Syllabus of lectures on materia medica and therapeutics, delivered in the University of London / by Anthony Todd Thomson.

SYLLABUS

OF

LECTURES

ON

MATERIA MEDICA AND THERAPEUTICS,

DELIVERED IN

THE UNIVERSITY OF LONDON,

BY

ANTHONY TODD THOMSON, M.D. F.L.S.

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS;

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON,

&c. &c. &c.

LONDON:

PRINTED FOR JOHN TAYLOR,

BOOKSELLER AND PUBLISHER TO THE UNIVERSITY OF LONDON,

30, UPPER GOWER STREET.

1829.

"*Quærere verum.*"

PRINTED BY RICHARD TAYLOR,
PRINTER TO THE UNIVERSITY OF LONDON,
RED LION COURT, FLEET STREET.

TO MY PUPILS.

GENTLEMEN,

IN presenting to you this Syllabus, it is my wish to aid, by its means, your comprehension of the Lectures to which it relates; to impress upon your minds that the subject is one deserving of your most serious attention, and that the knowledge of it is intimately connected with your future prospects in life as Practitioners.

Let us, Gentlemen! therefore, labour together in earnest. I am as anxious to learn as to instruct; and my utmost wish is to be regarded rather as your senior in the investigation of Science, than as your Professor.

Believe me, most sincerely yours,

A. T. T.

Calotropis Mudarii, Asclepiadeae L.

Calotropis - Brown - Hindostan

Root, yellowish brown, its bark reduced to powder constitutes Mudar.

Used in Hindostan in cutaneous diseases especially Elephantiasis Lepra.

SYLLABUS,

&c.

THE subject introduced:—definition of MATERIA MEDICA and THERAPEUTICS.

A. GENERAL CIRCUMSTANCES CONNECTED WITH THE ACTION OF MEDICINES ON THE BODY.

Medicinal agents act on the living solid:—distinction between dead and living matter:—between life and organization. General manner in which medicines operate on the living body:—influence of the *digestive* and *assimilating* functions in modifying the action of those taken into the stomach:—

a. in health;
b. in disease.

The distinguishing features of these states pointed out.

Medicinal agents operate on the living body in *four* distinct modes:—they may

a. act directly on the nervous energy of the part to which they are applied; and the effect be propagated to other parts of the system. They may act in this manner when

1. applied to the skin :
2. taken into the stomach :
3. applied to the organ of Smelling.

b. They may be conveyed, undecomposed, into the system, influencing the habit through the medium of the blood : this may occur b y

1. absorption from the intestinal canal :
2. ———— through the skin :
3. ———— through the lungs.

c. They may be carried into the system, having been either previously decomposed or whilst suffering decomposition in transitu, and may operate by one or more of their constituents. They may be

1. decomposed in the stomach :
2. ———— in the blood, or in some secreting organ.

d. They may act chemically, combining with the part of the body to which they are applied.

Illustration of each of these modes.

Examination of the peculiar powers of medicines, particularly those which determine their operation on some parts of the body in preference to other parts.

Circumstances which modify the general operation of medicines :—

a. Original conformation ;—denoting

1. Constitution ; displayed in the vigour and the debility of the frame,—its irritability and sensibility,—predisposition to disease,—and in the state of the mind.
2. Temperament ;—sanguine, melancholic :—proofs that all the other temperaments are modifications of these two.
3. Idiosyncrasy ; displayed in the senses : in the vital functions.

b. *Age ;*—distinct characters of each of its stages.

c. *Sex :*—characteristics of each sex at different periods of life, and under different circumstances dependent on the state of civilized society.

d. *Habit* or *custom.*

e. *Climate :*—its powerful influence on the original conformation of animals,—particularly on man, as displayed in the races of the human species :—description of these,

1. The Caucasian :
2. —— Mongolian :
3. —— Ethiopian :
4. —— American :
5. —— Malay :

conjectures regarding the causes of these permanent varieties. Effects of climate in changing the characters of the different races of animals ;—the medicinal properties of plants ; consequently, in modifying the operation of medicines.

f. *Culture :*—manner in which this modifies the operation of medicines and affects the state of plants employed as medicines :—how each of these causes modifies the action of medicines, both on the healthy and the diseased frame, explained and illustrated.

Circumstances may occur to oppose and counteract the operation of medicines, and to disappoint the hopes of the physician :—they may be

a. those over which he has no controul ;

1. *Mental affections*—displayed in the exciting and depressing passions ; in the faith or confidence of the patient on the attending practitioner ; in imagination :—credulity :—superstition.

b. those which he may be able to controul :

2. *Deceptions of patients ;* displayed in the simulation of diseases which do not exist :—of peculiar symptoms, when disease actually exists.

Negligence or wilful neglect of the patient in following the directions of the attending practitioner.

Manner of discovering and counteracting these deceptions. Examination of the influence which the period of a disease exerts over the operation of medicines.

B. Classifications of medicinal agents as objects of Natural History.

All medicinal agents are either *natural* or *artificial* substances ;—

a. Organized—comprehending animals and vegetables.

b. Inorganic—comprehending fossils, minerals, earths.

The first of these divisions may be classed—the Animals, according to the systems either of Linnæus or of Cuvier ;—the Plants, according to those of Linnæus or of Jussieu. A knowledge of these systems facilitates greatly the study of animal and vegetable products ; and, therefore, a brief explanation of each system is given, for the benefit of those who have not previously studied Natural History. As the inorganic substances are chiefly objects of chemical investigation, no natural classification of them is requisite for the purposes of Materia Medica.

C. Classifications of the Materia Medica.

Sketch of the history of these arrangements :—the only Classifications founded on rational principles are those of Cullen, Brown, Dr. Young, and Dr. John Murray. Brief view of each ;—in what valuable, in what objectionable. The foundation of the Classification adopted in this course of Lectures :—its supposed advantages.

Class I.—Vital Agents;

A.—influencing the body generally;—

Excitants:

1. by operating on the muscular and the sanguiferous system, through the nervous energy:
   1. Tonics.
   2. Stimulants.
   3. Astringents.
2. ——— on the secerning system:
   4. Errhines.
   5. Sialogogues.
   6. Cathartics.
   7. Emetics.
   8. Diuretics.
   9. Diaphoretics.
   10. Expectorants.
   11. Emmenagogues.
3. ——— directly on the nervous system:
   12. Narcotics.
   13. Antispasmodics.

Depriments:

14. Sedatives.
15. Refrigerants.

B.—influencing the body solely by their action on the part to which they are applied.

16. Epispastics.

Class II.—Chemical Agents;

A.—influencing the state of the body, or its contents by their chemical properties.

Solvents:

17. Escharotics.
18. Lithontriptics.

Neutralizants:

19. Antacids.
20. Antalkalies:
    a. Antiseptics.

Class III. Mechanical Agents;

21. Demulcents.
22. Diluents.

D. Examination of Medicines acting as Vital Agents.

Explanation of the terms Simple, Vital, animal solid ;—nervous energy ; — contractility ; — irritability ; — sensibility ;—excitant ;—depriment. Inquiry regarding the question—do medicines that act on the nervous energy enter the circulation ?—Examination of the general manner in which medicines, acting as vital agents, influence the body through the medium of the circulation.

1. Vital Agents acting on the muscular and sanguiferous system, through the nervous energy.

I. Tonics.

Definition.—Tone implies a state of health, in which all the functions are duly and regularly performed :—deficient tone,—a state of disease : — description of both states. Manner in which medicines change a state of deficient tone or debility into a state of tone.—The same substance may operate either as a simple stimulant, or as a tonic, according to the manner in which it is administered :—almost all medicines, within the range of excitants, produce a relative tonic effect on the habit ;—but those only are considered *Tonics*, the invigorating effect of which is the direct sequence of their administration. Inquiry into the manner in which the effect of a tonic taken into the stomach is extended to the rest of the system.—Use of Tonics as Medicinal agents.—General qualities of Tonics ;—bitterness ;—aromatic principle :—fallacy of regarding any single principle as solely productive of tone. Examination of

Particular Tonics.

A. Tonics acting primarily on the stomach.

* *Organic Products.*

a.—Cinchonia—combined with

Kinic Acid in *Cinchona lancifolia.* 5. 1.[1] Rubiaceæ.[2]

—— *Cinchona oblongifolia.* — ——

[1] Class and Order of Linnean arrangement.

[2] Natural Orders of Jussieu and DeCandolle.

an unknown Acid	*Cusparia febrifuga.*	5.	1.	Rutaceæ.
Sulphuric Acid	*Sulphas Cinchoniæ.*			

b.—Quinia—with

Kinic Acid	*Cinchona cordifolia.*	5.	1.	Rubiaceæ.
——	*Cinchona oblongifolia.*	—		——
Sulphuric Acid	*Sulphas Quiniæ.*			

c.—Piperina— with

fixed acrid oil	*Baccæ Piperis nigri.*	2.	3.	Urticeæ.
——	*Fructus Piperis longi.*	—		——
volatile oil	*Fl. Anthemidis nobilis.*	19.	2.	Compositæ.
——	*Artemisia Absinthium.*	—		——
——	*Folia Tanaceti vulgaris.*	—		——

d.—Strychnia—with

Extractive &c.	*Strychnos nux vomica.*	5.	1.	Strychneæ.

e.—Gentiania—with

fixed oil &c.	*Radix Gentianæ luteæ.*	5.	2.	Gentianæ.

f.—Quassina—with

Gum &c.	*Lig. Quassiæ excelsæ.*	10.	1.	Simarubiæ.
volatile oil	*Cortex Quassiæ Simarubæ.*	—		——
Resin	*Chironiæ Centaurii.*	5.	1.	Gentianæ.

g.—Bitter Extractive—with

Fecula &c.	*Radix Calumbæ.*			Menispermeæ.
——	*Cetraria Islandica.*	24.	3.	Lichenes.
Gallic acid	*Menyanthis trifoliata.*	5.	1.	Gentianæ.
——	*Arbutus Uvæ Ursi.*	10.	1.	Ericineæ.
Tannin	*Swietenia febrifuga.*	10.	1.	Meliaceæ.
——	*Radix Gei Urbani.*	12.	5.	Rosaceæ.
volatile oil	*Cnicus benedictus.*	19.	3.	Compositæ.
——	*Croton Cascarilla.*	21.	8.	Euphorbiaceæ.
——	*Radix Acori Calami.*	6.	1.	Junceæ.

h.—Volatile Oil—with

Gum &c.	*Myrrha.*			

** *Inorganic Products.*

g.—Oxides of Metals—(simple radicals with oxygen)

Calx.
Zinci Oxydum.
Arsenici Oxydum.

with acid salts:
- *Zinci Sulphas.*
- —— *Acetas.*
- *Cupri Sulphas.*
- —— *Acetas.*
- *Bismuthi Subnitras.*
- *Barytæ Murias.*
- *Sodii Chloridium.*
- *Potassæ Arsenias.*

h.—Chlorine—with
a metallic base — *Ferrum ammoniatum.*

B. Tonics acting through the medium of the blood.

a.—Oxygen—with
a metallic base—an Oxide. — *Oxydum Ferri Nigrum.*
Simple radicals
——— acids:
- *Acidum Sulphuricum.*
- ——— *Nitricum.*

b.—Chlorine—with
a metallic base ——— *Sodii Chloridum.*
hydrogen and water — *Acidum Muriaticum.*

a.—Oxides of Metals—with
various acids

— salts:
- *Potassæ Chloras.*
- *Calcis Hydro-chloras.*
- *Argenti Nitras.*
- *Ferri Carbonas.*
- —— *Sulphas.*
- —— *Hydro-chloras.*
- —— *Acetas.*
- —— *Tartras et Potassæ.*

c. Tonics acting primarily on the nervous energy.

(Mental) *Hope.*
Confidence.
Travelling.
Amusement.
(Material) *Cold Bathing.*
Exercise.
Friction.

Practical employment of Tonics—diseases in which they are chiefly indicated :—cautions necessary to be observed during their administration.

II. Stimulants.

Definition—sensible properties :—chiefly aromatics :—is there any general aromatic principle ?—volatile oil ?—Stimulants act primarily on the stomach ;—but the impulse is communicated to the rest of the system :—manner in which this is effected. Affinity between Tonics and Stimulants—practical necessity for separating them :—in what Stimulants are distinguished from Tonics :—General state of the habit in which Stimulants are useful as medicinal agents. Examination of

Particular Stimulants.

* *Organic Products.*

a.—Volatile Oil—

* Uncombined.

in *Cortex Citri Aurantii.*	18. 2.	Hesperideæ.
—— *Citri Medicæ.*	—	——
Folia Melaleucæ Cajeputi.	12. 1.	Myrti.
Herba Menthæ viridis.	14. 1.	Labiatæ.
—— *Menthæ Piperitæ.*	—	——
—— *Menthæ Pulegii.*	—	——
—— *Rutæ graveolentis.*	10. 1.	Rutaceæ.
—— *Origani vulgaris.*	14. 1.	Labiatæ.
Flores Lavandulæ Spicæ.	14. 1.	——
—— *Rorismarini officinalis.*	2. 1.	——

** Combined with

Fecula in	*Semina Cari Carui.*	5. 2.	Umbelliferæ.
	—— *Fœniculi dulcis.*	—	——
	—— *Pimpinellæ Anisi.*	—	——
	Radix Zingiberis officinalis.	1. 1.	Drymyrrhizæ.
	—— *Curcumæ longæ.*	—	——
Gum & Inulin	—— *Acori Calami.*	6. 1.	Junceæ.
Polychroite	—— *Croci sativæ.*	3. 1.	Irideæ.
Extractive	*Flor. Eugeniæ Caryophyllatæ.*	12. 1.	Myrti.
	Semina Matoniæ Cardamomi.	1. 1.	Drymyrrhizæ.
	Rad. Aristolochiæ Serpentariæ.	20. 6.	Aristolochiæ.
	—— *Dorsteniæ Contrayervæ.*	4. 1.	Monimieæ.
Tannin	*Baccæ Myrti Pimentæ.*	12. 1.	Myrti.
Resin	—— *Piperis Cubebæ.*	2. 3.	Urticæ.
	Cortex Drimys aromaticæ.	11. 1.	Magnoliaceæ.
	—— *Canellæ albæ.*	11. 1.	Meliaceæ.
	—— *Lauri Cinnamomi.*	9. 1.	Laurineæ.
	—— *Lauri Cassiæ.*	—	——
	Lignum Lauri Sassafras.	—	——
Fixed oil	*Baccæ Lauri nobilis.*	—	——
	Nuclei Myristicæ moschatæ.	22. 8.	Myristicæ.
Piperina	*Baccæ Piperis Nigri.*	2. 3.	Urticeæ.
	Fructus Piperis longi.	—	——

b.—Acrid fixed oil—with

Inulin in	*Radix Anthemidis Pyrethri.*	19. 2.	Compositæ.

c.—Camphor—from

	Dryabalanops Camphora.	13. 1.	Guttiferæ.
	Laurus Camphora.	9. 1.	Laurineæ.

d.—Peculiar acrid principle—with

Fecula in	*Radix Ari maculati.*	21. 7.	Aroideæ.
	Folia Asari Europæi.	11. 1.	Aristolochiæ.

e.—Alcohol—

*Uncombined.

Pure Alcohol.

** Combined.
Spirits.
Wine.
Cider.
Beer.
Mead.

** *Inorganic Products.*

d.—Caloric—
with Water *Hot Water.* (*Baths.*)

e.—Azote—
with Hydrogen *Ammonia*

f.—Electricity—
var. Galvanism.

States of the constitution in which stimulants are requisite :—practical employment of this genus of remedies.

III. Astringents.

Definition :—analogy between the action of Astringents on dead animal matter and on the living body :—examination of the question, Is the cause of their influence on both the same ?—consideration of the manner in which disease relaxes the body ;—the relative action of cold, diluted acids, tannin and other Astringents on living matter, in restoring tone, leads us to conclude, that no explanation of the action of Astringents on the living body can be founded on a view of their action on dead animal matter.—Manner in which Astringents influence the living body examined : Distinction between the operation of general Stimulants and of Astringents :—Stimulants usually excite sensation ; which is not a necessary result in the operation of Astringents, yet action is induced ;—do Astringents stimulate directly the ultimate extremities of the motor nerves ; and thus produce an immediate effect upon the contractility of the fibres which these nerves supply ? Astringents produce their effects, by 1. inducing *tone ;*—2. by a *sedative* power ;—3. by a *chemical influence* exerted on the

contents of the stomach and bowels: thence Astringents may be classed under three distinct heads. Examination of

Particular Astringents.

A. Astringents exerting a tonic power.

* *Organic Products.*

a.—Tannin—with Gallic Acid in

Krameria triandria.	4. 5.	Polygaleæ.
Lythrum Salicaria.	11. 1.	Salicareæ.
Rumex aquaticus.	6. 3.	Polygoneæ.
Polygonum bistorta.	8. 3.	———
Geum Urbanum.	12. 5.	Rosaceæ.
Tormentilla erecta.	12. 5.	———.
Quercus pedunculata.	21. 7.	Amentaceæ.
Gallæ Quercus infectoriæ.	21. 7.	———
Swietenia Mahagoni.	10. 1.	Meliaceæ.
Punica Granatum.	12. 1.	Myrti.
Salix alba.	21. 2.	Amentaceæ.
Pinus Larix.	21. 9.	Coniferæ.
Arbutus Uvæ Ursi.	10. 1.	Ericineæ.
Petala Rosæ Gallicæ.	12. 5.	Rosaceæ.
Kino verum.		
—— *Encalypti.*		
Catechu.		
Hæmatin — *Hæmatoxylon Campech.*	10. 1.	Leguminosæ.

** *Inorganic Products.*

b.—Oxygen—with simple radicals

Acids { *Acidum Sulphuricum.*
——— *Aceticum.*

Salts *Alumen.*

c.—Oxides of Metals—with acids

Salts { *Ferri Sulphas.*
—— *Hydro-chloras.*
Cupri Sulphas.
Zinci Sulphas.
—— *Acetas.*
Argenti Nitras.

Ruspini's styptic.

B. Astringents exerting a sedative influence.

c.—Oxides of Metals—

Plumbi Oxidum semivitreum.

with acids — Salts { —— *Acetas.* —— *Subacetas.* —— *Carbonas.*

d.—Cold.

C. Astringents operating chemically.

e.—Calx.

f.—Calcis carbonas.

Practical use of Astringents as medicines:—in dysentery;—diarrhœa;—gonorrhœa;—leucorrhœa; cautions and rules for regulating their employment in these diseases. Value of Astringents as remedies in diabetes;—epidrosis;—calculous affections:—as external applications.

II. Vital agents acting on the secerning system.

General view of the secerning system—description of glands;—their excretories;—vital properties;—sympathies:—the influence of sex—age—climate—health and disease on their development and functions. Of the secretions in general.

Medicinal agents must act as Stimulants to influence the secretions:—the effect of a Stimulant may be strictly local; or its first effect may be local, its secondary general:—illustrations. All local Stimulants, with the exception of Astringents, produce an evacuant effect;—thence the general excitement of the habit is reduced through the increased action of the excretories. Examination of the genera forming this division of vital agents.

IV. Errhines.

Definition:—anatomy of the nostrils and pituitary membrane:—nature of the excretion from the glandular follicles

of this membrane. Manner in which Errhines affect the pituitary membrane :—this action is communicated to the glands agreeably to a law of the system, that the susceptibility of a gland always corresponds to the irritation of its excretory ducts : illustrations. The nerves acted upon by Errhines are not those of the sense of smelling : some of the most powerful Errhines are inodorous : review of the experiments of the French physiologists. Examination of the causes which modify the action of Errhines ;—disease ;—sympathy ;—state of the atmosphere.

Manner in which Errhines produce beneficial effects in some diseases. Examination of

Particular Errhines.

* *Organic Products.*

a.—Volatie Oil—with

Emetina in	*Radix Iris Florentinæ.*	3. 1.	Iridiæ.
Extractive—	*Herba Origani Marjoranæ.*	14. 1.	Labiatæ.
	Flores Rosmarini officinalis.	——	——
	—— *Lavandulæ spicæ.*	——	——
acrid fixed Oil—	*Herba Asari Europæi.*	11. 1.	Aristolochiæ.

b.—Veratria—with

Gallic Acid in	*Radix Veratri albi.*	23. 1.	Colchicaceæ.

c.—Acrid Resin—with

Volatile Oil in	*Euphorbia officinarum.*	11. 3.	Euphorbiaceæ.
Nicotina —	*Folia Nicotianæ Tabaci.*		

** *Inorganic Products.*

d.—Subsulphas Hydrargyri.

Practical uses of Errhines as remedial agents ;—diseases in which they are useful :—cautions respecting their employment.

V. Sialagogues.

Definition :—under this title are comprehended both those substances that act topically when applied to the excretories of the salivary glands—and those also, which, received into the system, affect powerfully these glands :—or *direct* and *indirect* Sialagogues. Description of the salivary glands—*parotid*—*submaxillary*—*sublingual* :—chemical nature of saliva.—Manner in which *direct* Sialagogues operate ;—sources of their utility as remedial agents :—various hypotheses to explain the operation of *indirect* Sialagogues :—review of these :—hypothesis of the Lecturer.

Particular Sialagogues.

* *Direct.*

a.—Volatile Oil—with

Mucus in	*Radix Cochleariæ Armoraciæ.*	15. 1.	Cruciferæ.
——	*Acori Calami.*	6. 1.	Junceæ.
——	*Anthemidis Pyrethri.*	20. 2.	Compositæ.
Extractive	*Herba Angelicæ Archangelicæ.*	5. 2.	Umbelliferæ.

** *Indirect.*

b.—Mercurials—

c.—Fixed Acrid Oil—with

Nicotina in	*Folia Nicotianæ Tabaci.*	5. 1.	Solaneæ.

d.—Acrid Resin—with

Fecula in	*Radix Zingiberis officinalis.*	1. 1.	Drymyrhizæ.
Daphnina—	*Cortex Daphnis Mezerei.*	8. 1.	Thymaleæ.

History of Mercury :—it is not medicinal in its metallic state :—united with oxygen, chlorine and acids, it acts powerfully on the glandular system : examination of its preparations.—Mercury is rendered active by

I. Combining with Oxygen (*oxydizement*), forming

A. Protoxide $\left\{\begin{matrix}1\ Mercury = 200\\ 1\ Oxygen = 8\end{matrix}\right\} = 208.$

1. By trituration :

a.—with saccharine substances :

Pilulæ Hydrargyri. L. E. D [1].
Hydrargyrum cum Magnesia. D.

b.—with unctuous substances :

Unguentum Hydrargyri. L. E. D.
——— ——— *Mitius.* L. D.
Emplastrum Hydrargyri. L. E.
Linimentum Hydrargyri. L.

c.—with Ammoniacum :

Emplastrum Ammoniaci cum Hydrargyro.

d.—with Carbonate of lime :

Hydrargyrum cum Creta. L. D.

2. By precipitation :

Hydrargyri oxydum cinereum.

B. Peroxides $\left\{\begin{matrix} 1\ Mercury & = 200 \\ 2\ Oxygen & 8\times 2 = 16 \end{matrix}\right\} = 216.$

1. By the action of heat and air :

Hydrargyri oxydum rubrum. L. D.

2. By the action of Nitric acid :

Hydrargyri nitrico-oxydum. L. D.
——— *oxidum rubrum per acidum nitricum.* E.
Unguentum Hydrargyri nitrico-oxydi. D.
——— *Hydrargyri oxidi rubri.* E.

II. Oxydized and combined with acids. (*acidified.*)

A. Protoxides combined with

1.—Nitric acid:

Unguentum Hydrargyri Nitratis. L. E. D.

2.—Sulphuric acid :

Hydrargyri oxydum sulphuricum. D.
Subsulphas Hydrargyri flavus. E.

[1] These letters mark the British Pharmacopœias in which the preparations are ordered.

3.—Acetic acid :

Acetas Hydrargyri. E. D.

B. Peroxides combined with

1.—Sulphuric acid :

Hydrargyri persulphas. D.

2.—Hydro-chloric acid and ammonia :

Hydrargyrum præcipitatum album. L.
Hydrargyri submurias ammoniatum. D.
Unguentum hydrargyri submuriatis ammoniati. D.
——— *Hydrargyri præcipitati albi.* L.

3.—Hydrocyanic acid :

Hydrargyri cyanuretum. D.

III. Combined with Chlorine.

A. Perchlorides : $\left\{\begin{array}{l}1 \text{ Mercury} \quad =200 \\ 2 \text{ Chlorine} \quad (36\times2)= 72\end{array}\right\} =272.$

Hydrargyri oxymurias. L.—*Murias.* E. —*Murias corrosivum.* D.
Liquor oxymuriatis Hydrargyri. L.

B. Protochlorides : $\left\{\begin{array}{l}1 \text{ Mercury} =200 \\ 1 \text{ Chlorine} = 36\end{array}\right\} =236.$

1.—by sublimation ;

Hydrargyri submurias. L. E. *Calomelas sublimatum.* D.
Pilulæ Hydrargyri submuriatis. L.

2.—by precipitation ;

Submurias Hydrargyri præcipitatus. E.
Calomelas præcipitatum. D.

IV. Combined with Sulphur.

1.—by trituration ;

Sulphuretum Hydrargyri nigrum. E. D.

2.—by sublimation ;

Hydrargyri sulphuretum rubrum. L. D.

The preparations of Mercury are decomposed and re-

duced when received into the habit :—ground on which this opinion is founded. Modes in which Mercurials are introduced into the system : effects of their introduction : salivation ; how to check : mercurial erithismus ;—how to prevent ;—how to relieve : mercurial eczema—state of habit that induces it ; existing cause ; mode of treating this affection.

Practical employment of Mercurials as remedial agents : —in syphilis :—state of disease requiring their administration :—best preparations ;—theories which explain their mode of operating. Precautions to be observed by patients using Mercurials. Theory of the action of Mercury in curing syphilis.

VI. Cathartics.

Definition :—general anatomy of the intestinal canal :— its divisions—general functions—secretions—excretions : manner in which it is effected by stimulants. Cathartics act both *locally*, that is on the intestines and adjoining viscera ; and *generally*, or on the whole system :—examination of the results of their local action on the functions of the stomach—liver—pancreas—kidneys—uterus and other abdominal viscera : and those of their general action on the sanguiferous and lymphatic systems :—abstraction of a large quantity of serum from the circulating mass—diminution of the action of the heart and arteries—excitement of the absorbents. Cathartics are divided into *laxatives*, *purgatives*, *drastic purgatives*, and *clysters*—general nature of each of these divisions separately considered : circumstances which alter the limits of these divisions,—such as quantity—mechanical division and solubility of the substances employed. Examination of the differences in the after effects of Cathartics on the natural functions of the intestinal canal : and of the modification of their effects by climate—season—sex—age—the state of the habit and constitution of the patient. Examination of

Particular Cathartics.

A. Laxatives:—medicines which merely quicken the natural peristaltic motion of the intestinal canal.

* Organic Products.

Animal.

a.—Honey.

Vegetable.

b.—Saccharine Matter—with

Gum &c. in	*Pulpa Cassiæ fistularis.*	10. 1.	Leguminosæ.
Acids —	*Fructus Tamarindi Indicæ.*	16. 1.	————

c.—Bitter Mucus—with

Mannite	*Manna—Succus concretus Fraxini orni.*	23. 2.	Oleineæ.

d.—Fixed oil—from

	Fructus Oleæ Europææ.	2. 1.	Oleineæ.

* Inorganic Matter.

e.—Simple combustibles:

Sulphur.

f.—Oxides of Metals—with

Water	*Magnesia,* (a *hydrate*).
Acid	*Magnesiæ subcarbonas.*

B. Purgatives:—medicines which both quicken the peristaltic motion, and augment the natural secretions of the intestinal canal.

* Organic Products.

g.—Acrid Principle—with

bland oil	*Oleum Ricini communis.*	21. 8.	Euphorbiaceæ.

h.—Volatile oil—with

Resin	*Copaifera officinalis.*	10. 1.	Leguminosæ.
Turpentines from	*Pinus Larix.*	21. 6.	Coniferæ.
	—— *Canadense.*	—	——
	—— *Sylvestris.*	—	——
	Pistacia Terebinthus.	22. 5.	Terebinthaceæ.
	Amyris Gileadensis.	8. 1.	————

i.—Resin—with

Extractive,	*Radix Convolvuli Jalapæ.*	8. 1.	Terebinthaceæ.
Rhabarbarine ——	*Rhei palmati.*	9. 3.	Polygoneæ.

k.—Extractive—with

Resin	*Succus Aloes spicatæ.*	6. 1.	Liliaceæ.
——	—— *vulgaris.*	—	——

l.—Cathartine—with

Extractive &c.	*Folia Cassiæ Sennæ.*	10. 1.	Leguminosæ.

m.—Veratria—with

Fecula &c.	*Bulbus Colchici autumnalis.*	6. 3.	Colchiaceæ.

** Inorganic substances.

n.—Oxides of metals—with

various acids
- *Magnesiæ Sulphas.*
- *Sodæ Phosphas.*
- —— *Sulphas.*
- —— *Murias.*

Salts
- *Sodæ Tartras et Potassæ.*
- *Potassæ Sulphas.*
- ——— *Bisulphas.*
- ——— *Tartras.*
- ——— *Bitartras.*
- ——— *Acetas.*

o.—Oxides of Metals—with

Fat	*Pilulæ Hydrargyri.*
Magnesia	*Hydrargyrum cum Magnesia.*

p.—Chlorides.

Hydrargyri Submurias.

C. Drastic Purgatives:—medicines which stimulate powerfully the intestinal canal, affecting both the nerves of sensation and of motion; and the operation of which is attended generally with griping.

* Organic Products.

q.—Extractive—with

Resin &c.	*Succus Cucumis Colocynthidis.*	21. 10.	Cucurbitaceæ

Baccæ Rhamni cathartici. 5. 1. Frangulaceæ.

r.—Resin—with
Gum &c. *Herba Gratiolæ officinalis.* 2. 3. Labiatæ.
Succus Convolvuli Scammoniæ. 5. 1. Convolvulaceæ.
—— *Stalagmitis Cambogioidis* (Camboge.) 23. 1. Guttiferæ.
volatile oil. *Radix Hellebori nigri.* 13. 7. Ranunculaceæ.

s.—Veratria—with
Gum &c. *Radix Veratri albi.* 23. 1. Colchicaceæ.

t.—Peculiar acrid principle—with
fixed oil &c. *Semina Crotonis Tiglii.* 21. 8. Euphorbiaceæ.
Mucus &c. *Radix Rumicis patientiæ.* 6. 3. Polygoneæ.

u.—Acrid oil—with
Nicotina &c. *Folia Nicotianæ Tabaci.* 5. 1. Solaneæ.

v.—Elatin—with
Fecula. *Momordica Elaterium.* 21. 10. Cucurbitaceæ.

** Inorganic substances.

w.—Metallic oxide—with
Sulphuretted hydrogen. *Antimonii Sulphuretum præcipitatum.*

D. Clysters—medicines applied directly to the rectum. *All purgatives.*

Practical application of Cathartics as remedial agents: —review of various opinions respecting their employment in febrile affections:—their effects, in this class of diseases, are modified by climate—type of the fever—stage of the disease:—cautions respecting their administration in idiopathic fever.—Remarks regarding their employment in the phlegmasiæ and in strictly inflammatory diseases;—in the exanthemata,—in hæmorrhages;—spasmodic affections;—the neuroses;—the cachexiæ.—On the general importance of Cathartics in the treatment of diseases.

VII. Emetics.

Definition :—anatomy of the stomach :—manner in which the food is conveyed into the stomach, and from it into the duodenum :—inquiry how far the changes effected on it, there, modify the natural motion of the stomach? Effect of stimuli in exciting the contractions of the muscular coat of the stomach.—Examination of the questions—Do Emetics operate as local stimulants;—or are they first taken into the circulation before they produce vomiting? What is the nature of the irritation, the excitement of which is followed by vomiting? In what manner is vomiting produced? What share have the stomach, the diaphragm and the abdominal muscles in effecting vomiting?—Review of the contending opinions of physiologists on this subject :—new theory of the mechanism of vomiting suggested.—The effects of Emetics on the stomach itself :—on the contiguous viscera ;—on the general system : —the degree and severity of their effects—cautions regarding their employment :—period for their administration—method of aiding their operation—of checking it when too violent.—All substances employed to produce vomiting may be ranged under two heads :

a. *Direct emetics*—producing vomiting by an immediate action on the stomach :

b. *Indirect*—entering the circulation previous to vomiting being excited.

Particular Emetics.

1. *Direct :*

a.—Alkaline Salts—*Ammoniæ Carbonas.*

b.—Metallic Salts—

(oxides with acids) { *Zinci Sulphas.* / *Cupri Sulphas.* / —— *Acetas.*

2. *Indirect.*

* Organic Products.

a.—Acrid volatile oil—with

bland oil, &c.	*Semina Sinapis nigræ.*	15. 2. Cruciferæ.
Resin &c.	*Flores Anthemidis nobilis.*	19. 2. Compositæ.
	Folia Asari Europæi.	11. 1. Aristolochiæ.

b.—Emetina—with

Extractive &c.	*Radix Cephealis Ipecacuanhæ.*	5. 1. Rubiaceæ.
	—— *Psychotriæ emeticæ.*	5. 1. Rubiaceæ.
	—— *Violæ odoratæ.*	5. 1. Violaceæ.

c.—Scillitina—with

Tannin, Mucus.	*Bulbus Scillæ maritimæ.*	6. 1. Liliaceæ.

d.—Nicotina—with

volatile oil &c.	*Folia Nicotianæ Tabaci.*	5. 1. Solaneæ.

** Inorganic substances.

e.—Alkaline Salts—

Hydrosulphuretum Ammoniæ.

f.—Metallic Salts—

Preparationes Antimonii.

Practical utility of Emetics—the effects of vomiting are not confined to the stomach, but extend to the skin and contribute to maintain the balance of the circulation. Employment of Emetics in fever;—in *intermittents*—circumstances to be attended to in their administration—these refer to

a. the period of the disease;
b. ——— of the paroxysm;
a. type of fever;
b. local determinations of blood:

precautions to be observed:—in *continued fever*—they may cut short the fever if a proper choice be made of the

Emetic :—it should be such as to produce full vomiting—affect the bowels and also the skin.—Proper attention should be paid to the circumstances indicating, and those contraindicating the use of Emetics :—these are chiefly—mode of exhibiting Emetics in fever ;—best period of the day for their administration.—Rationale of the operation of Emetics in continued fever—review of opinions.—Employment of Emetics in the phlegmasiæ ;—in the hæmorrhagiæ,—the profluviæ—the neuroses—and in local affections.

VIII. Diuretics.

Difficulty of correctly defining this genus of medicines. Diuretics operate in four distinct ways :

a. by passing directly to the kidneys and stimulating them without undergoing decomposition in transitu :

b. by undergoing decomposition, and acting by one or more of their constituents :

c. by acting primarily on the stomach and primæ-viæ ; their action being communicated by sympathy to the kidneys :

d. by stimulating powerfully the absorbents, and throwing an increased quantity of fluid on the kidneys, as excretories.

Anatomy and physiology of the kidneys :—analysis of the urine :—substances that have been taken into the stomach may be detected in the urine, although their presence in the blood cannot be rendered obvious.—Effects of the excretion of urea on the health of the system ;—of other saline matters :—extraneous substances entering the circulation and stimulating the kidneys must act within certain limits :—effects of dilution ;—of temperature on the surface ;—of the state of the bowels ;—of the absorbents,—in modifying the action of diuretics :—influence of the mental affections on the excretion of urine.

Diuretics produce their remedial effects by acting as evacuants—as stimulants :—mode of administering diuretics—cautions requisite. Examination of

Particular Diuretics.

A. Direct Diuretics—acting primarily on the kidneys :

1.—not undergoing decomposition in transitu.

*** Organic Products.**

a.—Volatile oil—

uncombined.

Ol. Terebinthinæ	*Pinus Larix.*	21. 6.	Coniferæ.
	—— *sylvestris.*	——	——
— Cajeputi	*Melaleuca Leucodendron.*	12. 1.	Myrti.
	—— *Cajeputi.*	—	——
— Juniperi	*Juniperus communis.*	22. 8.	Coniferæ.

combined

with resin *Bals. Copaiferæ officinalis.* 10. 1. Lomentaceæ.

*** Inorganic substances.**

b.—Aqua—

united with Acids *Acida Mineralia diluta.*

c.—Iodinum—

d.—Oxides—

Potassa.

—with Acids—Salts

- *Potassæ Carbonas.*
- —— *Nitras.*
- —— *Chloras.*
- —— *Hydro-sulphuretum.*
- —— *Ferro-cyanas.*
- *Sodæ Carbonas.*
- —— *Subboras.*
- *Barytæ Murias.*

2.—undergoing decomposition in transitu.

*** Organic Products.**

a. Animal.

e.—Cantharidin—

Cantharis vesicatoria.

b. Vegetable.

f.—Volatile oil—with

Resin &c. in	*Baccæ Piperis Cubebæ.*	2. 3.	Urticæ.
	—— *Juniperi communis.*	22. 8.	Coniferæ.

g.—Veratria—with

Fecula &c.	*Bulb. Colchici autumnalis.*	6. 3.	Colchiaceæ.

h.—Scillitina—with
Tannin &c. *Bulbus Scillæ maritimæ.* 6. 1. Liliaceæ.

i.—Unknown principles—
in *Summitates Spartii Scoparii.* 17. 4. Lomentaceæ.

k.—Parillina ?—with
Fecula *Rad. Smilacis Sarsaparillæ.* 22. 6. Smilaceæ.

** Inorganic Substances.

l.—Oxygen—with compound radicals

Acids { *Acidum Tartaricum.*
——— *Citricum.*

Salts { *Potassæ Bicarbonas.*
——— *Acetas.*
——— *Citras.*
——— *Bitartras.*
Sodæ Bicarbonas.

B. Indirect Diuretics—acting primarily on the nervous system, secondarily on the absorbents and kidneys :

1.—diminishing arterial action—augmenting absorption.

*** Organic Products.**

m.—Nicotina—with
volatile oil &c. *Folia Nicotianæ Tabaci.* 5. 1. Solaneæ.

n.—Digitalia—with
Extractive *Folia Digitalis purpureæ.* 15. 1. Personatæ.

o.—Lactucarium— *Succus Lactucæ virosæ.* 19. 2. Compositæ.

*** Inorganic Substances.**

p.—Oxides—with
Acid *Murias Ferri.*

Mental.
Fear.
Anxiety.

2.—increasing the general tone of the habit.

q.—Vegetabilia Amara—

r.—Alcohol—with
volatile oil and water *Gin.*
Whisky.
— Ether *Spiritus Ætheris Nitrici.*

3.—acting primarily on the absorbents, secondarily on the kidneys.

s.—HYDRARGYRI PRÆPARATIONES.

Practical application of Diuretics :—as they are generally stimulant, their employment in inflammatory states of the kidneys is contraindicated :—employment of Diuretics in *febrile diseases :*—in *dropsy*, they act rather as auxiliaries in removing the redundant fluid than as radical remedies of the disease ;—tension and excitement must be previously reduced :—they are most useful in *anasarca* and *ascites*—scarcely at all in *encysted dropsies :*—is dilution necessary to secure their beneficial effects ?—review of opinions on this question :—in *calculous affections* their good effects probably arise from some change of action in the renal vessels.

General rules for the administration of Diuretics.

IX. DIAPHORETICS.

Definition.—Function of perspiration and its effects. Anatomy of the skin :—cuticle—reticulum—corium :—examination of the question,—Does the reticulum exist in Europeans ? The skin an excretory organ ;—its transpiration consists of

a.—*Aëriform fluids*—with bases of carbon, hydrogen, azote :

b.—*Aqueous fluid*—combined with saline matters.

detail of experiments on the cuticular function and excretions :—loss by perspiration :—this function is never wholly suppressed :—result of perspiration on the temperature of the body—on the circulating mass ;—balance between the skin and the kidneys.

Diaphoretics operate either *indirectly*—by stimulating generally and extending their influence to the cuticular vessels ;—or *directly* by immediate application to the skin —illustration of each. Remedial effects of Diaphoretics :

—rules necessary to be attended to in their administration: these refer chiefly to the

1. — situation of the patient:
2. — use of diluents:
3. — employment of nonconductors as covering:
4. — state of the bowels and kidneys:
5. — period of the day for exhibiting them.

precautions to be observed in checking diaphoresis. Examination of

Particular Diaphoretics.

A.—Sudorifics, causing a copious, watery, cutaneous excretion:

1. taken into the stomach:

* Organic Products.

a.—Emetina—with

Extractive	*Rad. Cephaelis Ipecacuanhæ.*	5.	1.	Rubiaceæ.

b.—Daphnina—with

Resin	*Cortex Daphnis Mezerei.*	8.	1.	Thymaleæ.

c.—Guaiacum—

	Guaiacum officinale.	10.	1.	Rutaceæ.

d.—Volatile Oil—with

Fecula.	*Semina Sinapis nigræ.*	15.	2.	Cruciferæ.
	Fol. Rhododendri Chrysanthi.	10.	1.	Ericineæ.
Resin	*Rad. Aristolochiæ serpentariæ.*	20.	6.	Aristolochiæ.
	Lignum Lauri Sassafras.	9.	1.	Laurineæ.
	Radix Acori Calami.	6.	1.	Junceæ.
	Herba Rutæ graveolentis.	10.	1.	Rutaceæ.

e.—Cytissina—with

Resin &c.	*Herba Arnicæ Montanæ.*	19.	3.	Compositæ.

** Inorganic Substances.

f.—Oxides— { *Pulvis Antimonialis.* / *Antimonii Sulphuretum præcipitatum.*

—— with an Acid. *Antimonium Tartarizatum.*

2.—applied to the surface.

g.—HOT BATHS.

h.—VAPOUR BATHS.

i.—HOT AIR BATHS.

3.—sweating produced by violent muscular action.

B.—Diaphoretics augmenting only the ordinary perspiration :

1.—acting on the skin through the medium of the stomach.

* Organic Products.

(*Animal.*)

l.—MUSK—secretions

	Moschus Moschifer.	Mammalia.	Bisulca.
m.—CASTOR—	*Castor Fiber.*	———	Palmata.

(*Vegetable.*)

n.—SOLANIA—with

Resin &c.	*Stipites Solani Dulcamaræ.*	5.	1.	Solanaceæ.

o.—CAMPHOR—	*Secretio Lauri Camphoræ.*	9.	1.	Laurineæ.

p.—VOLATILE OIL—with

Extractive.	*Herba Melissæ officinalis.*	14.	1.	Labiatæ.
Camphor	—— *Rorismarini officinalis.*	2.	1.	———
Fecula	*Rad. Dorsteniæ Contrayervæ.*	4.	1.	Monimieæ.

q.—PARALLINA—with

Mucus	*Rad. Smilacis Sarsaparillæ.*	22.	6.	Smilaceæ.

** Inorganic Substances.

r.—SALTS— *Ammoniæ Carbonas.*
——— *Citras.*
——— *Murias*

s.—Aqua.

t.—Oleum empyreumatica.

2.—entering the circulation and stimulating the skin

u.—Sulphur

v.—Potassæ Sulphuretum.

w.—Mercurials.

3.—applied to the surface.

x.—Frictions.

y.—Tepid Baths.

z.—Cold Affusion.

Practical employment of Diaphoretics:—in *intermittents;*—period in which they prove useful—they have been given immediately before the paroxysm;—whilst it is present:—propriety of these modes of practice. Diaphoretics are contraindicated during apynexia. Their use in *Continued fevers*:—the propriety of administering them is determined by the type of the fever and the period;—it is indicated also by peculiar symptoms—nature of these:—their use in the *phlegmasiæ*—in *dropsy*. In some cutaneous diseases Diaphoretics have been found to prove beneficial. Cautions respecting their administration.

Expectorants.

Definition attempted:—the correctness of any definition of this genus of medicines doubtful. Anatomy of the lungs, as far as refers to its pneumatic tubes:—theory of respiration—change produced on the inspired atmospherical air:—examination of the question respecting the absorption of oxygen into the blood—opinions of Spallanzani—Mr. Ellis—Milne Edwards, and others. Natural mucus of the bronchial tubes:—effects of the accumulation of this: Expectorants intended to remove it when redundant:—this is effected in various ways;—*topically* so as to expel the redundant excretions:—by

1. compressing the thoracic viscera:
2. stimulating the respiratory muscles to aid the excretion by coughing.

—*generally* so as to aid the excretion by diluting it:—

1. by stimulating the pulmonary exhalants:
2. by exciting nausea.

But opinions vary respecting the direct influence of any medicine on the pulmonary exhalants—review of these opinions. Examination of

Particular Expectorants.

A.—Expectorants that produce their effects topically or by mechanical influence:

1. compressing the thoracic viscera;

a.—Emetics.

2.—stimulating the respiratory muscles;

b.—Air—impregnated with

Benzoic acid.
Acetic acid.
Chorine (largely diluted).

3. — stimulating the pulmonary exhalants;

c.—Air—impregnated with fumes of

Tobacco.
Stramonium.
Boiling Tar.
Burning Wool.
Ammonia.
Carbonate of Ammonia.

d.—Caloric—conveyed in *Watery Vapour.*

B.—Expectorants acting through the circulation, or by sympathy with the stomach;

1.—stimulating the pulmonary exhalants:

* *Organic Products.*

e.—Emetina—with

Extractive — *Rad. Cephaelis Ipecacuanhæ.* 5. 1. Rubiaceæ.

f.—Scillitina—with
Tannin &c. *Bulbus Scillæ maritimæ.* 6. 1. Liliaceæ.

g.—Gum Resins—
Myrrha.
Ammoniacum.
Sagapenum.
Secretio Ferulæ Assafœtidæ. 5. 2. Umbelliferæ.
——— *Bubonis Galbani.* 5. 2. ———

h.—Balsams—
Secretio Toluiferæ Balsami. 10. 1. Terebinthaceæ.
——— *Styracis officinalis.* 10. 1. Erinaceæ.
——— ——— *Benzoini.* 10. 1. ———
——— *Myroxyli Peruiferi.* 10. 1. Leguminosæ.

i.—Turpentines—
Secretio Amyridis Gileadensis.
8. 1. Terebinthaceæ.
——— *Copaiferæ officinalis.*
10. 1. Leguminosæ.

k.—Bitter Extractive—with
Mucus *Herba Marrubii vulgaris.* 14. 1. Labiatæ.
—— *Tussilaginis farfaræ.* 19. 2. Compositæ.
Fecula —— *Cetrariæ Islandicæ.* 24. 3. Lichenes.

** Inorganic Substances.

l.—Ammonia—
m.—Ammoniæ Carbonas.

2. — exciting the excretories by nausea:

* Organic Products.

n.—Emetina—with
Extractive *Rad. Cephaelis Ipecacuanhæ.* 5. 1. Rubiaceæ.

** Inorganic Substances.

o.—Antimonials.
p.—Potassæ Sulphuretum.

Practical employment of Expectorants as remedies :—much of the benefit depends on the proper choice of the Expectorant, in reference to the disease and the period of it :—in the early stages of pneumatic inflammation those Expectorants that excite nausea are most useful ;—in the later stages, when the lungs are loaded with mucus, those of a stimulant nature are often requisite :—in asthma, expectoration is a useful auxiliary but not a remedy :—how far Expectorants are proper in Catarrh. Expectoration may be too profuse :—mode of lessening it :—effects of opium, &c.

Emmenagogues.

Definition :—anatomy of the uterine organs :—menstruation : period of its commencement :—natural cessation :—is the discharge a secretion ?—review of the various opinions on this question :—final causes of menstruation :—effects of the morbid obstruction of the catamenia on the habit :—symptoms attending it :—practical utility of distinguishing between suppression with a *pale*,—and that with a *florid* countenance. It is doubtful whether any medicines act directly on the uterine nerves and vessels :—the nature of the substances to act as Emmenagogues must be regulated by the existing state of habit—whether one of atony or of tone.—Utility of Emmenagogues in painful menstruation :—this state connected with a morbidly irritable state of the habit :—some substances supposed to lessen directly uterine irritation :—perhaps, in general with very few exceptions, the utility of Emmenagogues is to be referred to the improvement of the general state of health which they effect. Examination of

Particular Emmenagogues.

A. Direct—supposed to operate, by their stimulant influence, on the uterus itself.

1. *Immediate.*

a.—Electricity.

2. *Mediate.*

* *Organic Products.*

a.—Bitter Principle—with

Extractive, in	*Radix Rubiæ tinctorum.*	4. 1. Rubiaceæ.

b.—Volatile oil—with

Extractive	*Radix Rutæ graveolentis.*	10. 1. Rutaceæ.
	Juniperus Sabina.	22. 8. Coniferæ.

c.—Polygala—with

Polygalinic acid.	*Rad. Polygalæ Senegæ.*	17. 3. Polygaleæ.

** *Inorganic Substances.*

d.—Preparationes Hydrargyri.

B. Indirect—influencing the uterus sympathetically by their action on other organs.

1. On the intestinal canal:

e.—Extractive—with

Resin	*Succus Aloes spicatæ.*	6. 1. Liliaceæ.
	—— —— *vulgaris.*	— ——
	Radix Hellebori nigri.	13. 7. Ranunculaceæ.

f.—Gum—with

Resin	*Camboge—Stalagmitis cambogioides.*	22. 1. Guttiferæ.

2. —— on the stomach:

* *Organic Products.*

g.—Volatile oil—with

Extractive	*Radix Valerianæ officinalis.*	3. 1. Valerianæ.
	—— *Aristolochiæ serpentariæ.*	20. 1. Aristolochiæ.
	Herba Artemisiæ Abrotani.	19. 2. Compositæ.

** *Inorganic Substances.*

h.—Sales Ferri—(artificial).

(natural in Chalybeate waters.)

3. —— on the nervous system:

* *Animal Products.*

i.—Castor—

Castor Fiber. Mammalia—Palmata.

** *Vegetable Products.*

k.—Gum Resins—

Galbanum. Bubon Galbanum. 5. 2. Umbelliferæ.
Assafœtida. Ferula Assafœtida. — ——

l.—Digitalia—with

Extractive *Folia Digitalis purpureæ.* 15. 1. Personatæ.

m.—Unknown Principle—

Secale Cornutum.

General remarks on the practical employment of Emmenagogues.

III. Vital Agents operating directly and chiefly on the Nervous Energy.

Nervous energy,—the medium between mind and body —between the intellectual principle and the external world:—the organs on which it depends probably peculiar to animals:—the organs may be thus classed;—

a. central or *primary*, comprehending the brain and medulla spinalis:
b. accessory—the ganglia and plexi:
c. transmissive—the nerves.

a. Brain:—its position—coverings—substance—supply of blood—divisions;—cerebrum—cerebellum—medulla oblongata:—*Medulla spinalis*—position—composition—substance—divisions:—*b. Ganglia*—general description—structure:—*c. Nerves*:—composition—origin in the brain —in the medulla spinalis—termination:—division into sensorial,—motor,—respiratory.—

Functions of the brain and medulla spinalis:—discoveries of Mr. Charles Bell;—not correctly understood by some of the Continental physiologists. Importance of the nervous system to the whole animal œconomy:—nervous communication the medium by which the influence of all me-

dicinal agents is propagated over the body ;—some, nevertheless, exert a more direct influence on the nervous energy than others :—neither sensation nor motion occurs except as the result of the action of stimuli, either mechanical, chemical, or mental :—but some substances when applied to the body destroy both sensation and motion ;—thence medicines acting on the nervous system produce their effects in two distinct modes :

1. As *Excitants*—increasing the susceptibility of impression :
2. — *Depriments*—diminishing the susceptibility of impression :

the first are termed Narcotics and Antispasmodics :—the second Sedatives and Refrigerants.

Narcotics.

Definition :—manner in which their action is propagated over the system :—immediate death follows the injection of Narcotics into the veins :—this does not arise, merely from the substance being carried into the circulation, but from a paralyzing influence on all the voluntary and involuntary muscles of the body, propagated through the nerves :—the chief influence is exerted on the respiratory nerves :—experiments of Mr. Brodie in illustration of this fact.

Narcotics are diffusible Stimulants, the excitement being rapidly followed by collapse ; but, although the action of all excitants is followed by collapse, yet, all Stimulants are not Narcotics : and these act as Stimulants or Sedatives according to the mode of exhibiting them. Examination of the question—how do Narcotics produce sleep? hypothesis. The effects of Narcotics are much modified by season—climate—extent of the dose ;—the recollection of these of great importance in a practical point of view.—The stimulant effect of Narcotics is taken advantage of in the treatment of some kinds of fevers, &c.—their influence is modified greatly by various circumstances ; as

a. Custom.
b. Climate.
c. Idiosyncrasy.

Illustrations of each of these modifying causes.—Examination of

Particular Narcotics.

A. Narcotics which exert a direct influence on the nervous energy, without entering the circulation :

* *Organic Products :*

a.—Morphia—combined with
Meconic acid in *Succus Papaveris somniferi.* 13. 1. Papaveraceæ.
a. Opium.
b. Extractum Papaveris.
Sulphuric acid *Sulphas Morphiæ.*
Acetic — *Acetas Morphiæ.*
Citric — *Citras Morphiæ.*

b.—Digitalia—with
extractive &c. *Folia Digitalis purpureæ.* 14. 2. Personatæ.

c.—Hyosciamia— with
extractive &c. *Hyosciamus niger.* 5. 1. Solaneæ.

d.—Conia—with
resin &c. *Folia Conii maculati.* 5. 1. Umbelliferæ.

e.—Atropia—with
albumen &c. *Folia Atropæ Belladonnæ.* 5. 1. Solaneæ.

f.—Daturia—with
malic acid &c. *Semina Daturæ Stramonii.* 5. 8. Solaneæ.

g.—Lupulia—with
extractive &c. *Strobilus Humuli Lupuli.* 22. 5. Urticæ.

h.—Aconitia—with
extractive *Herba Aconiti Napelli.* 13. 3. Ranunculaceæ.

i.—Camphor in	*Dryobalanops Camphora.*	13. 1. Guttiferæ.
	Laurus Camphora.	9. 1. Laurineæ.

k.—Unknown Principle—

with extractive	*Rhododendron crysanthum.*	10.1. Erinaceæ.
	Lactuca sativa.	19. 1. Compositæ.
	——— *virosa.*	19. 1. ———
— bitter resin	*Flores Arnicæ montanæ.*	19. 2. ———
— gallic acid	*Folia Rhi Toxicodendri.*	5.2. Terebinthaceæ.

B. Narcotics exerting a direct influence on the Nervous energy, through the medium of the circulation :

l.—Alcohol—

* free

Rectified Spirits.

** combined

Wine.
Beer.
Mead.
Tinctures of Narcotics.

m.—Ether—

* free

Ether sulphuricus.

** combined.

Spiritus Ætheris sulphurici.
——— *Ætheris aromatici.*
——— *Ætheris sulphurici compositus.*

C. Narcotics exerting their influence on the spinal column :

Organic Products.

n.—Strychnia—

with volatile oil *Fructus Strychni nucis vomicæ.* 3.1.Strychniæ.

The effects of Narcotics as remedial agents depend so much on the nature of the peculiar Narcotic, that the therapeutics connected with this genus will be given under the heads of the articles enumerated.

Antispasmodics.

Definition :—general sketch of the structure of muscles : —connection of nerves with the muscular fibres :—inquiry into the cause of muscular contraction :—opinion explaining it on physical principles erroneous :—undoubtedly a vital principle :—how far dependent on nervous energy ;— theory of the vis insita suggested by Haller set aside by Mr. Bell's discoveries :—light which these have thrown on the subject demonstrated. In what does the inordinate action of muscles differ from that which is natural ?— difficulties of the inquiry :—attempted explanation—hypothesis.

All substances that allay inordinate muscular action might be regarded as Antispasmodics :—purgatives :—narcotics :—tonics :—this term, however, is confined to one set of remedies.—Distinction between Antispasmodics, strictly so called, and Narcotics :—are all either Stimulants or Sedatives ?—If the hypothesis advanced to explain their operation be correct, they must exert a sedative influence : —this may be either immediate or mediate, the result of a stimulant action : — Antispasmodics may be, therefore, divided into *direct* and *indirect*. Examination of

Particular Antispasmodics.

A.—Direct Antispasmodics. Substances exerting their influence on the nervous energy, but neither as Narcotics nor as Tonics :

* *Organic Products.*

(from the Animal Kingdom.)

a.—Animal Resin with volatile oil, in

Musk—*Moschus Moschifer*. Cl. Mammalia. O. Bisulca.
Var. *α. Chinese Musk.*
β. East Indian Musk.

Castor—*Castor Fiber*. Mammalia. Palmata.
Var. *α. Russian Castor.*
β. Canadian Castor.

b.—Empyreumatic Oil:

Animal oil of Dippel.
Oil of Amber.

(From the Vegetable Kingdom.)

c.—Volatile Oil, with

extractive,—	*Radix Valerianæ officinalis.*	3. 1.	Valerianæ.
	Oleum Melaleucæ Cajeputi.	18. 3.	Myrti.
Polychroite.	*Stigmata Croci sativæ.*	3. 1.	Irideæ.

d.—Gum Resins.

Galbanum:—	*Bubon Galbanum.*	5. 2.	Umbelliferæ.
Assafœtida:—	*Ferula Assafœtida.*	5. 2.	——
Opoponax:—	*Pastinacea Opoponax.*	5. 2.	——

Sagapenum.
Succinum.

** *Inorganic Products.*

e.—Bitumens:

Asphaltum.
Naphtha.
Var. *α.* Petroleum.

B.—Indirect Antispasmodics.

* Material.

f.—Tonics; as Vegetable bitters.

Metallic salts: { *Sulphas Cupri.* / —— *Zinci.* / *Nitras Argenti.* }

g.—Narcotics.

** Mental.

Fear.
Abstraction.

Practical employment of Antispasmodics,—confined to one order of diseases, the Spasmi:—effects of Antispasmodics in Tetanus, in Chorea,—Epilepsy,—Asthma,—Colic,—Pertussis;—Hysteria. Cautions respecting their administration.

Sedatives.

Definition:—In the arrangement of this course, Se-

datives are placed under a distinct section from those vital agents already treated of; and, also, separated from Narcotics, with which they are generally but erroneously confounded :—reasons for these alterations from the usual classification. Sedatives cause no arterial excitement; —directly diminish muscular energy; and produce a prompt and decisive paralysis of the nerves of sensation :—Majendie contends for a state of previous transient excitement :—demonstration that this opinion is erroneous,—supported by the experiments of Mr. Brodie, which throw much light on the subject. Sedatives destroy, therefore, the susceptibility of nervous impression; and the chain between the animal system and the external world being thus cut off, life necessarily ceases.—How is this effected?—Is something abstracted from the nervous energy?—Is the state of the nerves altered?—examination of these questions.

Sedatives, from the nature of their effects, may be divided into *direct*—or those acting immediately on the nerves :— *indirect*—or those acting through the medium of the nervous system. Examination of

Particular Sedatives.

A. Direct Sedatives—acting immediately on the nerves:

* *Organic Products.*

a.—Cyanogen—with

Hydrogen in	*Hydrocyanic Acid.*		
	Laurel Water. Prunus Lauro-Cerasus.	12.	1. Rosaceæ.
	Cherry Water—Prunus Avium.	—	——
	Bitter Almonds—Amygdalus communis.	—	——

b.—Empyreumatic volatile oil—with

Nicotina. *Oil of Tobacco—Nicotiana Tabacum.* 5. 1. Solaneæ.

** *Inorganic Substances.*

c.—Sulphuretted Hydrogen—with

Ammonia. *Hydrosulphuretum Ammoniæ.*

B. Indirect Sedatives—operating through the vascular system.

* *Organic Products.*

d.—Nicotina—

Folia Nicotianæ Tabaci. 5. 1. Solaneæ.

** *Unrespirable Gases.*

e.—Carbonic Acid Gas.

f.—Carburetted Hydrogen Gas.

g.—Sulphuretted Hydrogen Gas.

Practical employment of Sedatives as remedial agents: —although much caution is required in using them, yet they are possessed of powers that cannot be obtained from any other remedies. Sedatives are chiefly indicated in diseases of increased sensibility and irritability:—thence many of them are useful as external applications in the exanthemata:—their value, internally administered, in dysentery:—chronic catarrh:—dyspepsia:—the spasmi, &c.: —Examination into the poisonous effects of Sedatives:— of Hydrocyanic acid:—Tobacco:—gaseous sedatives:— means of detecting the presence of the fluid Sedatives in substances taken into the stomach:—in the body when death has ensued from their administration:—of the gases in atmospherical air:—Antidotes.

Refrigerants.

Definition:—Although the existence of this genus of medicines is established by universal consent, yet no satisfactory explanation of their action has been proposed:— all the hypotheses advanced until the time of Dr. John Murray are obscure and vague:—his theory is founded on the presumption of the truth of Dr. Crawford's theory of animal heat,—and the chemical action of the substances. Examination of the most rational theories of animal heat: —experiments of Ellis:—Sir E. Home:—M. Le Gallois: —the investigation of these, and a reference to facts,

weaken Dr. Murray's theory :—difficulty of forming one less objectionable :—not essential for practical purposes. Refrigerants are of two kinds according to their effects—or they are *general* and *local.* Examination of

Particular Refrigerants.

A.—General Refrigerants—acting on the organic functions :

* *Organic Products.*

a.—Oxygen—with compound radicals

vegetable acids {
- Acetic Acid.
- Oxalic Acid in *Oxalis Acetosella.* 10. 4. Geraniaceæ.
- Citric Acid *Tamarindus Indica.* 16. 1. Leguminosæ.
- *Rumex acetosa.* 6. 1. Polygoneæ.
- Citric Acid *Citrus medica.* 19. 1. Hesperideæ.
- —— *Aurantium.*

** *Inorganic Products.*

b.—Mineral Acids—
largely diluted.

c.—Salts—
in solution
Potassæ Nitras.
Sodæ Subboras.
Sub-borate of Soda.

B.—Local Refrigerants—acting on the sensibility :

d.—Cool Air—

e.—Cold Water—Ice.

f.—Evaporating Lotions.

Practical employment of Refrigerants as remedial agents :—rationale of their operation in febrile diseases :—cautions necessary to be observed during their administration.—Mode of relieving and obviating their injurious effects.

B. Vital Agents influencing the body solely by their action on the part to which they are applied.

Having finished the examination of those substances that, as vital agents, influence the body *generally*, our arrangement leads us now to treat of substances that, as vital agents, influence the body *locally*; that is, solely by their action on the part to which they are applied. This section contains only one genus,—

Epispastics.

Definition of Epispastics:—ancient division into *Phœnigmoi*, *Sinapismi*, *Vesicatorii*, and *Caustici*:—objections to the last of these divisions:—it is therefore omitted in the arrangement of Epispastics adopted in these lectures, which comprehends three divisions only—*Rubefacients*:—*Vesicants*, and *Suppuratives*.—The substances constituting the first two are the same, but differ in strength:—the last is altogether different:—nature of each explained:—manner of acting:—whence is the benefit produced derived?—Chemical nature of the fluid effused in blisters;—what portion of the advantage obtained from them is to be referred to the abstraction of serum from the blood?—what to counter irritation?—what to the general influence of the Epispastics?—contraindications. Examination of

Particular Epispastics.

1. —— acting as *Rubefacients*,—or simply exciting the cutaneous vessels so as to redden the skin:

* *Organic Products.*

a.—Acrid oil—with

Gum &c in	*Baccæ Capsici annui.*	5. 1. Solaneæ.
Fecula	*Semina Sinapis nigræ.*	15. 2. Cruciferæ.
	Bulbus Alii sativi.	6. 1. Liliaceæ.

b.—Volatile oil—with

Resin	*Secretio Pini Abietis.*	21. 8. Coniferæ.

** *Inorganic Substances :*

c.—Hot water.

d.—Ammonia.

2. —— acting as *Vesicants*, which may be also used as Rubefacients when properly diluted.

* *Organic Products :*

Animal :

e.—Cantharidin—with

Wax &c.	*Cantharis officinalis.*	Insecta. Coleoptera.
——	*vittata.*	—— ——

Vegetable :

f.—Acrid oil—with

Fecula	*Semina Sinapis nigræ.*	15. 2. Cruciferæ.
Gum	*Radix Ranunculi acris.*	13. 7. Ranunculaceæ.
—— ——	*scelerati.*	— ——

** *Inorganic Substances :*

g.—Ammonia.

h.—Aqueous steam.

3. —— acting as *Suppuratives*, causing the formation of pus :

* *Organic Products :*

i.—Acrid oil—with

Daphnina, &c.	*Cortex Daphnis Gnidii.*	8. 1. Thymaleæ.
—— ——	*Mezerei.*	— ——

** *Inorganic Substances :*

k.—Antimonii Tartras et Potassæ.

l.—Caloric.

(Actual Cautery—Moxa.)

*** *Mechanical :*

m.—Issues.

n.—Setons.

Practical employment of Epispastics as remedial agents :—in *intermittent fever*,—period when to be applied—rationale of their operation :—in *continued fevers*—varying opinions regarding their utility :—they are, generally, most pro-

per in the later stage :—Rubefacients are more useful than *blisters* in this description of fever ;—rules for their employment :—in the *phlegmasiæ*—their utility is undeniable :—period when they may be safely applied :—how far allowable in *phrenitis* :—value of Sinapisms and Moxa in gout and rheumatism :—in the *exanthemata* :—the *hæmorrhagiæ* :—the *profluviæ* :—the *neuroses* :—the *spasmi* :—how far are blisters admissible in *mania ?*—Suppuratives :—precautions to be observed in the use of Epispastics.

D. Examination of Medicines acting as Chemical Agents.

General remarks on the nature of chemical action :—how far it is modified and resisted by the living principle. Medicines acting chemically produce their effects in two ways,—by

1. affecting the body *directly*, forming new compounds with it :
2. ———————— *indirectly*, neutralizing the morbid secretions of the stomach : and also neutralizing matters injurious to health contained in the atmosphere :

hence their division into *Solvents* and *Neutralizants*. General remarks on these two divisions.

Escharotics.

Definition :—nature of the chemical action which takes place :—union of the Escharotic with the animal matter to form an eschar :—change of the composition of the solids by a resulting affinity, causing new combinations of elements and the subversion of the cohesion of the animal solid :—destruction of the life of the part takes place in both cases. Different degrees of intensity of Escharotics :—division into *Cauteries* :—*Erodents* :—their operation as counterirritants. Examination of

Particular Escharotics.

1.—Potential Cauteries, destroying the life of the part however healthy :

a.—Mineral acids.—(oxygen with simple radicals.)

Acidum Sulphuricum ;
——— *Nitricum ;*
——— *Arsenicum ;*

b.—Alkalies.—(oxygen with metallic bases.)

Potassa (a hydrate).
Calx (a hydrate).
Potassa cum Calce.

c.—Metallic Salts.

Argenti Nitras ;
Antimonii Murias ;
Hydrargyri Murias.

2.—Erodents, destroying fungous growths :

* *Organic.*

d.—Acrid Oil.—with Resin — *Folia Juniperi Sabinæ.* — 22. 9. Coniferæ.

** *Inorganic.*

e.—Acids.—

Acidum aceticum.

f.—Salts.—

Aluminæ Supersulphas et Potassæ.
Cupri Sulphas.
Argenti Acetas
——— *Nitras.*

Practical employment of Escharotics :—medicinally as counterirritants :—surgically for the destruction of parts.—Precautions to be observed in using them.

Lithontriptics.

Definition :—the propriety of the name of the genus doubtful :—that of *Antilithics* preferable. The formation of calculi in the kidneys is not a mere chemical process, but the result of disease on the secretion of these organs. Lithontriptics produce much benefit independently of any solvent

power they possess:—their chemical action being altogether secondary.—Various diseases produce distinct deposites in the urine:—*Urea*—its ultimate constituents: *Lithic acid*—its constituents the same as those of Urea, but in different proportions:—*Phosphate of lime:—sugar:—tannin.* In some diseases scarcely any Urea is present.—The result of the consideration of the facts connected with urinary deposites, is the necessity of varying our means—according as an acid, an alkali, or tonics are indicated. Examination of

Particular Lithontriptics.

A.—where an acid is indicated:

a.—Acids. { *Acidum Muriaticum;* ——— *Carbonicum;* ——— *Citricum.*

Var. *Succus Citri Medicæ.* 19. 1. Hesperideæ.

B.—when an alkali is indicated:

b.—Oxides.— *Potassa.*
Magnesia.
Calcis Aqua.
Magnesia.
with Acids—*Potassæ Carbonas.*
Sodæ Carbonas.

C.—when tonics are indicated:

c.—Vegetable Bitters.

d.—Astringents.

Practical employment of Lithontriptics:—how to determine the nature of the deposite:—daily voiding white sabulous matter in a visible state with the urine indicates the phosphates,—and the use of the acid Lithontriptics:—relative value of the acids:—much of their benefit probably depends on their action on the digestive organs:—reasons for this opinion:—Pink and red deposites indicate the use of alkalies:—rationale of their operation—in their pure state:—their effects as carbonates:—Magnesia. General remarks on the effects of Tonics as Antilithics.

Antacids.

Definition :—their utility is not confined to their chemical action :—as far as this extends they are merely palliatives : —their effects on the irritability of the stomach. Examination of

Particular Antacids.

a.—Oxides.—(oxygen with metallic bases.)
Calcis Aqua.
Magnesia.
Potassa.
with Acids— *Sodæ Carbonas.*
Potassæ Carbonas.

b.—Ammonia.

Practical employment of Antacids :—they are useful chiefly in Dyspepsia :—and some kinds of diarrhœa :—precautions to be observed in using them.

Antalkalies.

This genus is introduced merely to bring forward the subject of the disinfecting gases, under its subsection *Antiseptics*. It is probable that all septic principles are of an alkaline nature, thence the gases extricated for destroying their influence, or in other words for their neutralization, must be acid.

The gases chiefly employed for this purpose are

Chlorine.
Nitrous acid Gas.

Examination of the nature of these gases :—substances yielding them :—mode of extrication :—their application :—theory of their operation.

E. Examination of Medicines acting as Mechanical Agents.

Meaning of the term. Although the substances contained in this Class exert no immediate influence on the vital principle, yet it is not meant to imply that this principle is not influenced by them in a secondary manner. This

division comprehends medicines of little activity; but, nevertheless, of some importance in a practical point of view. The class contains two genera only, *Demulcents* and *Diluents*.

Demulcents.

Definition :—utility of Demulcents as topical means of preventing the effects of acrid and stimulant matters on highly irritable surfaces :—their mode of acting is obvious; but it is less so when they are taken into the stomach and intended to act on distant organs :—effects of digestion upon them :—examination of the opinion that some of them pass entire through the kidneys :—in whatever manner they act, they are not calculated to do more than alleviate symptoms; or to afford nutriment in disease. Examination of

Particular Demulcents.

A.—used medicinally:

* *Organic Products:*

(*Animal.*)

a.—Gelatin—from

Horns of	*Cervus Elephas.*	Mammalia.	Bisulca.
Sound	*Accipenser Sturio.*	Pisces.	Branchiosige.

b.—Adipocire.—

Physeter Macrocephalus. Mammalia. Cetacea.

c.—Wax.—

Apis Mellifica. Insecta. Hymenoptera.

(*Vegetable.*)

d.—Gum.—

Acacia vera.	23. 1.	Leguminosæ.
—— *Senegalensis.*	—	———
Feronia Elephantum.	10. 1.	Hesperideæ.

e.—Mucus.—

Semina Lini Usitatissimi.	5. 5.	
——— *Pyri Cydoniæ.*	11. 5.	Rosaceæ.
Radix Altheæ officinalis.	16. 8.	Malvaceæ.
—— *Malvæ sylvestris.*	—	———
Folia Gmelinæ parviforæ.		

f.—Cerasin—in

Tragacanth. *Astragalus vera.*	17. 4.	Leguminosæ.
Cherry tree Gum *Prunus Cerasus.*	12. 1.	Rosaceæ.

with Bassorine in *Gummi Bassoræ.*

g.—SARCOCOLL—with
Saccharine matter. *Rad. Glycyrrhizæ glabræ.* 17. 4. Leguminosæ.

h.—FIXED OIL.—

fluid—from	*Nuclei Amygdali communis.*	12. 1.	Rosaceæ.
	Fructus Oleæ Europææ	2. 1.	Oleineæ.
Solid	*Nuclei Cocci Butyraceæ.*	1. 1.	Palmæ.

B.—used dietetically :

i.—FECULA—in

Starch from	*Semina Tritici hyberni.*	3. 1.	Gramineæ.
Grits	—— *Avenæ sativæ.*	—	——
Barley	—— *Hordei distichi.*	—	——
Arrow-root	*Rad. Marantæ Arundinaceæ.*	1. 1.	Drymyrrhizæ.
Tapioca	—— *Iatrophæ Manihot.*		
Sago	*Medulla Sagi fariniferæ.*	1. 1.	Palmæ.
	—— *Cycadis circinalis.*	—	——
Salep—	*Bulbus Orchidis masculæ.*	20. 2.	Orchideæ.
—with bitter principle	*Cetraria Islandica.*	24. 3.	Lichenes.

Practical employment of Demulcents.

DILUENTS.

Definition :—relative proportion of solid and fluid matters in the body :—cause of thirst :—mode in which diluents relieve it :—danger of not assuaging it ;—polydypsia or morbid thirst :—morbid state of body requiring dilution. The only true diluent is WATER :—examination of its properties ; and its natural combinations as found in

* *a natural state, in—*

Rain Water, *Aqua Pluvia.*
Var. *a. Ice Water.*
Snow Water.
Spring Water,—*Aqua fontanæ.*
River Water,—*Aqua fluviatilis.*
** *artificially purified.*
Distilled Water,—*Aqua distillata.*

Medicinal use of water :—its action modified by the bulk of the liquid administered, and by its temperature.—Its utility in idiopathic fever :—in the phlegmasiæ :—the exanthemata :—the profluviæ :—in calculous affections,—solvent power of the liquid :—water variously combined as a diluent :—use in promoting generally the operation of medicines :—external use of water to allay thirst.

The Course will terminate with a few lectures on the theory and art of prescribing medicines.

Regulations for inspecting the Museum of Materia Medica.

1. The Museum will be open every day, except Sunday, from Eleven o'clock in the Forenoon 'till One in the Afternoon ; and from Four o'clock 'till Five o'clock in the afternoon.
2. Those Pupils only who attend the Lectures on Materia Medica can be admitted to inspect the specimens in the Museum.
3. The specimens in the cases cannot be handled by the Pupils ; but a duplicate of each will be found in the gallery ; and these the Pupils will be allowed to examine at their pleasure ; care being taken to replace each in the shelf from which it was taken ; and not to waste or destroy the specimens.
4. The dried plants exhibited, in each day's lecture, will be hung up in the Museum : and any plant particularly required to be seen, will be placed before the student by the Professor's assistant.
5. Scales, models, air-pumps, or any other apparatus in the Museum are not to be used.

PRINTED BY RICHARD TAYLOR,
PRINTER TO THE UNIVERSITY OF LONDON,
RED LION COURT, FLEET STREET.