

Syllabus of a course of lectures, read at Guy's Hospital / by Wm Babington.

Contributors

Babington, William, 1756-1833.
Little, Robert
Royal College of Physicians of London

Publication/Creation

London : H. Reynell, 1789.

Persistent URL

<https://wellcomecollection.org/works/v4jyr658>

Provider

Royal College of Physicians

License and attribution

This material has been provided by This material has been provided by Royal College of Physicians, London. The original may be consulted at Royal College of Physicians, London. where the originals may be consulted. This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

Unable to display this page





Digitized by the Internet Archive
in 2016

<https://archive.org/details/b28037406>

SYLLABUS

Robt. Jones OF A *Little*
Libr

COURSE OF LECTURES,

Anno Domini

READ AT

1792

GUY'S HOSPITAL,

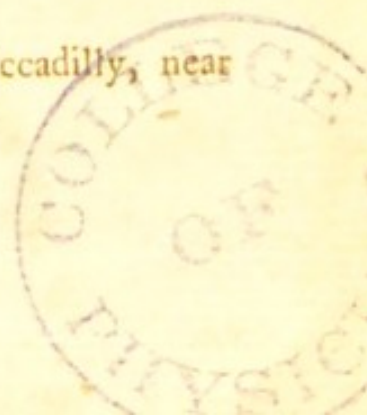
BY

WM. BABINGTON.

L O N D O N:

Printed by H. REYNELL, (No. 21,) Piccadilly, near
the Hay-Market.

M,DCC,LXXXIX.



S Y L L A B U S

S Y L L A B U S

COURSE OF LECTURES

LECTURE

DOCTRINE

DOCTRINE

DOCTRINE

DOCTRINE

DOCTRINE

DOCTRINE

DOCTRINE

DOCTRINE

DOCTRINE

ROYAL COLLEGE OF PHYSICIANS LIBRARY	
CLASS	54
ACCN.	5489
SOURCE	
DATE	

S Y L L A B U S
O F
C H E M I S T R Y.

GENERAL DOCTRINES.

DEFINITION of Chemistry.

Distinction between this and other Branches
of Natural Philosophy.

Matter, the Object of Philosophy in general.

General Properties of Matter : *Extension ;*
Impenetrability ; Divisibility.

States of Matter : *Rest ; Motion.*

Motion, either *communicated*, or *excited*.

Excited Motion : *Repulsion ; Attraction.*

Of Attraction.

Attraction of different Kinds : *Magnetic, Electric, Capillary Attraction ; Attraction of Gravitation, of Cohesion ; Chemical Attraction.*

Of Gravitation.

Gravity, either *Absolute*, or *Relative*.

Modes of ascertaining the Relative or Specific Gravity of Bodies.

Of Cohesion.

It's various Degrees : *Hardness ; Softness ; Fluidity ; Vapor ; Air.*

It's various Modes : *Brittleness ; Ductility ; Malleability ; Crystallizability.*

Of Chemical Attraction.

Distinction between this and other Attractions.

Necessary Conditions in the Bodies upon which it operates.

Effects

Effects produced by it : *Change of Temperature* ; of *Specific Gravity* ; of *Taste* ; of *Smell* ; &c.

Division into *Single* and *Double Elective Attractions*.

Construction of *Tables* of *Elective Attractions*.

Apparent Objections to these.

EXPLANATION OF GENERAL TERMS.

Analysis ; *Synthesis* : *Via Sicca* ; *Via Humida*.

Solution : *Menstruum* ; *Solvent*.

Precipitation : *Precipitate* ; *Precipitant*. &c.

OF CHEMICAL APPARATUS.

Choice of Materials.

Forms : *Furnaces* ; *Baths* ; *Retorts* ; *Receivers* ; *Matrasses* ; *Muffles* ; *Cupels* ; *Crucibles* ; *Lutes* ; &c.



OBJECTS OF CHEMISTRY.

NATURE of Chemical Objects.

Division into *Heat, Gasses, Water, Salts, Earths, Metals, Inflammables.*

OF HEAT.

Definition. *Boiling heat 212 degrees. freezing point 32 degrees*

Opinions regarding its Nature.

Laws of it's Transmission in Solids and

Fluids.

Water may be made red hot by being compressed in its vessels, so that some

Capacities of Bodies for conducting and retaining Heat. *Some bodies will retain heat more than others*

General Effects of Heat; Expansion, Liquefaction, Evaporation, Ignition, Combustion.

Of Expansion.

Illustrations in Solids, Liquids, Airs.

Apparent Exceptions. *Iron expands by being heated so does other bodies*

Expansion of certain Bodies proportioned to the Heat applied: Thermometers.

Mercuri Spir; Vini Aq; Vini are what is commonly used in the construction of thermometers. Spirit Vini is the most properest for this purpose

in the Constitution of the matter, it must be
perfect hollow tube like the degree of heat in
Cold will not be accurately ascertained, their way
know by putting quickly into the tube measure
the space it takes up by this method when me-
asure with the greatest accuracy. ---
Of Liquefaction.

Dependence of Liquefaction upon the De-

gree of Heat. Some bodies will liquefy sooner
Manner in which it takes place in Bodies: to be liq-
Melting Point; Fusion; Vitrification. as Cold

Manner in which it ceases: Freezing Point; 32 deg

Congelation; Coagulation. { Brit. Dist with 4 w

Theory of LATENT HEAT. { freeze sooner than 4 w

Of Sol. here on is Dist with 4 w. { Sol. will raise the

It will lower the thermometer. { thermometer

below the freezing point. { of Sol. will raise the

of Sol. here on is Dist with 4 w. { Sol. will raise the

It will lower the thermometer. { thermometer

below the freezing point. { of Sol. will raise the

of Sol. here on is Dist with 4 w. { Sol. will raise the

It will lower the thermometer. { thermometer

below the freezing point. { of Sol. will raise the

of Sol. here on is Dist with 4 w. { Sol. will raise the

It will lower the thermometer. { thermometer

below the freezing point. { of Sol. will raise the

of Sol. here on is Dist with 4 w. { Sol. will raise the

It will lower the thermometer. { thermometer

below the freezing point. { of Sol. will raise the

of Sol. here on is Dist with 4 w. { Sol. will raise the

It will lower the thermometer. { thermometer

below the freezing point. { of Sol. will raise the

of Sol. here on is Dist with 4 w. { Sol. will raise the

It will lower the thermometer. { thermometer

below the freezing point. { of Sol. will raise the

Different Degrees of Ignition ; Red Heat,
White Heat, &c.

Susceptibility of different Bodies to be
ignited.

Combustion of bodies always alters them in their
properties very materially, as if Sulphur is burnt it is
quite altered in its nature. **Of Combustion.** For bodies being
burnt are in capable of being mixed with
oxygen. Can happen unless there is Atmospheric
Nature of this illustrated.

It's limitation to particular Bodies : **Inflam-**
mables. A dephlogistic Air will create inflammability
in a body that contains heat as a piece of wood in the
Effects of Combustion on Inflammable
Bodies. A little by plunging them into a bottle of Pure Air
will become luminous. Dephlogistic Air is inflammable

on the Air in
which it takes place. becomes inflammable, the

Different Theories of Combustion. Contain different
is now said that nothing contains inflammability
but pure dephlogistic Air alone. If Sulphur is added
will produce its own weight before burnt. If we

OF THE SOURCES OF HEAT. More Nitric
acid than its own weight before burnt. If we

Enumeration : Life ; Fermentation ; Con-
densation ; Chemical Combination ; Friction ;

Combustion ; Electricity ; Solar Rays. Friction will
produce an intense degree of heat so as to set fire

the surrounding apparatus. Electric Sparks are ve-
ry of heat so as to reduce bodies to different states.

The Electric fluid falls upon iron it will make
it hot. Solar Rays may be brought to one point
that its heat will volatile entirely away.

Of Affinity
magnetic it is found to have the least affinity
of any substance. Glass is easily reduced to
powder by the heat of the Solar Rays.

gas or Air. This is found in the Atmosphere which is a
Some time Elastic forms part of the Atmosphere
se Gases are many of them invisible; who don't mean
forms produced by heat or Gases as they are not permanent
their Elasticity. Was it not for these Gases Life could not be
preserved. These Gases are of various kinds some of them
Capable of Inflammability, some are Saline. Some of
them will not support life, unless there is combined
with it pure and De-phlogostic Air. No body can
live in Acid Acid. Such as is found in Caverns &
if we take hold of it & pour upon it Vitriolic Acid
and cover it over some time, then suspend it in
any History of their Discovery. Other Animals it will
destroy Their Sources. it if it remains in a few minutes
Distinguishing Properties: Rarity; Invi-
sibility; Permanent Elasticity.
Disposition to unite with Water.
----- with other Substances.
----- with each other.
Theory of their Composition.
Division into Respirable, and Mephitic.

OF GASSES.

History of their Discovery.

Their Sources. it if it remains in a few minutes

Distinguishing Properties: Rarity; Invi-
sibility; Permanent Elasticity.

Disposition to unite with Water.

----- with other Substances.

----- with each other.

Theory of their Composition.

Division into Respirable, and Mephitic.

OF RESPIRABLE GAS.

Distinguishing Properties of this Order.

Example; Pure Air.

Of Pure Air.

It's Discovery.

Sources.

Preparation.

Sensible Properties.

Effects upon Animal Life.

Effects

Other Metallic Substances & the Iron that is used will weigh more after fusion than it did before. Nitrous Gas (or Air) is Capable of Reducing - The Union of different Gases, and the quantity of Nitrous Gas, which will form

Effects upon Combustible Bodies: Water;

Nitrous Acid.

Absorption by Water.

by other Bodies.

Mixture with other Gases: Eudiometer;

Nitrous Acid.

Theory of its Composition.

Elective Attractions.

Uses.

OF MEPHITIC GASSES.

Their distinguishing Properties.

Division into Simply Mephitic, Saline, Inflammable.

OF GASSES SIMPLY MEPHITIC.

Their distinguishing Properties.

Enumeration; Phlogisticated Air, Nitrous Air.

Of Phlogisticated Air.

Its Sources.

Preparation, and Purification.

Sensible

Sensible Properties.

Effects upon Animal Life, and Flames.

Disposition to unite with Water.

Effects of Vegetation upon it.

----- of the Electric Spark with pure

Air : Nitrous Acid.

Mixture with other Gaffes.

Theory of it's Composition.

With our Air is Of Nitrous Air.

It's Preparation and Purification.

Sensible Properties. of the Air. *Atmosphere & the Air*
of the Air. Colour, it is

Effects upon Animal Life, Vegetation, and to know

Specific Combustion. Gravity. The Column of

and ought of various Fluids upon it: Phlo-

gified Nitrous Acid; &c. Nitrous

of Exposure to Liver of Sulphur:

Dephlogisticated Nitrous Air.

_____ of the Electric Spark.

— of this Air upon putrefying Sub-

stances.

----- of Exposure to heated Charcoal,

Pyrophorus, or Vitriolated Iron.

Mixture with other Gasses.

Theory of it's Composition.

Uses.

OF SALINE GASSES.

Their distinguishing Properties.

Enumeration; *Vitriolic Acid Air*, *Marine Acid Air*, *Dephlogisticated Marine Acid Air*, *Spathic Acid Air*, *Aërial Acid*, *Prussian Acid Air*, *Volatile Alkaline Air*.

N. B. These considered under simple Salts.

OF INFLAMMABLE GASSES.

Their distinguishing Properties.

Enumeration; *Common Inflammable Air*, *Hepatic Air*, *Phosphoric Air*.

Of Common Inflammable Air.

It's Sources.

Preparation and Purification.

Sensible Properties.

Effects upon Animal Life, and Vegetation.

Result of it's Combustion: *Water*; *Nitrous*

Acid. will produce the greatest explosion that is possible.

Effects of various Fluids upon it.

Measure it's quantity by *Com-*

with *Phos. Viri. vcl. H. Sub.*

Other Contains a quantity of Inflammable Air

(11)

Combination with Phlogisticated Air: Volatile Alkali.

Effects upon Metallic Calces.

Theory of it's Composition.

Uses: Aerostation; Fire-works.

Is obtained from the Liver of Sulphur by means of Acid: This Mixture is composed of alkaline salt with common Sulphur, on the addition of acid a large quantity of Hepatic Gas is generated.

Of Hepatic Air.
It's Preparation. It is immaterial what acid is used. Purely Hepatic water it has no weight.

Purification. There is a spring at Bath of this kind.

Sensible Properties. This Gas is soon decomposed by Air, to have

Effects of Exposure on it. The Gas is pure & wash it with Hy. Chloride it

Result of it's Combustion. will burn with a green explosion. This Gas

Union with Water: Hepatic Waters. of Victor is a green colour.

Decomposition by Nitrous Acid. This Gas seems

to be inflammable Air combined with Sulphur.

----- by Metals. Rotten eggs have a smell like Hepatic Gas

It's Effects upon Metallic Calces, and their

Solutions. This Gas repairs Eruptions and

Theory of its Composition. Some to the same

Uses.

To obtain this some Caution is requisite. It is

made by a mixture of Vol. Alkali and Phosphorus

which is produced from Scilla.

Of Phosphoric Air. This Gas is produced when it comes into contact

It's Discovery. Phosphorus Combined with Cal

Preparation. d then pouring water upon them this

Properties. will give out a quantity of

Phosphoric Gas & a very offensive

Effects. This Gas burns intensely being the most diff.

of any Gas whatever. It is very offensive

... Gas is a compound of inflammable
and Phosphorus. Temperature has no effect in
burning this Air. There is no light so far
as the Explosion (12th) Gas in Air

Effects of Exposure on it: *Spontaneous
Inflammation.*

Theory of it's Composition.

OF WATER.

Definition.

Properties in it's State of Vapor.

———— in it's Fluid State.

———— in it's Solid State.

Theory of it's Composition.

Attractions.

Uses.

OF SALTS.

Distinguishing Properties of SALINE BO-
DIES: *Sapidity; Solubility; Incombustibility.*

Effects of Exposure: *Deliquescence; Efflo-
rescence; &c.*

Effects of Solution in Water: *Change of
Temperature; Saturation.*

Means of promoting the Crystallization of
Salts: *Cooling; Evaporation; Sublima-
tion; Precipitation.*

Effects

Effects of Heat upon them: *True and Watery Fusion; Decrepitation; Decomposition.*

----- of Saline Substances on each other.

----- on Gasses.

----- on Earths.

----- on Metals.

----- on Inflammables.

Division of Saline Bodies into *Simple and Compound.*

They combine OF SIMPLE SALTS. *was I think*
especially the Acids. Acids turn Vegetable
blue to Their distinguishing Properties. *Red & Alkaline*

are Division into *Acids and Alkalies. Vegetable blue*
to Green. by this we may detect whether
there is any Alkali or Acid in any Mixture
whatever, Alkalies are used in dyeing. Alkalies
OF ACIDS.

are in Their distinguishing Properties. No 3 -
Acids Theory of Acidity. *Differ much in their power*

and Division of Acids into *Mineral, Vegetable, & proper*
they differ and Animal. in their Combination with
each other. All Acids have one principle
which is pure OF Mineral ACIDS. *dephlogostic*
air or pure Air

Their distinguishing Properties.

Enume-

is now prepared from a mixture of Sulphur & Common Nitre being burnt together which produces H. Vitriol. The Chamber that it is burnt in is lined with lead. 14 After this it is redistilled.

Enumeration: Acid of Vitriol, Phlogisticated Acid of Vitriol, Acid of Nitre, Phlogisticated Acid of Nitre, Acid of common Salt, Dephlogisticated Acid of common Salt, Acid of Arsenic, of Borax, of Fluor, of Molybdaena, of Amber, of Tungsten, and the Aerial Acid.

Of Acid of Vitriol. readily combines with moisture by mixing large quantities of it.

It's Sources. Preparation and Concentration. Sensible Properties.

Power of attracting Moisture: loses its specific gravity. It is Capable

Union with Water: Acidum Vitriolicum Di- being frozen into ice. by mixing this of Alcohol it produces the Rub. Vitriol.

Phaenomena attending it's freezing.

Action upon other Salts: Kali Vitriolatum (P.L.); Natron Vitriolatum (P.L.); &c. It acts on several Metals

upon Earths: Heavy Spar; Selenite; Colloid Sal Amarus (P.L.); Alum. mixed with

upon Metals: Vitriolum Album, Vitriolum Verde, Coeruleum (P.L.). Vit. Acid

upon Inflammables: Sulphur; Vitriolic Acid Air, and Glacial Vitriolic Acid;

Æther Vitriolicus (P.L.); Spiritus Aethæris Vitriolici (P.L.); Acid Soaps.

and forms a kind of Vitriolic Soap. It has a very great power of Elective

in (you de burn a quantity of Match in
the Cask & it will prevent fermentation
from taking place. Its Composition is
principally form by ¹⁵ Sulphur & the azo-gillay
Elective Attractions. of pure air
Theory of it's Composition.
Uses: Dying; Bleaching; Purifying Oils;
Medicine; &c. It is used in medicine
in a very extensive, & exhibit in different
forms - the Of Acid of Nitre. but in Nit:
acid It's Sources. Salub. in Hamorrhages
Usual Mode of obtaining it.
Method of purifying.
It's sensible Properties.
Action upon Gasses.
Union with Water: Aqua Fortis; Acidum
Nitrosum Dilutum (P.L.).
Action upon Saline Bodies: Aqua Regia: Nitrous
Prismatic, and Rhombic Nitre; &c.
upon Earths: Nitrous Barytes; of Limestone
Calcareous Nitre; &c.
upon Metals: Argentum Nitratum
(P.L.); Nitrated Copper; &c.
upon Inflammables: Nitrous Gas; Nitrous
Phlogisticated Nitrous Acid; Spontaneous Combustion.
Elective Attractions. Vegetable blues &c. the
Theory of it's Composition. acid is more pure
than ~~Muriatic~~
Uses: Dying; Etching; Assaying; Medi-
Both these &c. are very hurtful to the Liver
Salts are prepared from these Acids
They combine with Metals & Earths. They are
very corrosive & destructive to the human body.

Of Acid of Common Salt.

It's Sources.

Manner of obtaining the Pure Acid.

It's sensible Properties.

Combination with Gasses: *Dephlogisticated Marine Acid Air.*

Union with Water: *Common Marine Acid.*

Action upon other Salts: *Digestive Salt; Common Salt; Sal Ammoniacus (P.L.); &c.*

— upon Earths: *Muriated Barytes; Muriated Lime; Muriated Magnesia; &c.*

— upon Metallic Substances: *Hydrargyrus Muriatus; Hydrargyrus Muriatus Mitis (P.L.); Luna Cornea; &c.*

Theory of it's Composition.

Uses: *Bleaching; Dying; Assaying; Medicine; &c.*

Of Acid of Arsenic; of Borax; of Fluor; of Molybdæna; of Amber; and of Tungsten.

Their Sources.

Preparation.

Pro-

Properties.

Combinations.

Attractions.

Constitutions.

Uses.

Of Aërial Acid.

It's Sources.

Methods of collecting it.

It's sensible Properties.

Union with other Gases.

with Water: Acidulated Springs.

with Saline Bodies: Mild Alkalies.

with Earths: Aerated Earths.

with Metallic Substances: Chalybeate Springs.

with Inflammable Substances.

Elective Attractions.

Theory of it's Composition.

Use in Medicine.

Vegetable blues.

Quantity of Aërial Acid, Especially in

OF Vegetable ACIDS.

Their distinguishing Properties.

Enumeration of Acid of Vinegar, of Tartar, &c.

may be made Artificially, but their

is great danger in making it unless

is taken. Mr. B. has invented an apparatus

for this purpose, in this manner

...contain a quantity of this Acrid Acid
before where there is this Lignous substance, it is
known. The quantity of Lignous substance depends
on the presence of Acrid Acid. This Acrid Acid
united with Sulphur, is a good medium in
things of Sugar, of Sorrel, of Lemons, of Wood,
of Benzoin, and of Galls.

Acrid Acids are very easily decomposed
and differ in point of strength

Of Acid of Vinegar.

It's Sources. *this is the best & strongest of*
Purification. *being quite colourless, but best*

Concentration by Freezing, by Composi-
tion, and Decomposition: Acidum Aceto-
sum (P.L.). *known by mixing with it*

Sensible Properties. *Earth: To purify it it*

Action upon other Salts: Kali Acetatum *done by*
(P.L.); Aqua Ammoniae Acetatae (P.L.)

upon Earths: Acetated Barytes. *that which*

upon Metals: Aerugo; Cerussa Ace-
tata (P.L.). *very strong. Another way*

upon Inflammables. *it is the fire which then*

Elective Attractions. *glass retort, all Vinegar*

Theory of it's Composition. *Various the more so*

Uses; Dying; Printing; Preserving; Medi-
cine; Etc. *If bottles*

filled in Water & they filled with Vinegar
will keep a great length of time, & Cotton

put in pure but will burn without, & even

burning the Cotton & put in Vinegar
and used much in Medicines Of

*Of Acid of Tartar; of Sugar; of
Sorrel; of Lemons; of Wood; of
Benzoin; and of Galls.*

Their Sources.

Preparation.

Purification.

Properties.

Combinations.

Attractions.

Constitutions.

Uses.

OF *Animal* ACIDS.

Their distinguishing Properties.

Enumeration; *Acid of Phosphorus, of
Prussian Blue, of Ants, of Fat, of Milk,
and of Sugar of Milk.*

by pouring Of Acid of Phosphorus. upon it. Nitrous Acid then is a quantity of pure dephlogo-
is what is left behind in Vitriolic Acid
Present Modes of preparing it. Nitrous Acid
It's sensible Properties. is heat applied to
Effects of Heat on it: Glacial Acid. of Phospho-
produces a kind of Glass. Com-
Phosphorus Combined with Earth
will produce Corn; Cere;

Combination with other Salts: Phosphorated

Soda; Microcosmic Salt; Etc.

with Earths: Cornu Cervi

Ustum (P.L.)

with Metals: Siderite; Green

Lead Ore; Etc.

with Inflammables: Kunckel's

Phosphorus; Phosphoric Gas.

Elective Attractions.

Theory of it's Composition.

Uses.

Of Acid of Prussian Blue; of Ants;

of Fat; of Milk; and of Sugar

Acid of Milk. fat is produced by

Their Sources.

Preparation.

Purification.

Properties.

Combinations.

Attractions.

Constitutions.

Uses.

in greater quantity by fire than by
There are 3 Species of Alkali (viz) the
Vegetable & Volatile. Cream of Tartar
contains a quantity of Vegetable Alkali.
Vegetable Alkali is produced from the
different Vegetables by burning them in
Ash. These Alkalies contain a quantity
of Acid which is got rid of by

Their distinguishing Properties.

Theory of Alkalescence.

Division of Alkalies into Vegetable, Mineral,

Animal. Kali purum of the Shops

All these Alkalies are in a degree
Caustic. Of Vegetable Alkali. Alkali un-
fixed with all acids and produces
many preparations as is here enumerated
(Kali P.L.)

It's Sources.

Preparation and Purification.

Sensible Properties.

Effects of Exposure on it: Oleum Tartari per

Deliquium.

It's Solution in Water: Aqua Kali Puri

(P.L.).

Effects of Heat on it: Causticum commune
Acerrimum (P.E.).

It's Combination with Acids: Kali Vitrio-

latum (P.L.); Common

Medicine both as Nitre; Kali Acetatum

internal & External (P.L.); Crystalli Tartari

is given in dyspepsia (P.L.); Kali Tartarisa-

tionum (P.L.); Prussian

Blue, beginning

with a few drops at first & seldom more

above 30 drops.

Alkali; Kali Preparatum
(P.L.).

It's Combination with Earths : *Glass; Li-
quor Silicum.*

————— with Metallic Substances.

————— with Inflammables : *Phos-
phoric Gas; Kali Sulphu-
ratum (P.L.); Fluxes ;
Soaps.*

Elective Attractions.

Uses : *Dying ; Scowering ; Bleaching ; Agri-
culture ; Glass-making ; Metallurgy ; Me-
dicine ; &c.*

is obtained Of Mineral Alkali. in the same
anner as the Vegetable, by burning a
ed Called Soda (Natron P.L.) which produces
the Soda of the Shops. These properties

It's Sources.

Preparation and Purification.

Sensible Properties.

Effects of Exposure on it : *Efflorescence.*

of Heat : *Watery Fusion.*

It's Union with Acids : *Natron Vitriolatum*

(P.L.) ; *Rhombic Nitre ; Com-
mon Salt ; Borax ; Natron Tarta-
rifatum*

risatum (P.L.); *Soda Phosphorata*; *Natron Preparatum* (P.L.).

It's Union with Earths: *Glass*.

—— with Metallic Substances.

—— with Inflammables: *Hepar Sulphuris*; *Common Soap*; *Fluxes*; &c.

Elective Attractions.

Uses: *Bleaching*; *Dying*; *Glass-making*; *Medicine*; &c.

Of Animal or Volatile Alkali.

Is produced by the decomposition of some animal body, especially the horny part of it. *Ammonia P.L.*

It's Sources.

Preparation: *Alkaline Gas*.

Sensible Properties.

Union with Water: *Aqua Ammoniac Pura* (P.L.). - *Volatiles* are all of

with Acids: *Vitriolic*, *Nitrous*, and

Common Ammoniac; *Aqua Ammoniac*

Acetata, (P.L.); *Ammonia Prepara-*

rata (P.L.).

—— with Earths.

—— with Metals: *Cuprum Ammoniacum* (P.E.).

are *alkalies* are easily decomposed
 of alkali seems to be a composition
 of Common inflammable, and
 Phlogiston (24)

Union with Inflammables: *Spiritus Ammoniac* (P.L.); *Spiritus Ammoniac* com-
Volatilis *positus* (P.L.); *Spiritus Ammoniac* fœ-
Antiputridus *tidus* (P.L.), *Succinatus*, *Salis Am-*
ich. Should *moniaci* (P.E.); *Linimentum Am-*
given in *moniac* (P.L.).
and State

Elective Attractions.
 Theory of it's Composition.

Uses in the Arts and Medicine.

Spi: C.C. that is high Coloured is more
~~OF COMPOUND SALTS.~~

temperatures Nature of their Composition. *are Simple and*
apounds Division into Simply-Compounded, and Super-
aplication *basis of these Compound Salts*
 Compounded.

OF SIMPLY-COMPOUNDED SALTS.

Their Composition.

Selection.

is difficult to dissolve this it requires 10
is the quantity of *is the quantity of*
decomposed *is the quantity of*
winer of the salt *is the quantity of*
the salt *is the quantity of*
a great degree *is the quantity of*
to Fugurine *is the quantity of*
tri 3 *is the quantity of*
with *is the quantity of*
de of Alkali *is the quantity of*
Should be mixed to a very Subtle powder
Mixing with it a quantity of ley. let it
and should be mixed

Basis	}	*Vitriolated Tartar, <i>is the quantity of</i>
Vegetable		*Common Nitre, <i>is the quantity of</i>
Alkali.	}	Cream of Tartar, <i>is the quantity of</i>
		Soluble Tartar, <i>is the quantity of</i>
	}	Diuretic Salt. of Gold.
		Glauber's Salt, <i>is the quantity of</i>
Basis	}	Common Salt, <i>is the quantity of</i>
Mineral		Phosphorated Soda, <i>is the quantity of</i>
Alkali.	}	Phosphorated Soda, <i>is the quantity of</i>
		Phosphorated Soda, <i>is the quantity of</i>

Should be mixed to a very Subtle powder
Mixing with it a quantity of ley. let it
and should be mixed

*Of Cream of Tartar; Soluble Tar-
tar; and Diuretic Salt.*

*(Crystalli Tartari; Kali Tartarifatum;
Kali Acetatum P.L.)*

Their Sources.

Preparation.

Properties.

Combinations.

Decomposition.

Uses.

Of Glauber's Salts.

(Natron Vitriolatum P.L.)

It's Preparation.

Properties.

Uses.

*is composed of Common Salt. of Mineral
acid & alkali with* *(Natron Muriatum P.L.)* *Muriatic*

It's Natural History.

Preparation.

Purification : *Dundonald's Method.*

Properties.

Decom-

Decomposition: *Marine Acid*; *Patent Yellow*.

Uses: *Diet*; *Agriculture*; *Glazing*; *Metal-
lurgy*; *Medicine*; &c.

Of Phosphorated Soda.

(*Natron Phosphoratum.*)

It's Preparation.

Properties.

Uses.

*This is imported Of Borax. from the East
Indies in (Natron Boracicum P.L.) an impure
state, it is purified by solution & reprecipitation.
It is used as a Gargle in
Asthma &c.*

It's Natural History.

Purification.

Properties.

Uses in the *Arts* and *Medicine*.

*Of the Vitriolic, Nitrous, and *Com- mon Ammoniacs.*

(**Ammonia Muriata P.L.*)

Their Preparation.

Properties.

Decomposition.

Uses.

... a few, tho they seem to be of many
kinds. Earths are double more Especies
... Some Earths²⁸ contain a quantity
of Saline matter — Under the

OF SUPER-COMPOUNDED SALTS.

Their Composition.

Example: *Natron Tartarizatum* (P.L.).

... Especially Lime
... combined with metallic Gums
... and Glass see

OF EARTHS.

Their distinguishing Properties: *Weight;*

Insolubility; Incombustibility; Fixity.

Effects of Saline Substances on them:

Earthy Salts; Aerated Earths; Glass.

— of Earths on each other: *Porcelain.*

Their union with Metallic Calces: *Ena-
mels; Coloured Glass.*

— with Inflammables: *Earthy
Hepars.*

Division of Earthy Bodies into *Saline*, and
Insipid.

OF SALINE EARTHS.

Their distinguishing Properties.

Enumeration: *Barytes, Lime, Magnesia.*

Of

and Nitric Barytes, being combined
with both these Acids. Prussian alkali
readily decomposes ²⁹ the Barytes. The

Barytes contains a quantity of metallic
Combined with. (Heavy Earth.)
It gives us a

It's Natural History. by Dr Crawford in the

Modes of obtaining it. of Serophulace

Sensible Properties. Medicine requires a

Union with Acids: Heavy Spar; Nitrated,

Muriated, Acetated, Aerated Barytes. begins

Precipitation by Prussian Alkali. Small doses

Effects upon Compound Salts. 34 x going

upon Sulphur: Barytic Hepar. as 20 drop

Elective Attractions. Barytes if given

Opinions concerning it's Nature.

Uses. Animals will produce death

It is used in Lancashire to Poison

Rats, instead of Arsenic.

Of Lime. Both in the pure

Calcareous Earth. deprived of

It's Natural History. Lime is composed

Preparation. Combined with

Sensible Properties. The same as Crystalline

Effects of Exposure on it: Slaked Lime.

Union with Water: Aqua Calcis. upon it

with Acids: Selenite; Calcareous

Fluor; Chalk; Marble; &c.

Effects

is much used as a cement

and is very durable, Crystallizing

itself in a solid form

Effects upon Alkalies: Calx cum Kali Puro

(P.L.); Soap Lees.

upon Compound Salts.

upon other Earths.

upon Metallic Substances: Cemen-

tation of Iron.

upon Inflammables: Calcareous He-

par; Calcareous Soap.

Elective Attractions.

Uses: Utensils; Cements; Modelling; Dying;

Bleaching; Tanning; Sugar-baking; Me-

tallurgy; Medicine; &c.

Saline Earth Is a decomposition

Of Magnesia. It is found

in water (Muriatic Earth.) Many Stones

found in its Natural History, to contain Magnesia

any Preparation. of these Stones are found in

land Sensible Properties. Some Epsom Salts.

Effects of Heat upon it: Magnesia Usta

(P.L.) of alkali, solution, and

Magnesia will be thrown down in

its Combination with Acids: Magnesia Vir-

triolata (P.L.); Magnesia Alba (P.L.)

Effects of Compound Salts on it. Magnesia

It's Union with other Earths: Soap Rock;

Asbestos; &c. Magnesia combines freely with

acids. It is weak in its Union

Attraction, - Uses. It is used in -

Dyspeptic (use in acidity in the
stomach & vice. The best having no acrid
acid, does not produce indigestion
as the Magnesia³¹ All does when it goes

Union with Sulphur: Muriatic Hepar.

Elective Attractions.

Uses.

Magnes. Alb. is more proper than
Magnes. Alb. Fire does not deprive

of its OF INSIPID EARTHS.

Magnesia is used in making both

Their distinguishing Properties.

Enumeration; Clay, Flint.

Earth Contains a quantity of Metallic
substance especially the Calx of Iron
(Argillaceous Earth.) a quantity of
water. Fuller's Earth Contains a quantity
of its Natural History.

Preparation.

Sensible Properties.

Effects of Heat on it:

Wedgwood's Ther-

monometer.

Mixture with Water.

Union with Acids: Alum.

with Alkalies, and Earths: Reau-

mur's Porcelain.

Elective Attractions.

Uses: Pottery; Pigments; Dying; Scow-

ing; Bleaching; Tanning; Refining Li-

quors; Medicine; &c.

other bodies, the flint will most of them
d out fire when struck against steel. Among
the hardest body that we can find, Emery
is to be compared to it. Some
flints are quite transparent & without any
colour. Some of these flints are very
compressive & (Silicious Earth.) are converted

It's Natural History.

Sensible Properties.

Effects of Heat on it.

of Acids: Silicious Fluor. Acid. Flint

of Alkalies: Glass; Liquor Silicum.

of Compound Salts.

of other Earths.

of Metallic Calces: Coloured Glass;

Stained Crystal.

Elective Attractions.

Uses: Building; Glass; Pastes; Enamels;

Paints; Polishing; &c.

OF METALS.

Their Natural History.

Manner of working their Ores.

Assaying of Ores.

Distinguishing Properties: Weight; Splen-

dour; Opacity; Malleability; Ductility;

Power of conducting Electricity.

Effects

Effects of Exposure on them: Tarnish; Rust.

Effects of Heat: Annealing; Cementation;

Fusion; Granulation; Combustion;

Calcination; Scorification; Vitrification.

Effects of Acids: Solution; Corrosion. Bodies are

of Alkalies.

Effects of Compound Salts: Volatilisation.

Effects of Earths.

Effects of Metals on each other: Amalga-

mation; Alloy.

Separation of Metallic Compounds by So-

lution; Fusion; Sublimation; Calcination.

Effects of Sulphur on Metals: Artificial

Ores.

Effects of Oils.

Division of Metallic Bodies into Metals,

and Semimetals.

OF METALS. Volatile

Their Distinguishing Properties.

Division into Perfect, and Imperfect.

OF PERFECT METALS.

Their Distinguishing Properties.

Enumeration; Platina, Gold, Silver, Quick-

silver.

F

Of

the Gold & Iron. It is very difficult
to be fused. Aq. Regia is the menstruum
for Platina. (34) It is the most
toughly Article we are acquainted
with. Slightly Of Platina. Ductile & malleable

It's Natural History. fusible by mixing
Purification. arsenic All. Moscovium
most fused with copper

- Sensible Properties.
- Power of resisting Heat.
- Solubility in Aqua Regia.
- Properties of the Solution.
- Solubility in Liver of Sulphur.
- Combinations with other Metals.
- Elective Attractions.
- Uses: Chemical Vessels.

There is no Metallic that is so common
to be found Of Gold. In almost all
mineral beds there is some particles.

It's Natural History. found in different
Separation from it's Ores. Sometimes in its

Refinement: Cupellation; Quercitation; Part- form
to be found to be of different

Sensible Properties. Some being found

Effects of Heat on it. It is found Combined

Solubility in Aqua Regia. Antimony & Lead

Effects of Alkalies upon the Solution: Au-

Amalgam Fulminans, of Gold. Silver is

of Ethers. it likewise

very of Essential Oils. Ductile & malleable

more than any other Effects Metal

Shutwen M. Bebington

... that in bunches of gold might
be cut out so as to cover several miles
of length & breadth. The Aurum fulm.
will produce a (35) violent combustion
which is very dangerous. Gold is the
most durable of all metals.

Effects of Metals.

----- of Metallic Solutions: *Purple Powder of Cassius.*

Combination of Gold with other Metals:

Standard Gold.

Action of Hepar Sulphuris upon Gold.

Manner of heightening the Colour of Gold.

Elective Attractions.

Uses: *Utenfils; Ornaments; Enamelling;*

Gilding; Dying; Soldering; &c.

Of Silver.

It's Natural History.

Separation from it's Ores.

Refinement.

Sensible Properties.

Effects of Heat on it.

----- of Acids: *Staining Liquor; Argentum Nitratum (P.L.).*

Decomposition of it's Solutions.

----- by Acids: *Luna Cornea.*

----- by Alkalies, and Earths:
Argentum Fulminans.

----- by Metals: *Arbor Dianæ.*

• Effects of Alkalies upon Silver.

Effects of other Metals : *Standard Silver*,

----- of Inflammables,

Elective Attractions,

Uses : *Plate ; Ornaments ; Silvering ; Bell Metal ; Enamelling ; Soldering ; Dying ; Medicine ; &c.*

Of Quicksilver.

It's Natural History.

Extraction from it's Ores,

Purification.

Sensible Properties : *Fluidity*,

Effects of Exposure on it : *Consolidation*,

----- of Triture : *Pilulæ ex Hydrargyro* (P.L.) ; *Hydrargyrus cum Cretâ* (P.L.) ; *Syrupus Hydrargyri* (P.S.).

----- of Heat : *Volatilisation ; Calcination ; Hydrargyrus Calcinatus* (P.L.).

----- of Acids : *Hydrargyrus Vitriolatus* (P.L.) ; *Hydrargyrus Nitratus Ruber* (P.L.) ; *Hydrargyrus Muriatus* (P.L.) ; *Hydrargyrus Muriatus Mitis* (P.L.) ; *Calomelas* (P.L.) ; *Hydrargyrus Acetatus* (P.L.).

Pre-

Precipitates by Alkalies: *Calx Hydrargyri Alba* (P.L.); *Mercurius Cinereus* (P.E.).

————— by Earths.

————— by Metals.

Effects of Compound Salts on Quicksilver.

———— of Sulphur: *Hydrargyrus cum Sulphure* (P.L.); *Hydrargyrus Sulphuratus Ruber* (P.L.).

———— of Unctuous Substances: *Ointments*; *Plaisters*.

Union with other Metallic Substances: *Amalgams*.

Elective Attractions.

Uses: *Philosophical Instruments*; *Gilding*; *Refining*; *Assaying*; *Mirrors*; *Anatomy*; *Medicine*; &c.

OF IMPERFECT METALS.

Their distinguishing Properties.

Enumeration; *Lead*, *Copper*, *Iron*, *Tin*.

Of Lead.

It's Natural History.

Method of extracting from it's Ores.

It's sensible Properties.

Effects of Exposure on it.

— of Heat : *Plumbum Ustum* ; *Massicot* ;
Minium ; *Litharge*.

— of Acids : *Vitriolated*, *Nitrated*,
Muriated Lead ; *Patent Yellow* ; *Ce-*
russa ; *Cerussa Acetata* (P.L.) ; *Aqua*
Lithargyri Acetati (P.L.).

Combination with Earths : *Glass*.

— with Oils : *Unguent*s ; *Plaisters* ;
Paints ; *Varnishes*.

— with other Metallic Sub-
stances : *Pewter* ; *Solder* ; &c.

Manner of detecting the Presence of Lead.

Elective Attractions.

Uses : *Building* ; *Utenfils* ; *Shot* ; *Statues* ;
Glass-making ; *Glazing* ; *Painting* ; *Var-*
nishing ; *Refining* ; *Affaying* ; *Medicine* ; &c.

Of Copper.

It's Natural History.

Extraction from it's Ores.

Sensible Properties.

Effects of Exposure on it.

----- of Heat.

It's Solution in Acids : *Cuprum Vitriolatum*

(P.L.) ; *Nitrated, and Arsenicated Cop-*
per ; Ærugo (P.L.).

Precipitates by Alkalies.

----- by Earths : *Verditer.*

----- by other Metallic Substances :
Ziment Copper.

Effects of Alkalies upon Copper : *Cuprum*
Ammoniacum (P.E.).

----- of Compound Salts : *Aqua Sapphi-*
rina (P.E.).

----- of Sulphur : *Æs Ustum.*

----- of Oils.

Union with other Metallic Substances : *Bell*

Metal ; Bronze ; Prince's Metal ; Pinch-
beck ; Brass ; White Copper ; Pewter ; &c.

Elective Attractions.

Uses:

Uses : *Navigation ; Gunnery ; Buildings ;
Utenfils ; Alloys ; Gold, and Silver Lace ;
Enamelling ; Dying ; Painting ; Medicine ;
&c.*

Of Iron.

It's Natural History.

Manner of working it's Ores.

It's different States : *Crude Iron ; Bar Iron ;
Steel.*

Sensible Properties.

Magnetic Quality.

Effects of Exposure on it : *Ferri Rubigo
(P.L.).*

Means of defending it from rusting.

Effects of Heat : *Variation of Colour ; Tem-
pering Steel.*

----- of Acids : *Ferrum Vitriolatum
(P.L.) ; Colcothar ; Ferrum Muriatum
(P.L.) ; Prussian Blue ; Dyer's Ink ;
Common Ink ; Vinum Ferri (P.L.).*

----- of Compound Salts : *Ferrum Tarta-
risatum (P.L.) ; Ferrum Ammoniacale
(P.L.).*

----- of Sulphur : *Spontaneous Inflammation.*

Combination with Metallic Substances.

Elective Attractions.

Uses :

Uses : *Navigation ; Gunnery ; Utenfils ; Painting ; Dying ; Medicine ; &c. &c.*

Of Tin.

It's Natural History.

Extraction from it's Ores.

Sensible Properties.

Effects of Heat upon it : *Stannum Pulveratum* (P.L.) ; *Putty.*

----- of Acids : *Precipitates of Tin ; Scarlet Dyes.*

----- of Compound Salts : *Smoking Liquor of Libavius.*

Union with Sulphur : *Aurum Musivum.*

----- with other Metallic Substances :
Pewter ; Solders ; &c.

Elective Attractions.

Uses : *Utenfils ; Mirrors ; Types ; Tinning ; Enamels ; Medicine ; &c.*

OF SEMI-METALS.

Their distinguishing Properties.

Division into *Fixed*, and *Volatile*.

OF FIXED SEMI-METALS.

Their distinguishing Properties.

Enumeration ; *Bismuth, Nickel, Cobalt, Antimony, Manganese.*

Of Bismuth.

It's Natural History.

Extraction from it's Ores.

Sensible Properties.

Effects of Heat : *Flowers of Bismuth ; Vitri-fied Calx.*

Solution in Acids : *Sympathetic Ink.*

Precipitates : *Magistery of Bismuth.*

Union with Sulphur.

——— other Metallic Substances : *Sir I. Newton's Fusible Metal ; Adul-teration of Quicksilver.*

Elective Attractions.

Uses : *Pewter ; Solder ; Types ; Mirrors ; Assaying ; Painting ; Imitation of Silvering, and Gilding ; &c.*

Of Nickel.

It's Natural History.

Separation from it's Ore.

Difficult Purification.

Sensible Properties.

It's Magnetism accounted for.

Effects of Heat upon it.

Properties of it's Solution.

It's Affinity to Sulphur.

Combination with other Metallic Substances.

Elective Attractions.

Uses.

Of Cobalt.

It's Natural History.

Reduction from it's Ores.

Sensible Properties.

Effects of Heat upon it.

Solution in Acids : *Sympathetic Ink.*

Combination with Earths : *Zaffre ; Smalt ;
Powder Blue.*

————— with other Metallic Substances.

Elective Attractions.

Uses: *Colouring Glass; Glazing; Enamelling; Painting; Washing; &c.*

Of Antimony.

It's Natural History.

Different Methods of obtaining the Regulus.

It's sensible Properties.

Effects of Heat upon it: *Argentine Flowers; Antimonium Vitrificatum (P.L.); Vitrum Antimonii Ceratum (P.E.).*

----- of Acids: *Antimonium Muriatum (P.L.); Powder of Algaroth; Antimonium Tartarifatum (P.L.); Vinum Antimonii (P.L.).*

Deflagration with Nitre.

Combination with other Metallic Substances.

Union with Sulphur: *Crude Antimony.*

Effects of Heat upon Crude Antimony: *Pulvis Antimonialis (P.L.).*

Action of Alkalies upon it: *Kermes Mineralis (P.S.); Sulphur Antimonii Præcipitatum (P.L.).*

Defla-

Deflagration with Nitre : *Antimonium Calcinatum* (P.L.) ; *Nitrum Antimoniatum* (P.S.) ; *Crocus Antimonii* (P.L.) ; *Calx Antimonii Nitrata* (P.E.).

Combination of Crude Antimony with Metallic Substances : *Æthiops Antimonialis* (P.S.).

Elective Attractions.

Uses . *Types* ; *Medicine* ; &c.

Of Manganese.

It's Natural History.

Manner of obtaining the Regulus.

It's sensible Properties.

Effects of Exposure : *Black Calx*.

Action of this upon Acids : *Dephlogisticated Marine Acid*.

----- upon Oils : *Spontaneous Inflammation*.

Elective Attractions.

Uses : *Glass-making* ; *Glazing* ; &c.

OF VOLATILE SEMI-METALS.

Their general Properties.

Enumeration ; *Arsenic*, *Zinc*.

Of

Of Arsenic.

It's Natural History.

Sublimation of the Regulus.

Difference between this and *White Arsenic*.

Effects of Heat upon the latter : *Garlick Smell*.

It's Solubility in Water.

Effects of Acids upon it : *Acid of Arsenic*.

Combination with Alkalies and Earths : *Hepar Arsenici* ; *Macquer's Arsenical Salt*.

————— with Sulphur : *Realgar* ; *Orpiment*.

————— with Oils.

————— with Metallic Substances :
White Copper ; *Scheele's Pigment*.

Methods of detecting the Presence of Arsenic.

Elective Attractions.

Uses : *Gilding* ; *Imitating Silver* ; *Mirrors* ;
Enamelling ; *Glass-making* ; *Glazing* ; *Soldering* ; *Dying* ; *Painting* ; *Medicine* ; &c.

Of Zinc.

It's Natural History.

Distillation from it's Ores.

Sensible Properties.

Effects of Heat upon it : *Zincum Calcinatum*
(P.L.).

Union with Acids : *Zincum Vitriolatum*
(P.L.).

—— with other Metallic Substances : *Spelter* ; *Pewter* ; *Tutenag* ; *Brass* ; *Pinchbeck* ; *Solders* ; *Prince's Metal* ; *Bronze*.

Elective Attractions.

Uses : *Utenfils* ; *Gunnery* ; *Statuary* ; *Amalgams* ; *Painting* ; *Medicine* ; &c.

A P P E N D I X.

TUNGSTEN.

WOLFRAM.

MOLYBDÆNA.

OF INFLAMMABLES.

Their various Sources, and Forms.

Distinguishing Properties: *Combustibility,*
and Levity.

Effects of Exposure on them.

—— of Water.

Combination with Gasses, Saline Sub-
stances, &c.

Division into *Mineral, Vegetable, and Ani-*
mal.

OF *Mineral* INFLAMMABLES.

Their distinguishing Properties.

Enumeration ; *Inflammable, and Hepatic*
Airs, Naptha, Petroleum, Asphaltum, Jet,
Coal, Peat, Amber, Sulphur, Plumbago,
and the Diamond.

Of Inflammable and Hepatic Airs.

N. B. These treated of under Gasses.

*Of Naptha; Petroleum; Asphaltum;
Jet; Coal; and Peat.*

Their Natural History.

Theory of their Origin.

Sensible Properties.

Phenomena attending their Combustion.

Effects of Heat upon them in close Vessels:

Dundonald's Tar; British Oil.

Insolubility in Water, and Spirit of Wine.

Solubility in Oils.

Union with Sulphur: *Balsamum Sulphuris
Barbadense.*

Uses.

Of Amber.

Natural History.

Clarification.

Sensible Properties.

Effects of Heat in close Vessels: *Sal, &*

Oleum Succini (P.L.).

Difficult Solubility of Amber.

Uses.

Of Sulphur.

It's Natural History.

Manner of obtaining it: *Flores Sulphuris*
(P.L.); *Sulphur Vivum*.

Sensible Properties.

Effects of Heat upon it: *Phlogisticated Vi-*
triolic Acid.

Insolubility in Water.

Union with Inflammable Air: *Hepatic Gas*.

—— with Alkalies: *Alkaline Hepars*.

Deflagration with Nitre: *Vitriolic Acid*.

Combination with Nitre and Charcoal:
Gunpowder.

—— with Nitre and Vegetable Al-
kali: *Pulvis Fulminans*.

—— with Earthy Substances:
Earthy Hepars.

—— with Metallic Substances:
Hydrargyrus cum Sulphure
(P.L.); *Hydrargyrus Sulphu-*
ratus Ruber (P.L.); *Orpiment*;
Aurum Musivum; &c.

—— with Oils, and Bitumens:
Balsams of Sulphur.

Elective

Elective Attractions.

Theory of it's Composition.

Uses : *Impressions ; Bleaching ; Checking Fermentation ; Manufacturing Vitriolic Acid ; Gunpowder ; Medicine ; &c.*

Of Plumbago.

Natural History.

Sensible Properties.

Effects of Heat.

----- of Alkalies : *Inflammable Air.*

Decomposition by Neutral Salts.

Union with Metals : *Cold-short Iron.*

Theory of it's Composition.

Uses : *Pencils ; Shot-polishing ; Razor Strops ; Crucibles ; Furnaces ; &c.*

Of the Diamond.

Natural History.

Sensible Properties ; *Refractive Power.*

Effects of Heat.

----- of Charcoal.

Opinions regarding it's Nature.

Uses.

OF *Vegetable* INFLAMMABLES.

Their distinguishing Properties.

Enumeration; *Spirit of Wine, Essential Oils, and Resins, Expressed Oils, Camphor, Charcoal.*

Of Spirit of Wine.

Preparation, and Purification: *Alkohol* (P.L.).

Sensible Properties.

Effects of Combustion.

Union with Water: *Spiritus Vinosus Rectificatus* (P.L.); *Spiritus Vinosus Tenuior* (P.L.).

—— with Acids: *Dulcified Spirits; Æthers; Oleum Vini* (P.L.).

—— with Alkalies: *Spiritus Ammoniacæ* (P.L.).

—— with Compound Salts.

—— with Sulphur.

—— with Essential Oils: *Spiritus Carui* (P.L.); *Spiritus Cinnamomi* (P.L.); &c.

Union

Union with Resins : *Tinctures* ; *Varnishes*.

—— with Camphor : *Spiritus Camphoratus* (P.L.).

Elective Attractions.

Theory of it's Composition.

Uses.

Of Essential Oils, and Resins.

Their Preparation.

Sensible Properties : *Spiritus Rectior*.

Effects of Exposure.

—— of Heat : *Oleum Terebinthinæ Rect.* (P.L.) ; *Resina Flava* (P.L.).

Union with Water : *Aqua Cinnamomi* (P.L.) ; *Aqua Fœniculi* (P.L.) ; &c.

—— with Acids : *Acid Soaps* ; *Spontaneous Inflammation*.

—— with Alkalies : *Starkey's Soap* ; *Spiritus Ammoniac Comp.* (P.L.).

—— with Spirit of Wine : *Spiritus Cinnamomi* (P.L.) ; *Spiritus Lavendulæ* (P.L.) ; *Tinctures* ; *Varnishes*.

—— with Sulphur : *Balfams of Sulphur*.

Combinations of Resins with Expressed Oils : *Unguent*s ; *Plaisters*.

Sophistication of Essential Oils.

Effects of Essential Oils upon Phosphorus :

Liquid Phosphorus.

Nature of the Composition of Essential Oils, and Resins.

Uses : *Fuel ; Painting ; Varnishing ; Perfuming ; Soap-making ; Medicine ; &c.*

Of Expressed Oils.

Their Preparation.

Sensible Properties.

Effects of Exposure on them : *Rancidity.*

----- of Heat : *Empyreumatic Oil.*

----- of Acids : *Acid Soaps.*

----- of Alkalies : *Common Soap.*

----- of Earths : *Calcareous Soap.*

Combination with Metallic Substances :

Paints ; Plaisters ; Unguents.

----- with Sulphur : *Balsamum Sulphuris.*

----- with Phosphorus : *Liquid Phosphorus.*

Nature of their Composition.

Uses :

Uses : *Diet ; Lamps ; Painting ; Varnishing ;
Soap-making ; Mechanics ; Medicine ; &c.*

Of Camphor.

Natural History.

Refinement.

Sensible Properties.

Effects of Exposure.

----- of Heat : *Acid of Camphor.*

----- of Acids : *Oil of Camphor.*

Solution in Water : *Mistura Camphorata*
(P.L.).

----- in Spirit of Wine : *Spiritus Cam-*
phoratus (P.L.).

----- in Oils : *Oleum Camphoratum*
(P.E.)

Nature of Camphor.

Use in Medicine.

Of Charcoal.

It's Preparation.

Sensible Properties.

Durability of Charcoal.

Effects of Heat on it.

Effects

Effects of Charcoal on Gasses.

----- of Acids on Charcoal : *Sulphur ;
Inflammation.*

Union with Alkalies : *Phlogisticated Alkali ;
Fluxes.*

Effects upon Compound Salts : *Hepar Sul-
phuris.*

----- upon Metallic Substances : *Reduc-
tion ; Cementation.*

Mixture with Nitre and Sulphur : *Gun-
powder.*

Effects upon Liver of Sulphur.

----- upon Expressed Oils.

Theory of it's Composition.

Uses.

OF *Animal* INFLAMMABLES.

Their distinguishing Properties.

Enumeration ; *Phosphoric Gas, Wax, Sper-
ma Ceti, Fat, Butter, Ambergrease, Phos-
phorus.*

Of Phosphoric Gas.

N. B. This treated under Gasses.

Of

*Of Wax; Sperma Ceti; Fat; and
Butter.*

Their Origin.

Sensible Properties.

Effects of Exposure: *Cera Alba; Rancidity.*

----- of Heat: *Butter of Wax; Acid of Fat.*

----- of Acids: *Acid Soaps.*

----- of Alkalies: *Common Soap.*

----- of Earths: *Calcareous Soap.*

----- of these on Metallic Substances.

----- on other Inflammables.

----- on each other.

Theory of their Composition.

Uses: *Diet; Fuel; Soap-making; Curriery;
Varnishing; Medicine; &c.*

Of Ambergrease.

It's Origin.

Properties.

Uses.

Of Phosphorus.

It's Preparation.

Sensible Properties.

I

Effects

Effects of Exposure : *Slow Combustion.*

----- of Heat : *Acid of Phosphorus.*

----- of Acids.

----- of Alkalies : *Phosphoric Air.*

----- of Nitrous Salts.

----- of Earths.

----- of Metallic Substances.

----- of Metallic Solutions.

----- of other Inflammable Bodies : *Liquid Phosphorus ; Phosphoric Matches ; Portable Fire.*

Elective Attractions.

Theory of it's Composition.

Uses.

Of ANALYSIS.

Nature of Analysis explained.

Division into *Artificial*, and *Spontaneous.*

Of Artificial Analysis.

Distinction between this, and Spontaneous Analysis.

Manner of proceeding in it ; *Via Sicca ; Via Humida.*

Ana-

Analysis, Via Sicca, illustrated: *Assaying of Ores; Distillation of Vegetable, and Animal Substances.*

Analysis, Via Humida, illustrated: *Analysis of Mineral Waters.*

Of Spontaneous Analysis.

(Fermentation.)

Nature of the Bodies disposed to this Analysis.

Circumstances under which it takes place.

It's different Stages: *Vinous; Acetous; Putrid.*

Products of these: *Aërial Acid, Spirit, Vinegar, Volatile Alkali, &c.*

Means of promoting or retarding Fermentation: *Ferments.*

Nature of Ferments.

F I N I S.

THE HISTORY OF THE

AMERICAN REVOLUTION

OF THE

AMERICAN REVOLUTION

OF THE

AMERICAN REVOLUTION

OF THE

AMERICAN REVOLUTION

OF THE

AMERICAN REVOLUTION

OF THE

AMERICAN REVOLUTION

OF THE

AMERICAN REVOLUTION

OF THE

AMERICAN REVOLUTION

OF THE

AMERICAN REVOLUTION