. Efforts were made to render it manageable by mixing it with dry salts and powders, sulphur, &c., it was then administered internally, in doses of 3 or 4 grains with powerful effect. T. Bergmann, Essays II., 142, the result of which is however not detailed.
- \* Saturn (S) Calcinatum....  
 Calx (S) V. .... ..  
 \* Calx Extinct .... ..  
 \* Cerussa .... ..  
 Cotes .... ..  
 \* Marchasita .... ..
- Litharge, carried further the roasting produced minium. Lemery.  
 Calx Viva, Quicklime. Titanos of the Greeks.  
 Friable limestone. an Mortar.  
 Cerussa et Sandyx off. Plumbum Album. D. psimuthion.  
 Lapis olarius, the whetstone. D.  
 Iron and Copper Pyrites. Marcasite is ill defined. There were marcasites of all the metals. Lemery says that all stones which contain metal are marcasites. Native Bismuth was the marcasite *par excellence*, until the metal was made known by J. H. Pott. There is a specimen of manufactured metal in this collection labelled, "Bismuth, Sept. 6th, 1682." Marcasite is now Iron pyrites and finally the Rhombic variety of that.
- \* (S) Tutia .... ..  
 Crocs. Veneris (S) .... ..  
 \* Chalybs Cruds. .... ..  
 (S) Magnes .... ..
- Tutty or Zinc oxide, Lemery has "Pompholix sive Tutia preparata."  
 Cat. 545. "Crocus Veneris (S) Comburend."  
 Ferric Carbonate. "Chalybs off. Steel," D.  
 The symbol is that of Arsenic of the period. In the catalogue of minerals, Loadstone is the regular name given to Magnetic Iron, never Magnes. Magnes was anciently given to all things brought from places of that name. Magnes arsenicalis was invented by Angelus Sala for which he gives a formula, and asserts that it will defend the body from poison, but will also draw out the venom from an affected person. It was composed of antimony, arsenic, and sulphur. Dr. Paris says that amulets of arsenic were worn on the head during the plague. It was supposed to act after the manner of the Loadstone and Baily's Dict. says magnetism is a certain virtue whereby one thing becomes affected at the same time with another, and by this virtue the arsenic acts. Lemery calls it Aimant Arsenical.

* Lapis Hæmatitis	....	Hæmatite or Bloodstone.
* Scales of Mars (S)	....	Scales of Black Oxide of Iron.
* Limat. Chalybis....	....	Iron filings.
* Crocus	....	Crocus Martis, Saffron of Steel, Ferric Oxide.
* Ochra Prussiac	....	Cat. 140. "Ochra lutea off. Ochra Prussiac."
* Ochra Angl.	....	"Terra Tripolitana, Tripoli. English oker," D.
* Ochra Rub.	....	Red ochre.
* Creta Alb.	....	White chalk rock.
* Creta Gallic	....	Cat. "Creta Vindis Gallica off. Spanish Chalke, Marking Stone."
* Ter. Cimolia	....	Mottled Clay, "White Lumbarstone, Simolia Alba, also Cimolia purpurascens Fuller's earth." D.
* Bols. Vulg.	....	Common bole—it is a red clay, probably French, see Pomet.
* Bols. Vers.	....	Bole.
* Terra Samias.	....	Yellow sealed pellets.
* Terra Silesiac	....	A pellet is marked with a coat of arms having a key on it. Cat. 148. Terra Silesiaca off. Axungia Solis. St. Paul's earth or Adam's earth. Andrew Berthold, London, 1587, says that this <i>nuper Germania</i> repertur, is an antidote to vegetable and mineral poisons.
* Argilla	....	Pipe clay.
* Terra Sigillata Lemnia....	....	The regular stamped cakes. There were endless frauds of all colours; this is genuine.
* Lap. Judaic	....	Cidarid Spines from the Bocene of Syria. "Lapis Judaicus hath circular lines in length all down its body and equidistant." Sir T. Browne, <i>Vulg. Errors</i> , I., § 1.
* Lap. Lincis	....	Small Belemnites. These were the "Lap.-Lyncis." D. Ceraunia.
(?) Lap. Nephrit	....	Lapis Nephriticus. Dale does not describe this.
* Lap. Lazuli	....	There were two sorts. "Fixus colorem in igne uon mutans et non fixus in Germania reperietur." D.
Sapphirs.	....	
Smaragds.	....	Tincture of Emerald is mentioned by Boyle as of great value. <i>Scept. Chymist</i> , p. 260.
* Chrystalls	....	Quartz crystals.
* Hyacinths	....	Black Garnets, used in the <i>Confectio Hyacinthi</i> .
* Granati	....	Reddish yellow garnets.
* Topasis	....	Small pieces.
* Beryllus	....	A piece.
* Amethyst	....	Poor specimens.
Sardius Cup.	....	This was placed among the <i>Materia Medica</i> as being the correct substance out of which potions were to be administered.
* Amber	....	There was a cup used for the same purpose, now in another part of the museum.
* Rubes	....	Crimson Hungarian Garnets. "Rubinas off. Nobiliores in insula Zeilan (Ceylon?) nascuntur." D.
* Gagates	....	Jet. "Gagates et Succinum nigrum." D.
* Sal fossile	....	Selenite. Lapis Specularis.
* Hybernic Lapis	....	Pieces of dark shale. "Lapis Hibernicus, Irish slate." D.
Heliotropius	....	"Heliotropius 2s. 6d." on label.
* Lapis Calam	....	Native Calamine.
Onyx	....	"Onyx 2s." label.
* Bitumen Judaic....	....	Soft Asphalt, but keeping its shape. Asphalt or Jew's pitch.
* Lap. Bezoari	....	One of these varieties of Bezoars is apparently a fossil palate bone of shark.
* Lap. Bezoari Oc.	....	One gilt? Concretions from the stomach.

- \* *Bezoar Orientalis* .... Concretion, fine quality. There is an extensive literature concerning these concretions from the stomachs of various ruminants, which it is impossible even to enumerate. The stones were greatly sought after, and great prices being paid for them, there was an extensive sale of factitious ones. They were applied externally and internally. W. Gaitskell [Gents. Mag. 66, p. 54, 1796] says they were introduced as medicine in the 11th century. Bezoars are still exported from British Guiana.
- \* *Bufonius Lapides* .... The price given for these was 2s. 6d. They consist of the worn teeth of an old seal. "Lupus marinus Dentes molaris Lapis Bufonites officina dicta. The Toadstone." D.  
As there never was a toad which had a stone in its head, these strange frauds must have early been recognised by the faculty as necessary.  
In the next compartment is the Otolith of a large Cetacean—perhaps this was also a *Bufonius Lapis*, it is broken up. See Ch. Merrett's *Pinax*; and Phil. Trans. I., 364.
- \* *Dentalium* .... Shells of *Serpulæ*. Pomet says these are used falsely for the true *dentalium*; as were also the ear bones of cod, two of which are in a near compartment.
- \* *Mater Perlarum* .... Pearl oyster shell.
- \* *Lumbrici Terr.* .... Dried worms.
- \* *Cantharides* .... Dried whole.
- \* *Os Sepiæ*.... Label "Scuttle bone."
- \* *Seric Crudum* .... There are two sorts of cocoons, the common and another differently prepared and whiter. There are two labels "Seric Crud." and one "bags of rare silk" in much earlier writing, they are in two compartments.
- Ungula Alcis* .... Good against Epilepsy. Pomet.
- \* *Oculi Cancerorum* .... Circular stones from *Astacus fluviatilis*, very highly esteemed as lithontriptic. See Phil. Trans. XLV. p. 174.
- \* *Spodium* .... A label "Ebur Vst." here it is a broken Ivory Cup burnt. *Spodos* is by some writers used for any ash or odd substance found in a smelting furnace. R. Boyle, *Scept. Chymist*. p. 60, says that *Pompholyx* is found in the upper part and *Spodos* in the lower part of the furnaces in which copper ore and cadmium are treated for making bronze.
- \* *Cornu Cervi Vst.* .... Burnt harts horns.
- Zibethum* .... Civet.
- \* *Castoreum* .... In "pods."
- Mel virginicum* .... Small bottle only.
- \* *Ichthiocolla* .... Coarse swimming bladder of fish.
- \* *Cera Alba* .... Very hard and brittle.
- \* *Cera Citrina* .... With this was a portion of Honey Comb.
- \* *Moschus*.... Instead of Musk in this compartment were portions of human skull and pelvis covered with moss. Cat. 4104 "Usnea a cranio humano, Muscus B." The moss is of two species as determined by Mr. G. R. Murray—*Homalothecium Sericeum*, the larger mass—the smaller *Bryum capillare*. The moss was not always the same. See Parkinson's figure. Pomet says these were not uncommon things in the shops of London. There are other specimens mentioned in the Cat. of Sloane Coll. Boyle much extols the salt of man's skull, "Scept. Chymist. p. 250. An astonishing prescription of

- great length and complexity of healthy human blood is given by Beguinus in his Tyrocinium Chymicum. Eating these things is an attenuated form of cannibalism which may be detected in the next substance. Sentimental cannibalism is still in vogue with us.
- A specimen of moschus (true) is in the collection; it is very small and has no smell.
- \* Sang Hirci .... Dried Clots of Blood, considered a very valuable remedy.
- Sir T. Brown says this is a sovereign remedy for the Stone, &c., and traces this opinion to the belief that in the goat the Blood of Christ was typified, &c. Vulg. Errors II., Ch. V.
- \* Os de Corde C. .... There is also a label Os e Corde Bovis. They are ossified valves, but of which beast I cannot tell. Nor does Dr. Chr. Merrett enable us to distinguish although he complains that the apothecaries substituted the latter for the former. See his "Frauds and Abuses of Apothecaries," 1669.
- \* Ebur Crudum .... Raw Ivory Turnings.
- \* Cornu Cervi C. .... Unburnt tines of Deer. "C" is perhaps a mistake here (for Calcinatum).
- Troschisci de Viperis .... This was a complicated preparation of Snakes. It forms the most important ingredient of the famous Theriacum consisting of 96 to 100 medicines combined.
- Pulmones Vulp. .... Paris says that it was given because the fox is long-winded. Signatures. Introduction to his Pharmacologia.
- \* Scinci Marini .... Dried lizards. Pomet figures some like these, and says, "The Sea Skink is found in the Nile." They are amphibious lizards, it is the Crocodilus Terrestris of Ray. Used in the preparation of the famous Mithridatic antidote.
- Seta e bombico ... These may have been the silk glands of the silk worm drawn out. Now used by anglers.
- \* Chelæ Cancrorum .... Claws of Crab.
- \* Dentes Apri .... Cetacean bones (of the head?) Pomet gives a figure of the "Sea Hog," calling it "Delphinus or Porcus Marinus," but the bones are not Dolphins'.
- Cornu Rhenocerotis ....
- \* Mandibula Lucij .... Mandibles with teeth, of perch.
- \* Mumia .... A mummied finger from Egypt. Also a piece of human skull to which an entry in the Catalogue may apply, thus, "Mumia from Persia." There is no asphalt, therefore it is to be referred to the humanity of the specimen for virtue.
- \* Terra Japonica .... Catechu. Cuchu. This is the modern Catechu and the name Cachou now given to lozenges. Pomet, Lemery, and Tournefort agree that the nature of Catechu is difficult to determine, or its origin. It is said by them to come from the East, and from the Levant. It is very bitter. It is "pounded and when mixed with ambergrease and tragacanth is formed into little pellets, the smaller the better." Pomet says "it was one of the best of drugs, and yet the least used, which proceeds from the great use of tea and coffee." Pomet, Pharmacopie Universelle II, 414.
- \* Ext. Mort. of S .... Succinum understood. It is a black mass. Cat. 2657 has "Caput mortuum of Amber."
- \* Goa or Goar Stones .... Cat. "Made of five ingredients, pearl, bezoar," the rest omitted. They were often mere rubbish.

The following are among the specimens without labels :—

* Lead	....	....	....	
* Tin	....	....	....	
* Iron	....	....	....	
* Realgar	....	....	....	Native and factitious.
* Orpiment	....	....	....	"  "
* White Marble	....	....	....	
* Talcose Rock	....	....	....	
* Alabaster	....	....	....	Calcium Sulphate.
* Jasper	....	....	....	Green.
* Coal, mineral	....	....	....	
* Minium	....	....	....	Red lead.
* Fluor	....	....	....	Green.
* Antimony	....	....	....	Sulphide.
* Verdigris	....	....	....	This is the French preparation—from the marc of grapes and copper foil which lie in it.
Graphite....	....	....	....	This is not officinal. D.
* Borax	....	....	....	
* Saltpetre ..	....	....	....	

There are many other salts and minerals which I was unable certainly to determine without testing.