

**An introduction to medical botany : illustrated with coloured figures / by
Thomas Castle, F.L.S.**

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INTRODUCTION

TO

MEDICAL BOTANY.

ILLUSTRATED WITH COLOURED FIGURES.

BY

THOMAS CASTLE, F.L.S.

MEMBER OF THE ROYAL COLLEGE OF SURGEONS, ETC.

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TO
SIR WILLIAM BLIZARD, KNT. F.R.S.

ETC. ETC.

THIS HUMBLE PRODUCTION
ILLUSTRATIVE OF MEDICAL BOTANY,

IS, BY PERMISSION,

VERY FAITHFULLY INSCRIBED,

IN TESTIMONY OF HIS FRIENDLY DESIRE

AT ALL TIMES TO PROMOTE

THE AUTHOR'S

LITERARY AND PROFESSIONAL

VIEWS.

Throughout the following pages, utility and conciseness have been attempted, and as far as the study is connected with professional knowledge, it is confidently hoped sufficient has been given, to make familiar, the principles of the science, and to display their especial application to medical purposes.

T. C.

38, Bermondsey Square,
September 5th 1829.

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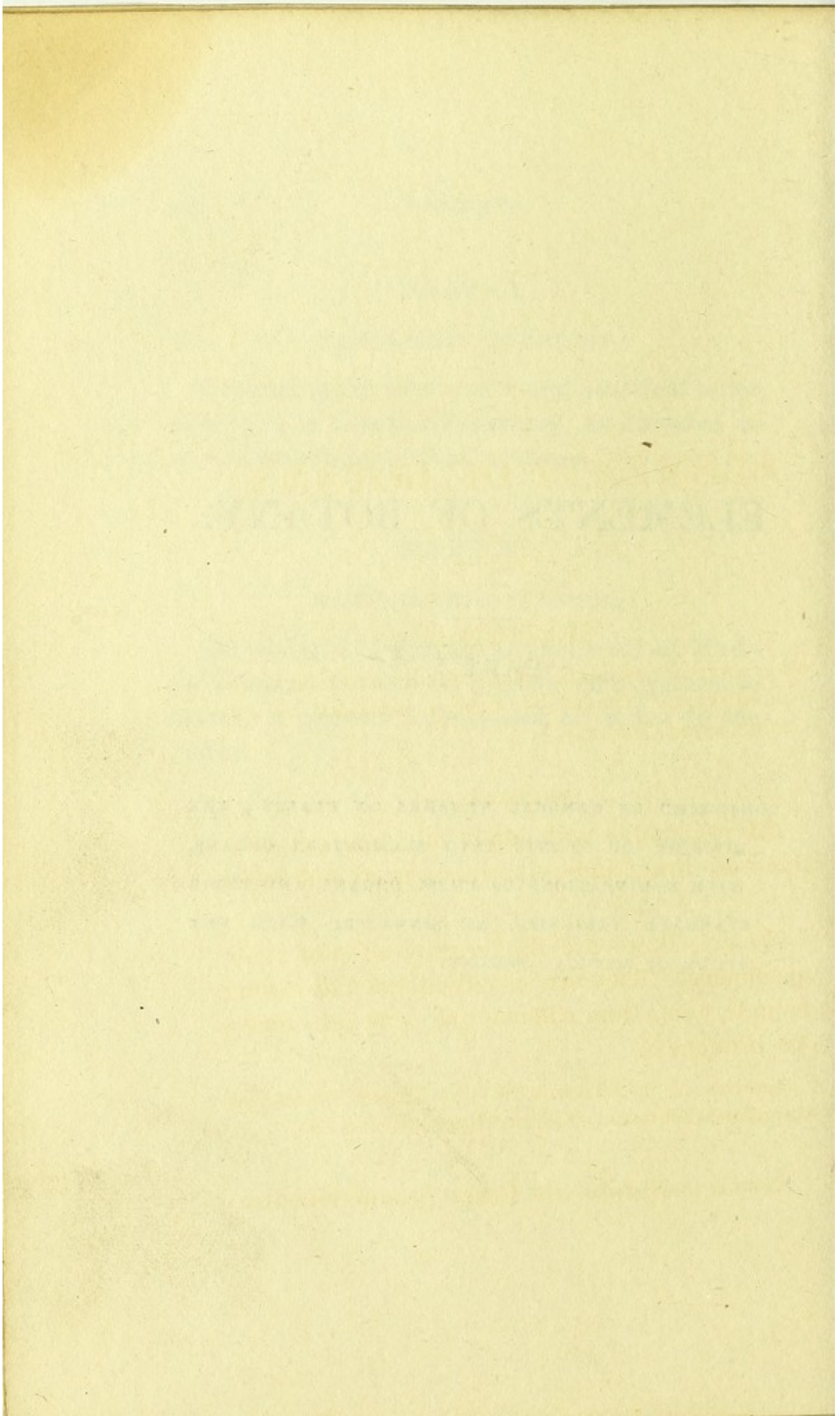
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THE
ELEMENTS OF BOTANY.

PART I.

CONSISTING OF GENERAL REMARKS ON PLANTS ; THE
DIVISION OF PLANTS INTO ELEMENTARY ORGANS,
WITH DELINEATIONS OF THESE ORGANS, AND THEIR
STANDARD VARIETIES, AS CONNECTED WITH THE
STUDY OF MEDICAL BOTANY.



THE
ELEMENTS OF BOTANY.

SECTION I.

ON PLANTS IN GENERAL.—THE DIVISION OF PLANTS INTO
ELEMENTARY ORGANS.—GENERAL REMARKS ON THE
ROOT, STEM AND LEAF.

ON PLANTS.

All vegetables will admit of a natural division into three kinds, viz. *trees*, *shrubs* and *herbs*.

Trees :—Trees are the largest and most noble specimens. They are usually defined as having a single stem, from whence are sent out numerous branches.

Quercus Robur, *Laurus Nobilis*, *Prunus Domestica*,
Amygdalus Communis, *Æsculus Hippocastanum*, &c.

Shrubs :—Shrubs are lesser productions than

trees, and instead of one single trunk, they have several.

Daphne Mezereum, *Rosa Canina*, *Juniperus Communis*,
Rosmarinus Officinalis, *Spartium Scoparium*, &c.

Herbs :—Herbs are those plants, whose stalks die away every year.

Avena Sativa, *Leontodon Taraxacum*, *Daucus Carota*,
Papaver Somniferum, &c.

From the local situation or attachment of plants, they are denominated *terrestrial*, *aquatic*, or *parasitical*.

Terrestrial :—When their roots are placed in the ground, as with most plants.

Aquatic :— When the plant grows in water.

Parasitical :—When it is attached to another plant or substance, not earth.

The *Lichen Islandicus* and *Boletus Ignarius*, are parasitical plants.

The duration or length of time which plants

live, are distinguished by the appropriate terms *annual*, *biennial* and *perennial*.

Annuals:—When they last but one year; that is, come up in the spring and die in the autumn.

Hordeum Distichon, Triticum Hybernum, Nicotiana Tabacum, Anethum Gravecolens, Conium Maculatum, &c.

Biennials:—Are those which produce seed the second year after their being raised, and then die.

Daucus Carota, Allium Porrum, Angelica Archangelica, Apium Petroselinum, Lactusa Sativa, &c.

Perennials:—When they last for more than two years.

Crocus Sativus, Dorstenia Contrayerva, Anethum Fœniculum, and most plants.

PARTS OF A PLANT.

The more perfect plants, are constantly described, as consisting of five principal parts, viz. the *root*, the *stem*, the *leaf*, the *flower*, and the *seed* or *fruit*.

OF THE ROOT.

The root is that part of the plant by which it

attaches itself to the earth, or to the substance on which it feeds, and is the principal organ of nutrition.

The most common varieties to be met with in medical plants are the *ramose*, the *fibrous*, the *bulbous*, the *tuberous*, and the *spindle-shaped*. To these, in general botany, is added, the *bitten* or *truncated*.

Ramose:—The *ramose* or branched root, is a very common species, being that of most trees and shrubs.

Morus Nigra, *Amygdalus Communis*, *Rosa Centifolia*, *Æsculus Hippocastanum*, &c. (F. 21.)

Fibrous:—The *fibrous* or *capillary* root, consists of a number of small and thread-like fibres, one of which is generally central and the rest lateral.

The *Hordeum Distichon*, *Avena Sativa*, and most annual plants have this kind of root. (F. 22.)

Bulbous:—*Bulbous* roots are those which consist of one globe or head, from the under-surface of which, many fibres descend.

They are of three kinds. In the *Crocus Sativus* (F. 23.) solid; in the *Scilla Maritima* (F. 24.) scaly; and in the *Allium Cepa*, coated.

Tuberous :—A tuberous root is formed of a knob or tubercle, furnished with a number of small or scattered fibres; or of a number of knobs or tubercles united by means of such fibres, and forming clusters.

The *Acorus Calamus* and the *Saxifraga Alba*, have tuberous roots.

Spindle :—The spindle-shaped or fusiform root, tapers gradually from the top to the extremity.

This is the case in the *Leontodon Taraxacum*, *Daucus Carota*, and many others. (F. 25.)

Truncated :—If a root bears the appearance of a fusiform root, suddenly cut off, it is then termed a *truncated* or *bitten* root.

Whatever may be the form of the root, it is botanically divided into two parts, the *caudex* or great root; and the *radiculae* or rootlets.

The latter are represented by (b. b.) in the 23d Figure, and the former by the letter (a.)

The *rootlets* or *fibres* are the essential organs by which absorption of nutriment is effected;

and the *caudex* or *main root*, is the medium of communication to the other parts of the plant.

OF THE STEM.

The stem is that part of a plant which supports the herbage or fructification.

There are six sets of stems ; viz. *trunks*, *stalks*, *straws*, *scapes*, *fronds* and *stipes*.

Trunk :—A trunk is the proper stem of trees and shrubs, and is characterized by its height, size and woody structure.

Quercus Robur, *Ulmus Campestris*, *Æsculus Hippocastanum*, *Morus Nigra*, *Prunus Domestica*, &c.

Stalks :—The stems of herbaceous plants are called stalks. They are rarely woody, and live but for one or two years in the natural state of the plant.

Glycyrrhiza Glabra, *Cochlearia Armoracia*, and so on.

Straws :—Straws are the peculiar stems of grasses, rushes and other similar plants. They are either hollow or partially filled with pith, and

generally divided into compartments by a species of knot or joint.

Avena Sativa, *Hordeum Distichon*, *Triticum Hybernum*, &c.

Scape:—A scape is that kind of stem, which arises from the root and supports the flower, but not the leaf.

Leontodon Taraxacum, *Aloe Perfoliata*, *Anthemis Nobilis*, *Colchicum Autumnale*, &c.

Frond:—The frond is that species in which the stem, leaf, and fructification are united; or in other words, the flowers and fruit are produced from the leaf itself.

Exemplified in the *Aspidium Filix Mas*, and *Lichen Islandicus*.

Stipe:—The word stipe, is used to express the stem of palms, ferns, fuci and fungi. They are generally cylindrical, but sometimes swollen in the middle, and bear a frond, or peculiar foliage at their summit.

In addition to the use of stems in supporting the herbage and fructification, they consist of a number of fine capillary tubes, through

which, during the time of growth, sap is carried from the root throughout the whole plant.

OF THE LEAF.

The leaf is usually the temporary part of the plant; generally of a thin and flat substance, of a green colour, and issuing from the stem and branches, or immediately from the root.

Most leaves are said to consist of two parts; viz. a small stalk or *petiole* and an *expansion* or broad part supported by the petiole.

The *petiole* is illustrated by the letter b in F. 26, and the *expansion* by the letter a.

Leaves are either situated *close* to the stem, branch or root from whence they proceed; or they are *supported* on a partial stem, called the *petiole* or leaf-stalk.

In the first case, as with the *Crocus Sativus*, *Amomum Cardamomum*, *Saccharum Officinarum*, they are said to be *sessile*; and with the latter, as in the *Convolvulus Jalapa*, *Capsicum Annum*, *Vitis Vinifera* and most plants, *petiolate*.

Leaves are also either *simple* or *compound*.

Simple:—When they consist of but one single expansion.

As in the *Ulmus Campestris*, *Rumex Acetosa*, *Daphne Mezereum*, &c. (F. 26.)

Compound:—When, instead of one expansion, there are several.

As in the the *Rosa Centifolia*, *Æsculus Hippocastanum*, *Ruta Graveolens*, and so on. (F. 27.)

The separate expansions of a compound leaf are called *pinnæ* or *leaflets*.

Thus the *Rosa Centifolia* is said to have a compound leaf with *six* pinnæ and a terminal leaflet making *seven*.

There is an infinite variety of leaves; the most common of which, are the linear, sagittate, and others, as explained in the terminalogy.

The chief use of the leaves, is to assist in supporting the life of the plant, by exhalation from their upper surface, and by absorption from the under part.

SECTION II.

THE ELEMENTARY DIVISIONS OF A FLOWER, OR THE PARTS OF FRUCTIFICATION. — GENERAL REMARKS ON THE CALYX, COROLLA, NECTARY, STAMEN, PISTIL, SEED-VESSEL, SEED AND RECEPTACLE. — OBSERVATIONS ON THE VARIETY OF FLOWERS, AND ON INFLORESCENCE.

PARTS OF FRUCTIFICATION.

Having obtained a general knowledge of the preceding parts, your attention must now be closely devoted to acquire a perfect comprehension of the parts of fructification; viz. the *flower* and the *fruit*.

OF THE FLOWER.

The parts which are considered necessary to form a perfect flower, are the *calyx*, the *corolla*, the *stamen*, the *pistil* and the *receptacle*. To these may be added the *nectary*, *seed-vessel* and *seed*.

THE CALYX.

The calyx is that part of the flower, often consisting of one or more green, or yellowish green

leaves placed at a small distance, or close to the corolla.

It is particularly conspicuous in the unexpanded flower bud of the *Papaver Rhæas*, consisting of two green leaves, as represented in the 29th figure. Also shown by the letter (a.) in the 1st figure.

There are many kinds of calyces enumerated in general works; viz. the *perianth*, the *fence*, the *catkin*, the *sheath*, the *glume*, the *veil* and the *curtain*.

Perianth :—The perianth or flower-cup is the most common kind. It is generally green and situate immediately below the flower, so as to form a part of it.

Possessed by the *Leontodon Taraxacum*, *Rosa Centifolia*, *Papaver Rhæas*, &c. (F. 29)

Involucrum :—The fence or involucrum, is a species of calyx peculiar to umbelliferous plants.

If it is placed below the common receptacle, (a. a. F. 31.) as in the *Conium Maculatum*, it is called a *general involucrum*; and when attached to the smaller divisions, as also in the *hemlock*, (b. b.) it is denominated a *partial involucrum*.

Amentum :—The catkin or amentum consists of a common cylindrical receptacle, beset with numerous scales, each of which is accompanied by one or more stamens or pistils, so that the whole forms an aggregate flower.

Illustrated in the *Salix Alba*, *Humulus Lupulus*, and others. (F. 30.)

Sheath :—The sheath or spathe is that kind of calyx, which is situated more or less remote from the flower, and after constituting a covering to the infant bud, opens longitudinally.

This species of calyx is present in the *Colchicum Autumnale*, but represented by the 33d Figure as it occurs in the snow-drop.

Glume :—The glume or husk is the peculiar calyx of corn or grasses, constituted by valves, enclosing one or more florets.

Avena Sativa, *Hordeum Distichon*, *Triticum Hybernum*, &c. (F. 32.)

Veil :—The veil or calyptra is a kind of membranous hood which is said to be the calyx of the mosses, covering their capsule or fructification, like an extinguisher on a candle.

Curtain :—The curtain or volva is the membranous covering of the fungus tribe, concealing their parts of fructification.

The intention of the calyx, with respect to the economy of the flower, is to protect the interior organs from atmospheric or casual injuries.

COROLLA.

The corolla is the interior envelope of the flower, investing the central parts, but invested by the calyx.

It is usually, in fact, the principal and most beautiful part of the flower, being that which is most coloured, and commonly regarded as constituting the flower. (F. 1, b.)

If the corolla consists of more than one piece, the individual parts are technically called *petals*, or leaves of the flower.

The apparent use of the corolla is to protect the interior organs; and to increase or diminish the rays of heat for fecundation.

NECTARY.

With some flowers, there is a nectary or peculiar appendage, attached for the most part, to the corolla, secreting or containing a honied juice, though it is not necessary to a nectary, that honey should be present.

The *horn-like* process issuing from the base of the corolla of the *Viola Odorata*, is a nectary. It assumes, however, a great variety of shapes and situations in different genera of plants. In the *Aconitum Napellus*, it is *hooded*; in the *Helleborus Niger*, *tubular*; and in the *Sinapis Alba*, a *gland*.

STAMEN.

The stamens are very important organs of the flower. They are of a very slender fabric, and of a thread-shaped figure, situated, for the most part, immediately within the corolla.

In the flowers of the *Crocus Sativus*, you will find *three* stamens; *four* in *Rubia Tinctorum*; *five* in *Daucus Carota*; and so on, with others.

Stamens are divided into two parts; viz. a *filament* and an *anther*.

The *filament* is the thread-shaped part (b.) in the 11th Figure, and the head (a.) or *anther*, situated on the top of the filament.

The anther is the only essential part of the stamen. In this part there is a fine dust, called *pollen* or *farina*; which, when the anther is ripe and bursts, is discharged upon the summit of the pistil, and impregnates the embryo seeds in the germen.

PISTIL.

The pistils are likewise small and column shaped organs, of the utmost importance to the economy of the flower. They occupy, almost invariably, the centre of the flower, and are surrounded immediately by the stamens.

In the *Crocus Sativus* you will discover *one* pistil; in the *Daucus Carota* *two*; in the *Linum Usitatissimum* *five*; and in the different *Roses*, *many* pistils.

Pistils consist of three parts; viz. the *summit* or *stigma*, the *style*, and the *germen* or *ovary*.

The *stigma* is denoted by the letter (a.) in the 12th Figure; the *style* or middle portion by (b); and the *germen* at the inferior extremity, by the letter (c.)

The summit of the pistil is generally organized to absorb the pollen of the stamen, the fecundating influence of which is communicated through a tube in the style, to the undeveloped seeds in the germen. When this is accomplishing, the upper parts of the pistil fade away, but the germen, on the contrary, gradually increases in size, till it finally constitutes the *seed-vessel*.

SEED-VESSEL.

Seed-vessels are of seven different kinds ; viz. *capsules, pods, legumes, drupes, pomes, berries and cones.*

Capsule :—The capsule is a dry, hollow, membranous seed-vessel, usually divided into valves, and opening naturally in some peculiar manner, according to the plant to which it belongs.

The *Papaver Somniferum, Viola Odorata, Valeriana Officinalis, Nicotiana Tabacum*, and many others, have capsular seed-vessels.

Pod :—The pod is a species of seed-vessel, which consists of two valves or partitions, within which, the seeds are fixed *alternately* to each seam.

If the pod is longer than it is broad (F. 39.), it is said to be a *siliqua*, as in the *Sinapis Nigra*; but if it is broader than it is long (F. 40.), it is then termed, a *silicle*, as in the *Cochlearia Armoracia*.

Legume :—The legume is likewise a seed-vessel of two valves, but in which the seeds are attached to one seam only.

The legume is met with in the *Polygala Senega, Spartium Scoparium, Glycyrrhiza Glabra*, and others. (F. 38.)

Drupe :—The drupe is either of a pulpy nature,

containing within, a single hard or bony nut, or only a dry and hard shell.

The latter kind will be found in the *Amygdalus Communis*, *Quercus Robur*; and the former in the *Prunus Domestica*.

Pome:—The pome is a seed-vessel of a peculiar fleshy nature, and instead of containing a nut, like the drupe, it incloses a capsule with several seeds.

As the fruit of the *Pyrus Cydonia*, *Punica Granatum*, &c.

Berry:—The berry is a species of seed-vessel, of a soft and pulpy nature, containing one or more seeds, but not separated by regular valves, nor enclosed within a capsule.

This kind is afforded by the *Citrus Aurantium*, *Citrus Medica*, *Juniperus Communis*, and many other vegetables.

Cone:—The cone or strobile is formed by an amentum with hardened scales, each scale containing a seed at its base.

The *Humulus Lupulus*, *Pinus Sylvestris*, and one or two other medical plants are furnished with coniferous vessels.

SEED.

A seed consists of several parts, some of which are more essential than others; as the *hilum*, *seed-coat*, *cotyledon* and *embryo*.

The *hilum* or *eye* is the external scar of a seed, by means of which it is fastened to the seed-vessel. The *seed coat* is the external covering; the *cotyledons* or *seed-lobes*, are the internal substances which constitute the bulk of the seed; and the *embryo* or heart, is that small part, which is the first principle of a new plant, and is commonly situated between the cotyledons.

The intention of the seed, in relation to vegetable life, is to continue the species from one season to another.

As soon as seed is deposited in a proper situation for germination, its several parts become acted upon, in a short while, by moisture and other stimuli; the seed-coat bursts, the cotyledons rise above ground as seminal leaves, a radicle or root is given out, and the plumule ascends to form the infant plant. As circumstances are more or less favourable, these several parts increase, till the root has acquired sufficient strength to seek its own nourishment; the seminal leaves then die away, as being no longer required to yield nutrient matter, and the plant becomes perfect.

RECEPTACLE.

The receptacle is the seat or base on which the different parts of a flower are situated.

It is not always distinguishable by any partial figure, except in the *Leontodon Taraxacum* and other compound flowers, in which it is very remarkable and important. (F. 37.)

Receptacles are usually divided into two kinds ; viz. *proper* and *common*.

Proper :—Proper or peculiar, when it belongs to only one flower.

As in the *Papaver Somniferum*, *Rosa Canina*, &c.

Common :—Common or general, when it connects several florets or distinct flowers, so that if any of them are removed, an irregularity is occasioned.

As in the *Leontodon Taraxacum*, *Anthemis Nobilis*, and other compound flowers.

VARIETY OF FLOWERS.

The different organs of the flower being explained, you have now to acquire a knowledge of the various kinds of flower, and of their manner of blooming or inflorescence.

When a flower is attached close to the branch or stem, it is said to be *sessile*; but if it is supported on a *peduncle* or partial stalk it is then termed a *pedunculated flower*.

The flowers of the *Ulmus Campestris* are *sessile*; while those of the *Solanum Dulcamara* being on a peduncle, (F. 6, a.) are *pedunculated*.

All flowers, according to their composition, are said to be either *simple* or *aggregate*.

Simple:—Simple flowers differ from aggregate flowers in not having any parts of the fructification common to many florets, but consisting of a single blossom.

The *Atropa Belladonna*, *Nicotiana Tabacum*, *Hyoscyamus Niger*, &c. have all *simple-flowers*.

A simple flower furnished with both calyx and corolla, is called a *complete flower*: when the corolla is wanting, *incomplete*: and when the corolla is present without the calyx, it is denominated a *naked flower*.

The *Datura Stramonium* has a *complete* flower; the *Morus Nigra*, an *incomplete* flower; and the *Helleborus Niger* a *naked* flower.

Aggregate:—Aggregate flowers are those in

which there are many *florets* or partial flowers, so connected by some part of the fructification, that not one of them can be taken out, without destroying the form of the whole.

Aggregate flowers are of two kinds ; viz. the *aggregate*, properly so called, and the *compound*.

Aggregate :—The aggregate proper, have a common undivided receptacle, and the florets usually situated on foot-stalks.

Exemplified in the *Conium Maculatum*, and other plants, particularly of the umbelliferous order. (F. 16.)

The five species of flower, called by Linnæus the *umbellate*, *cymose*, *amentaceous*, *glumose*, and *spadiceous*, are nothing more than varieties of the kind of flower, now called aggregate proper.

The first were so called from their constituting an *umbel* ; the second from their blooming in a *cyme* ; the third from their calyx being an *amentum* ; the fourth from its being a *glume* ; and the last from their having a receptacle issuing from a *spadix*.

Compound :—Compound flowers consist of numerous florets, all sessile or seated on a common undivided receptacle, and inclosed in one continuous calyx. It is also essential to this kind of

flower, that the anthers be united into the form of a cylinder.

The *Leontodon Taraxacum*, *Tussilage Farfara*, *Anthemis Nobilis*, and others, have compound flowers. (F. 9.)

The florets which constitute a compound flower, may be of two kinds, viz. *ligulate*, or shaped like a strap; or *tubular*, in the form of a tube.

The *former* are represented by the letter (a,) in the 10th Figure; and the *latter* by the letter (b.)

All flowers, as well as florets, have received characteristic names according to the presence or absence of the stamens and pistils, hence they are called *perfect*, *barren* and *fertile*.

Perfect:—When the stamens and pistils, are both, as usual, in one flower, it is called *perfect*, *united* or *hermaphrodite*.

As in the *Rosa Canina*, *Papaver Somniferum*, and most plants.

Barren:—When there are stamens only, it is called a *barren* or *male flower*, because it produces no seed.

As in the *Humulus Lupulus*, *Ricinus Communis*, *Quercus Robur*, &c.

Fertile :—When pistils only, a *fertile* or *female flower*, as producing the seed.

As also in the *Humulus Lupulus*, *Ricinus Communis*, *Quercus Robur*, &c.

There are numerous other terms applied to flowers, as respects many peculiar traits connected with the *form* and *structure* of the corolla.

With regard to the *petals* of the corolla, if it is formed of one piece, the flower is called *monopetalous*; if of two, *dipetalous*; if three, *tripetalous*; and so on.

If there are no petals, it is then termed an *apetalous flower*; if many petals, *polypetalous*.

From the figure of the corolla, a flower is either *campanulate*, *funnel-shaped*, *papilionaceous*, or otherwise.

The following are among the most frequent to be met with in medical plants.

Companulate :—*Companulate* or bell-shaped, when it swells out without any expanding border.

As in the *Atropa Belladonna*, and several others. (F. 1.)

Funnel-shaped :—*Funnel-shaped*, or *infundi-*

buliform, having a conical border, rising from a tube.

As in the *Nicotiana Tabacum*, *Datura Stramonium*, &c. (F. 2.)

Papilionaceous:—Papilionaceous or butterfly-shaped, irregular, usually consisting of four petals, and bearing some resemblance to the figure of a butterfly.

As in the *Spartium Scoparium*, *Myroxylon Peruiferum*, &c. (F. 3.)

With papilionaceous flowers of four petals, the lower petal, which is shaped somewhat like a boat, is called the *carina* or *keel*; the upper petal, the *vexillum* or *standard*; and the two lateral ones which stand singly, but separated by the keel, are denominated the *alæ* or *wings*.

Plaited:—Applied to flowers when they are expanded in on piece at the margin.

As for example, the bell-shaped flowers of the *Convulvulus Scammonia*, and others. (F. 4.)

Tubular:—Approaching very near in figure to the *complanate*.

As in the *Digitalis Purpurea*, &c. (F. 5.)

Wheel-shaped:—Rotate or wheel-shaped, when the corolla spreads without any tube.

As in the *Solanum Dulcamara*, *Capsicum Annuum*, &c. (F. 6.)

Cruciform:—Cruciform or cross-shaped, when the corolla consists of four equal petals, spreading out in the form of a cross.

As in the *Sinapis Nigra*, and *Cochlearia Armoracia*, (F. 7.)

Ringent:—Ringent or gaping, when it is irregular and opening with two distinct lips.

As in the *Zingiber Officinale*, &c. (F. 41.)

Hooded:—Hooded, when the upper petal of the corolla covers the inferior parts.

As in the *Aconitum Napellus*, &c. (F. 8.)

INFLORESCENCE.

The particular manner in which flowers are situated upon a plant, is denominated the manner of flowering or inflorescence.

There are ten modes of flowering peculiar to aggregate flowers. These are, the *whorl*, the *cluster*, the *spike*, the *corymb*, the *fascicle*, the *tuft*, the *umbel*, the *cyme*, the *panicle* and the *bunch*.

Whorl:—In the verticillus or whorl, the flowers surround the stem in a sort of ring,

though they may not always be inserted on all sides, but merely on two opposite ones.

This species of inflorescence is very distinct in the *Mentha Pulegium*. (F. 17.)

Cluster.—The racemus or cluster, consists of numerous rather distinct flowers, each on its own proper peduncle, and all connected by one common stalk.

As exemplified in the *Solanum Dulcamara*. (F. 14.)

Spike.—The spica or spike is a species of inflorescence, consisting of one common stalk bearing numerous flowers, all arranged along it without any, or having very small partial stalks.

As in the *Digitalis Purpurea*, *Aloe Spicata*, and many others. (F. 13.)

Corymb.—The corymbus or corymb is a spike, whose partial flower-stalks are gradually longer as they stand lower on the common stalk, so that all the flowers are nearly on a level.

This will be found the case in the *Valeriana Officinalis*. (F. 18.)

Fascicle.—The fasciculus or fascicle, is that kind of blooming in which the partial flowers on little foot-stalks, are variously inserted and sub-

divided and collected into a close bundle at the top.

Tuft:—The head or tuft is that kind, in which several flowers form a kind of ball or head at the extremity of the foot-stalks.

Umbel:—The umbella or umbel has several stalks or rays nearly equal in length, spreading from one common centre.

When each ray or stalk, bear an *umbella* or *little umbel*, the whole is said to be a *compound umbel*. In this case, the first or larger set of rays, constitute the *universal umbel*; while the second or lesser set of peduncles, form the *partial umbel*. Both kinds are present in the *Conium Maculatum*. (F. 16.)

Cyme:—The cyma or cyme consists of several flower-stalks, having the general appearance of an umbel, and agrees with it so far, that its common stalks proceed from one common centre, but differs in having those stalks variously and alternately divided.

Represented by the 19th figure.

Panicle:—The panicula or panicle, is that species, which bears the flowers in a sort of loose subdivided bunch or cluster without any order.

As in the *Avena Sativa*, and several others. (F. 15.)

Bunch:—The thyrsus or bunch, is a mode of inflorescence very nearly allied to the panicle, being in fact, a panicle contracted into an ovate or egg-shaped form.

The flower of the *Vitis Vinifera*, is probably, the best illustration you can select.

SECTION III.

ON THE APPENDAGES TO PLANTS; INCLUDING THE BRANCH,
THE BULB, THE BUD, THE STIPULE, THE BRACTEA, THE
THORN, THE PETIOLE, THE TENDRIL, THE GLAND, AND
THE PUBESCENCE.

APPENDAGES TO PLANTS.

By the appendages to plants, are to be understood, the peculiar organs which are present in some species of plants and not in others.

BRANCHES.

Branches are natural divisions of the stem, common to most trees and herbs, originating generally in the upper part, and often along the sides.

In their mode of growth and developement, they exhibit nearly the same appearances as the particular stem from which they issue.

BULBS.

Bulbs are peculiar gems of a tender and suc-

culent substance, and of an oval or globular figure, situated either upon the root, stem or branch, from which they ultimately and spontaneously detach themselves, and form a new plant.

If they are attached to the root, they are called *radical* bulbs; but if to the stem or branch, they are denominated *caulinar*.

BUDS.

Buds are likewise a species of gem, of an ovate or conical figure, issuing from the axil of the leaves or from the sides and extremities of the branch. They contain the rudiment of future branches, leaves or fruit, but do not detach themselves spontaneously from the plant, and form new individuals.

Trees, shrubs, and most herbs have buds.

Buds are of three kinds; the *leaf-bud*, the *flower-bud*, and the *compound-bud*.

The *leaf-bud* is slender and acute, producing leaves only; the *flower-bud*, thick and short, containing the flower only; and the *compound-bud*, larger than either of the two, producing both the leaf and the flower.

STIPULES.

Stipules are small leafy appendages accompanying the real leaves, assuming the appearance of leaves in miniature; either situated close to the leaf, along the *petiole*, or at its junction with the branch or stem.

In the *Rosa Centifolia*, and *Geum Urbanum*, they are present; but in the latter, they form two very conspicuous leaves, as represented by the letters (a. a.) in the 35th figure.

BRACTEA OR FLORAL-LEAF.

The bractea or floral-leaf, is a leaf which in general, differs from the true leaves both in shape and colour. It is commonly situated on the peduncle, and often so close to the corolla as to be mistaken for the calyx.

Met with in the *Heleborus Niger*, *Digitalis Purpurea*, &c. (E. 36. a. a.)

THORN.

The thorn or spine is a sharp-pointed projection growing from the ligneous substance of some plants.

Although thorns are peculiar to some plants, they are not scattered over the whole surface; thus, they protrude from the stem and branches in the *Rhamnus Catharticus*; from the leaf in the *Aloe Spicata*; and from the seed-vessel in the *Datura Stramonium*.

PRICKLE.

The aculeus or prickle, is a sharp process from the plant, arising from the bark only, and not from the wood.

This species of appendage, is well known in the *Rosa Canina*, *Rosa Centifolia*, &c.

TENDRIL.

The cirrus or tendril is a fine spiral string or fibre, proceeding from different parts of the plant, by means of which, it fastens itself to some other plant or body for support.

Exemplified in the *Vitis Vinifera* *Cucumis Colocynthis*, &c. (F. 34.)

GLANDS.

Glands are small and minute appendages of various forms, formed chiefly on the surface of the leaf and petiole, but often also on the other parts of a plant.

Present on the base of the leaf in the *Amygdalus Communis*.

PUBESCENCE.

Pubescence means all sort of vegetable down

or hairiness, with which the surface of a plant may be covered.

Pubescence differs both in form and texture, but consists principally of small slender bodies, which are either soft and yielding to the slightest impression, or rigid and comparatively unyielding. The former are, properly speaking, *hairs*, and the latter *bristles*.

43
LIXEN PATRIAL SYSTEM
on business, with which the surface of a plant
may be covered.

The process of lichen is both in form and texture, but consists
principally of small slender bodies, which are either soft
and yielding to the slightest touch, or rigid and brittle,
partially woody. The former are properly speaking
lives, and the latter bark.

The lichen is a very common and useful plant, and is found
in all parts of the world. It is particularly abundant in
mountainous regions, and is often found growing on rocks,
trees, and other hard surfaces. The lichen is a very hardy
plant, and is able to survive in the most extreme cold.
It is also a very useful plant, and is often used as a
food for the reindeer in the Arctic regions. The lichen is
also used as a dye, and is a source of many valuable
chemicals. The lichen is a very interesting plant, and
is well worth studying.

The lichen is a very common and useful plant, and is found
in all parts of the world. It is particularly abundant in
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THE
LINNÆAN
ARTIFICIAL SYSTEM.

PART II.

ILLUSTRATIVE OF THE CLASSES AND ORDERS OF THE SYSTEM, MORE PARTICULARLY AS CONNECTED WITH THE ARRANGEMENT OF MEDICAL PLANTS.

THE
MUSEUM OF
ARTIFICIAL SYSTEMS

PART II

THE
MUSEUM OF
ARTIFICIAL SYSTEMS

THE
LINNÆAN
ARTIFICIAL SYSTEM.

SECTION I.

AN OUTLINE OF THE LINNÆAN ARTIFICIAL SYSTEM, WITH
DELINEATIONS OF THE CLASSES AND ORDERS, AS USUAL-
LY EMPLOYED FOR THE PURPOSES OF GENERAL BOTANY.

GENERAL VIEW OF THE SYSTEM.

The Artificial System of Linnæus, is founded entirely on the *stamens* and *pistils* of the flower, and according to his arrangement, all known plants are distributed into different *classes*, *orders*, *genera*, *species* and *varieties*.

Classes :— The classes are the first general division of all vegetables into twenty-four kinds, according to the number, or some other peculiarity of the stamens.

Orders :— Each of the twenty-four classes, admit of being subdivided into orders or tribes. These orders are derived from a *secondary* characteristic.

Genera :—The orders into which the classes are divided, are again subdivided into genera or families. The genera in their turn, are derived from peculiar characters, which many plants of the same order possess in common to themselves.

Species :—Species are a further division of a genus or family of plants into individual plants.

Varieties :—With some species of plants, owing to soil, situation or other causes, both the leaves and flower are subject to variation. When this is the case, they are denominated varieties.

OF THE CLASSES.

The character of the classes are established on six circumstances connected with the stamens.

First :—The ten first classes are founded on the *number* of stamens *alone*; viz.

Monandria,	one stamen.
Diandria,	two stamens.
Triandria,	three stamens.
Tetrandria,	four stamens.
Pentandria,	five stamens.
Hexandria,	six stamens.
Heptandria,	seven stamens.
Octandria,	eight stamens.
Enneandria,	nine stamens.
Decandria,	ten stamens.

Second :—The three next classes, are estab-

lished on the *number* and *insertion* of the stamens, as being attached to the receptacle, or to the calyx and corolla.

Dodecandria,	12 to 19, to the receptacle.
Icosandria,	20 to 1000, to the calyx, or corolla.
Polyandria,	20 to 1000, to the receptacle.

Third:—The fourteenth and fifteenth classes depend on the *number* and *proportion*; or *length* of the stamens one to another.

Didynamia,	two long, two short.
Tetradynamia,	four long, two short.

Fourth:—The next four classes are established on a consideration of the stamens being *united* one with another, into one or more parcels; and the class gynandria, from the circumstance of their being *united* to the pistil

Monadelphia,	filaments united into one set.
Diadelphia,	filaments united into two sets.
Polyadelphia,	united into three or more sets.
Syngenesia,	anthers united into a cylinder.
Gynandria,	stamens rising from the pistil.

Fifth:—The twenty-first and two following classes are founded on the principle of the stamens being *separate*, that is, not in the same flower, or on the same plant as the pistils.

Monœcia,	both on the same plant.
Diœcia,	both on two plants.
Polygamia,	both on one, two, or three plants.

Sixth:—The last class, is constituted by those plants in which the stamens and pistils are *concealed*, or not perceptible to the naked eye.

Cryptogamia, concealed fructification.

DIVISION OF THE ORDERS.

The orders are the secondary divisions of the Linnæan system, and are established upon different principles.

In the first thirteen classes they are founded on *the number of pistils* in each flower.

Monogynia,	one pistil.
Digynia,	two pistils.
Trigynia,	three pistils.
Tetragynia,	four pistils.
Pentagynia,	five pistils.
Hexagynia,	six pistils.
Heptagynia,	seven pistils.
Octagynia,	eight pistils.
Enneagynia,	nine pistils.
Decagynia,	ten pistils.
Dodecagynia,	eleven to 19 pistils.
Polygynia,	twenty or more pistils.

The orders of the class didynamia, are taken from the *situation of the seed*.

Gymnospermia,	seeds without a capsule.
Angiospermia,	seeds in a capsule.

The orders of the classes, monadelphia, diadelphia, polyadelphia, and gynandria, are established on the *number of stamens*; and consequently called by the same names as the classes.

Monandria,	one stamen.
Diandria,	two stamens.
Triandria,	three stamens.
Polyandria,	many stamens.

The orders of the nineteenth class or syngenesia, are taken from *the structure of the flower*.

Polygamia æqualis,	stamens and pistils in each floret.
Polygamia frustranea,	the outer florets neutral.
Polygamia superflua,	only stamens in the outer florets.
Polygamia necessaria,	stamens central, pistils outer.
Polygamia segregata,	a calyx to each floret.

In the classes monœcia and diœcia, the orders are taken from the *number and other peculiarities of the stamens*.

Monandria,	one stamen.
Diandria,	two stamens.
Triandria, &c.	three stamens, &c.
Polyadelphia,	stamens in three or more sets.

In the twenty-third class, polygamia, the orders are established on *the separation of the stamens and pistils*.

Monœcia,	both on one plant.
Diœcia,	both on two plants.
Triœcia,	both on three plants.

The orders of the last class, or cryptogamia, are five in number, and founded on the *natural characters* of each production.

Filices,	ferns.
Musci,	mosses.
Hepaticæ,	liverworts.
Algæ,	flags.
Fungi,	mushrooms.

SECTION II.

AN EXPLANATION OF THE RESPECTIVE CLASSES AND ORDERS, MORE PARTICULARLY AS CONNECTED WITH MEDICAL BOTANY.

FIRST DIVISION.

The first *ten* classes are established on the *number of stamens alone*. The plants which belong to them produce simple perfect flowers.

CLASS I.—MONANDRIA.

Comprehending such plants as bear flowers with but *one* stamen. (F. 41.)

Monandria is divided into two orders;* viz. *monogynia* and *digynia*, according to the *number of pistils* in each flower.

The order *monogynia* only affords Medical Plants; *digynia* is a common division in General Botany.

Monogynia:—Each flower having *one* pistil, as in the

Curcuma Zedoaria.

Elettaria Cardamomum.

Zingiber Officinale.

* All the *orders* of the first *thirteen* classes, as before said, are established on the *number of pistils*. We shall

The three medical plants of this class, in addition to their being of the same artificial order, also belong to one natural family.

They are all perennial natives of India, and arranged in the order *scitamineæ*.

CLASS II.—DIANDRIA.

The plants of this class, bear flowers with *two* stamens. (F. 42.)

Divided into three orders; viz. *monogynia*, *digynia* and *trigynia*.

The orders *monogynia* and *trigynia* only afford Medical Plants: *digynia* is a common division in General Botany.

Monogynia:—Having *one pistil* in each flower.

Gratiola Officinalis.

Olea Europea.

Rosmarinus Officinalis.

Trigynia:—Having *three pistils* in each flower.

Piper Cubeba.

Piper Longum.

Piper Nigrum.

The plants of this class bear no common natu-

therefore, only explain in particular, those which afford medical plants, and enumerate the others as being the general divisions of each class.

ral characters, the seven being distributed in four natural orders.

The *Gratiola* belongs to *personatæ*; aloe to *sepiariæ*; *Rosmarinus* to *verticillatæ*; and the *piper* tribe to the order *piperitæ*.

CLASS III.—TRIANDRIA.

The third class includes those plants which bear flowers with *three* stamens. (F. 43.)

The class in question is also divided into three orders; viz. *monogynia*, *digynia* and *trigynia*.

The orders *monogynia* and *digynia*, only afford Medical Plants; *trigynia* is a common division in General Botany.

Monogynia:—Having *one pistil* in each flower.

Crocus Sativus.

Iris Florentina.

Valeriana Officinalis.

Digynia:—Having *two pistils* in each flower.

Avena Sativa.

Triticum Æstivum.

Hordeum Distichon.

Triticum Hybernum.

Saccharum Officinarum.

—

The plants of this division are arranged in three natural orders.

The *Crocus* and *Iris* belong to the family *ensatæ*; *Valeriana* to *aggregatæ*; and the five species in *digynia* to the extensive order *gramina*.

CLASS IV.—TETRANDRIA.

In this class, the flowers are furnished with *four* stamens, *all* equal in length, or nearly so.

In this circumstance they differ from plants of the class *didynamia*, which have *two* long and *two* short.

It is usually divided into three orders; viz. *monogynia*, *digynia* and *tetragynia*.

The order *monogynia* only, affords Medical Plants; *digynia* and *tetragynia*, are common divisions in General Botany.

Monogynia :—Embracing those plants of the class, which have *one pistil* in each flower.

Rubia Tinctorum.

Dorstenia Contrayerva.

The two plants of this class are both perennial, but of different natural characters.

The first is of the natural order *scabrideæ*, and the second of the order *stellatæ*.

CLASS V.—PENTANDRIA.

The class pentandria is one of the most considerable in the system, and brings together those plants which produce flowers with *five* stamens. (F. 45.)

Its general orders are six in number; viz. *mo-*

nogynia, *digynia*, *trigynia*, *tetragynia*, *pentagynia* and *polygynia*.

The orders *monogynia*, *digynia*, *trigynia* and *pentagynia* furnish us with Medical Plants: *tetragynia* and *polygynia* are common divisions in General Botany.

Monogynia:—Including such plants of the pentandrous character as have *one pistil* in each flower; among which will be found, the

Anchusa Tinctoria.	Cusparia Febrifuga.*
Atropa Belladonna.	Datura Stramonium.
Capsicum Annuum.	Hyoscyamus Niger.
Cephaelis Ipecacuanha.	Menyanthes Trifoliata.
Chironia Centaurium.	Nicotiana Tabacum.
Cinchona Cordifolia.	Rhamnus Catharticus.
Cinchona Lancifolia.	Spigelia Marilandica.
Cinchona Oblongifolia.	Solanum Dulcamara.
Convolvulus Jalapa.	Strychnos Nux Vomica.
Convolvulus Scammonia.	Vitis Vinifera.

Digynia:—The second order also affords many medical plants, the flowers of which are possessed of *two pistils*.

Anethum Fœniculum.	Carum Carui.
Anethum Graveolens.	Conium Maculatum.
Angelica Archangelica.	Coriandrum Sativum.

* The *Bonplandia Trifoliata* according to Wildenow; or *Galipea Officinalis*, in the first volume of the Transactions of the Medico-Botanical Society.

Bubon Galbanum	Cuminum Cyminum.
Daucus Carota.	Pastinaca Opoponax.
Daucus Sylvestris.	Pimpinella Anisum.
Eryngium Maritimum.	Rhus Toxicodendron.
Ferula Assafoetida.	Sium Nodiflorum.
Gentiana Lutea.	Ulmus Campestris.
Heracleum Gummiferum.	—

Trigynia :—Containing one medical species, in each flower of which will be found, *three pistils*.

Sambucus Nigra.

Pentagynia :—Including those plants of the class which produce *five pistils* in each flower.

Linum Catharticum.

Linum Usitatissimum.

The extent of this class, necessarily occasions the plants which we have enumerated to belong to several natural orders.

The Anchusa, is arranged in the order *asperifoliæ* ; Atropa, Capsicum, Datura, Hyoscyamus, Nicotiana, Solanum and Strychnos, in *luridæ* ; Cephaelis, in *aggregatæ* ; Chironia, in *rotacææ* ; Cinchona in *contortæ* ; Convolvulus in *campanacææ* ; Menyanthes in *preciaæ* ; Rhamnus, Rhus and Sambucus, in *dumosæ* ; Spigelia in *stellatæ* ; Vitis, in *hederaææ* ; Anethum, Angelica, Bubon, Carum, Conium, Coriandrum, Cuminum, Daucus, Eryngium, Ferula, Heracleum, Pastinaca, Pimpinella, and Sium, in *umbellatæ* ; Gentiana in *rotacææ* ; Ulmus in *scabrideææ* ; and Linum, in *gruinales*.

CLASS VI.—HEXANDRIA.

The plants of this class have flowers with *six* stamens, all of one uniform length, or at least, nearly so, in which respect they differ from the class *tetradynamia*. (F. 46.)

None of the flowers of this class have four petals, as is the case with all those of the fifteenth. Indeed, all the medical species of hexandria, have *six* petals, except the *rumex acetosa*, which has but *three*.

The class hexandria is divided into five orders; viz. *monogynia*, *digynia*, *trigynia*, *hexagynia* and *polygynia*.

The orders *monogynia* and *trigynia* are the only two which afford Medical Plants, the other three are common divisions in General Botany.

Monogynia:—Having *one pistil* in each flower.

Acorus Calamus.

Aloe Spicata.

Allium Cepa.

Aloe Vulgaris.

Allium Porrum.

Scilla Maritima.

Allium Sativum. ’

—

Trigynia:—Having *three pistils* in each flower.

Colchicum Autumnale.

Rumex Acetosa.

Rumex Aquaticus.

The Medical Plants of this part of the system, do not possess many natural affinities.

The *Acorus* will be found to correspond with the natural order *piperitæ*; *Allium* and *Colchicum* to *spathacæ*; *Aloe* and *Scilla* to *coronariæ*; and *Rumex* to *holeracæ*.

CLASS VII.—HEPTANDRIA.

This class embraces such plants as produce flowers with *seven* stamens. (F. 47.)

Though a very small class, it is divided into four orders, viz. *monogynia*, *digynia*, *tetragynia* and *heptagynia*.

Monogynia :—The only heptandrous medical species, is one having *one* pistil in each flower, consequently belonging to this order.

This is the *Æsculus Hippocastanum*, or common Horse-chestnut, a native tree of Siberia, belonging to the natural family *trihilatæ*.

CLASS VIII.—OCTANDRIA.

The plants of this class have *eight* stamens in each flower, of which kind there is a great variety. (F. 48.)

The class is divided into four orders; viz. *monogynia*, *digynia*, *trigynia* and *tetragynia*.

The orders *monogynia* and *trigynia* are the only two which supply Medical Plants. The other two are common divisions in General Botany.

Monogynia:—Including those octandrous plants which have but *one pistil* in each flower.

Amyris Elemifera.
Amyris Gileadensis.
Daphne Mezereum.

Trigynia:—Comprehending those which have *three pistils* in each flower.

Polygonum Bistorta.

The few plants which we have mentioned as of this class, are arranged in three natural orders.

Amyris belongs to *dumosæ*; Daphne to *vepriculæ*; and Polygonum to *holeracææ*.

CLASS IX.—ENNEANDRIA.

All plants of this class, bear flowers with *nine* stamens. (F. 49.)

Enneandria is divided into three orders; viz. *monogynia*, *trigynia* and *hexagynia*.

Monogynia and *trigynia* require attention as furnishing Medical Plants; while *hexagynia* is a common arrangement in General Botany.

Monogynia:—Each flower having *one pistil*.

Laurus Camphora.	Laurus Nobilis.
Laurus Cassia.	Laurus Sassafras.
Laurus Cinnamomum.	—

Trigynia:—Each flower having *three pistils*.

Rheum Palmatum.

Rheum Undulatum.

The few Medical Plants which arrange in this class, are of the same natural tribe.

Both the genera *Laurus* and *Rheum*, consequently belong to the natural order *holeraceæ*.

CLASS X.—DECANDRIA.

Here we have arranged, all plants which bear flowers with *ten* stamens. (F. 50.)

The orders of decandria are five; viz. *monogynia*, *digynia*, *trigynia*, *pentagynia* and *decagynia*.

Of these orders *monogynia*, *digynia* and *pentagynia* comprehend Medical Plants. *Trigynia* and *decagynia* are common divisions in General Botany.

Monogynia:—Having *one pistil* in each flower.

Arbutus Uva Ursi.

Quassia Simarouba.

Cassia Fistula.

Rhododendron Chrysanthemum.

Cassia Senna.

Ruta Graveolens.

Copaifera Officinalis.

Styrax Benzoin.

Guaiacum Officinale.

Styrax Officinale.

Hæmatoxylon Campechianum.

Swietenia Febrifuga.

Myroxylon Peruiferum.

Toluifera Balsamum.

Quassia Excelsa.

Digynia:—Each flower having *two pistils*.

Dianthus Caryophyllus.

Pentagynia :—Every flower having *five pistils*.

Oxalis Acetosella.

The plants of the tenth class are distributed among seven natural orders.

Arbutus, Rhododendron, and Styrax, belong to *bicornes*; Cassia, Hæmatoxylon, and Myroxylon, to *lomentaceæ*; Copaifera, and Toluifera to *dumosæ*; Gnaiacum, Quassia, and Oxalis to *gruinales*; Ruta to *multisiliquæ*; Swietenia to *trihilatæ*; and Dianthus to *caryophylleæ*.

SECOND DIVISION.

The three classes which constitute the second division, are founded on the *number and insertion* of the stamens.

CLASS XI.—DODECANDRIA.

Comprehending those plants which produce flowers with from *twelve to nineteen* stamens *inserted into the receptacle*. (F. 51.)

The orders are six in number; viz. *monogynia*, *digynia*, *trigynia*, *tetragynia*, *pentagynia* and *dodecagynia*.

The orders *monogynia*, *digynia*, and *trigynia*, afford Medical Plants; *tetragynia*, and the other two, are common divisions in General Botany.

Monogynia :—Each flower having *one pistil*.

Asarum Europeum.

Canella Alba.

Digynia :—Each flower having *two pistils*.

Agrimonia Eupatoria.

Trigynia :—Each flower having *three pistils*.

Euphorbia Officinarum.

The four Medical Plants belonging to this class, do not possess any natural affinities, but are all arranged in different orders.

Asarum belongs to the tribe called *sarmentaceæ* ; Canella to *holeraceæ* ; Agrimonia to *senticosæ* ; and Euphorbia to *tricocceæ*.

CLASS XII.—ICOSANDRIA.

This class embraces those plants which have flowers with *twenty or more* stamens, *inserted into the calyx or corolla*. Sometimes, however, there are not so many as twenty stamens. (F. 52.)

The class icosandria, altogether, is a very useful and innoxious selection of plants, scarcely comprising one of a poisonous nature.

It is divided into five orders ; viz. *monogynia*, *digynia*, *trigynia*, *pentagynia* and *polygynia*.

The orders *monogynia*, *pentagynia* and *polygynia* are the

three which supply Medicinal Plants. *Digynia* and *trigynia* are common divisions in General Botany.

Monogynia :—Having *one pistil* in each flower.

Amygdalus Communis.	Prunus Domestica.
Eugenia Caryophyllata.	Punica Granatum.
Myrtus Pimenta.	—

Pentagynia :—Having *five pistils* in each flower.

Pyrus Cydonia.

Polygynia :—Each flower having *twenty or more pistils*.

Geum Urbanum.	Rosa Gallica.
Rosa Canina.	Tormentilla Erecta.
Rosa Centifolia.	—

The icosandrous Medical Plants are met with in only three natural divisions.

Amygdalus, Prunus, Punica and Pyrus, belong to the order *pomaceæ*; Eugenia and Myrtus, to *hesperideæ*; while the five we have mentioned in polygynia, assimilate with the *senticosæ*.

CLASS XII.—POLYANDRIA.

The plants arranged in this class, have from *twenty* stamens or *upwards*, all inserted into the *receptacle*. (F. 53.)

The class polyandria is particularly noted for its poisonous productions, a character very different to the icosandrous vegetables.

Polyandria is divided into seven orders; viz. *monogynia*, *digynia*, *trigynia*, *tetragynia*, *pentagynia*, *hexagynia* and *polygynia*.

The first, third, fourth, and last, are the only orders which contain Medical Plants; the other three are common divisions in General Botany.

Monogynia:—Including such plants of the class as have *one pistil* in each flower.

Papaver Rhœas.

Papaver Somniferum.

Trigynia:—Including those which have *three pistils* in each flower.

Aconitum Napellus.

Delphinium Staphisagria.

Tetragynia:—Claiming such as have *four pistils* in each flower.

Wintera Aromatica.

Polygynia:—Including those which have *twenty or more pistils* in each flower.

Helleborus Fœtidus.

Helleborus Niger.

The plants enumerated as partaking of the

polyandrous character, are mostly arranged in two natural orders.

Papaver belongs to *rhæadeæ*; while Aconitum, Delphinium, and Helleborus contribute to form the family denominated *multisiliquæ*. The natural order for Wintera, is not mentioned in medical writings.

THIRD DIVISION.

There are only two classes in this division; and these are founded on the *number and proportion* of the stamens.

CLASS XVI.—DIDYNAMIA.

The present class is constituted by plants whose flowers have *four* stamens; *two long* and *two short*. (F. 54.)

The fourth class, *tetrandria*, has also *four* stamens, but all of an equal length or nearly so, which very effectually divides it from *didynamia*.

With all the preceding classes, the number of pistils established the different orders; but here, the *presence or absence of the seed vessel*, divides the class into two orders; the first called *gymnospermia*, and the second *angiospermia*.

Both of these orders we shall find, supply Medical Plants.

Gymnospermia.—This order contains those didynamous plants, which are *destitute of a proper seed-vessel*; the seeds being usually in an open calyx.

Hyssopus Officinalis.	Mentha Pulegium.
Lavandula Spica.	Mentha Viridis.
Marrubium Vulgare.	Origanum Vulgare.
Melissa Officinalis.	Teucrium Chamædrys.
Mentha Piperita.	Teucrium Marum.

Angiospermia:—Containing those plants answering the character of the class, which have their seeds covered, that is, *lodged in a proper seed-vessel*.

Digitalis Purpurea.	Scrophularia Nodosa.
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The plants of this class, particularly of the first order, have many natural relations, consequently are not much distributed in their natural arrangement.

Hyssopus, Lavandula, and all the plants of gymnospermia belong to *verticillatæ*; Digitalis to *luridæ*; and Scrophularia to the order *personatæ*.

CLASS XV.—TETRADYNAMIA.

The plants of this class have perfect flowers with *six* stamens, *four* of which are *longer* than the other *two*. (F. 55.)

The flowers are also *cross-shaped*, consisting of *four* petals; which, together with the above character, is sufficient to distinguish plants of this class from those of *hexandria*.

There are two orders in this class; viz. *siliculosa* and *siliquosa*; both founded on *the form of the seed vessel*.

Both the orders of this class also, afford Medical Plants, though not so numerous as those of *didynamia*.

Siliculosa:—The plants of this order are furnished with that kind of seed-vessel which is called a *silicle* or little pod.

Cochlearia Armoracia.

Siliquosa:—The plants of the second order, instead of having a little pod, have a *siliqua* or very long pod.

Cardamine Pratensis.

Sinapis Alba.

Sinapis Nigra.

Tetradynamia, is almost a natural class, consisting, in fact, of two extensive families of plants, which are included under one natural order.

The plants we have mentioned, therefore, belong to the same natural family, or in other words, to the common order *siliquosæ*.

FOURTH DIVISION.

In this division, we shall explain those classes which are founded on a consideration of *the union of the stamens one to another*; or on the other hand, *the union of the stamens with the pistil*.

CLASS XVI.—MONADELPHIA.

This is a vast and interesting class, embracing those plants, the flowers of which, have *all* their stamens *united below*, that is by their filaments, *into one body or set*, through which the pistil passes.

It will be as well to observe, in the present place, that the orders of monadelphia are founded on the *number and other peculiarities* connected with *the stamen*, and are named after the classes and employed with the same meaning. It is consequently, the *union of the filaments* which gives rise to the class.

The orders of this class, are eight in number—viz. *triandria*, *pentandria*, *heptandria*, *octandria*, *decandria*, *endecandria*, *dodecandria*, and *polyandria*, according to *the number of stamens* in each flower.

Triandria and *polyandria* are the only two sub-divisions from which we can select Medical Plants as illustrations. The other six orders are commonly met with in General Botany.

Triandria:—There is only one Medical Plant which has *three stamens*.

Tamarindus Indica.

Polyandria:—Containing two Medicinal Plants of the monadelphous character: the flowers of which, have *more than twenty stamens inserted in the receptacle*.

Althæa Officinalis.

Malva Sylvestris .

The three plants of monadelphia, belong to two natural orders.

The Tamarindus to *lomentaceæ*, and the Althæa and Malva to the tribe called *columniferæ*.

CLASS XVII.—DIADELPHIA.

With plants belonging to this class, the flowers have their stamens *united by their filaments into two sets*. (F. 57.)

The same remarks may be made here, as in the last class, with respect to the essential foundation of the class, and the origin of the orders.

There are four orders of plants in diadelphia—viz. *pentandria*, *hexandria*, *octandria*, and *decandria*, all established on *the number of stamens in each flower*.

The orders *octandria* and *decandria* are those which require our notice; the other two are common divisions in General Botany.

Octandria:—Each flower having *eight stamens*.

Polygala Senega.

Decandria:—Each flower having *ten stamens*.

Astragalus Tragacantha.

Pterocarpus Erinacea.

Dolichos Pruriens.

Pterocarpus Santalinus.

Geoffræa Inermis.

Spartium Scoparium.

Glycyrrhiza Glabra.

—

The plants of this class, which are used in medicine, are mostly of one natural order.

Polygala belongs to *lomentaceæ*; but Astragalus, Dolichos and the remainders are arranged under *papilionaceæ*.

CLASS XVIII.—POLYADELPHIA.

In this class, the flowers have their stamens *united by their filaments into more than two sets*. (F. 58.)

Polyadelphia, it is observed, is also established on the same principle as the last two classes. The orders, however, do not depend on the *number* of stamens alone.

There are three orders; viz. *dodecandria*, *icosandria* and *polyandria*. These are, of course, established on the *number and insertion* of the stamens.

The second order is the only one which affords Medicinal Plants. *Dodecandria* and *polyandria* are common divisions in General Botany.

Icosandria:—An order, in which the flowers have numerous stamens inserted in the calyx or corolla.

Citrus Aurantium.

Citrus Medica.

Melaleuca Leucodendron.

The three plants of polyadelphia icosandria, are found in two natural orders.

The genus Citrus in *bicornes*, and Melaleuca in *hesperideæ*.

CLASS XIX.—SYNGENESIA.

This is a very extensive class, comprehending for the most part, those plants which produce compound flowers. (F. 59.)

The necessary character, however, is, *the anthers united into a cylinder or tube*, whilst the filaments, by which they are supported, are separate and distinct. The pistil passes through the tube formed by the anthers.

Its orders are five; viz. *polygamia æqualis*, *polygamia superflua*, *polygamia frustranea*, *polygamia necessaria*, and *polygamia segregata*. These orders are all founded on *the structure of the flower*.

Medical species are only afforded by the two first, *polygamia æqualis*, and *polygamia superflua*; but as it is rather a complex class, I shall explain each order respectively.

Polygamia æqualis:—In the plants of this order, the florets or partial flowers are all *perfect* or *united*, that is, furnished with their own perfect stamens and pistils, and thereby capable of bringing their seed to maturity, without the assistance of any other floret.

Arctium Lappa.

Lactusa Virosa.

Lactuca Sativa.

Leontodon Taraxacum.

Polygamia superflua:—With the plants of this subdivision, the florets in the centre or disk are *perfect* or *united*, while those of the circumference or margin, are furnished with pistils only.

Anthemis Nobilis.

Artemisia Santonica.

Anthemis Pyrethrum.

Inula Helenium.

Arnica Montana.

Solidago Virga Aurea.

Artemisia Arbrotanum.

Tanacetum Vulgare.

Artemisia Absinthium.

Tussilago Farfara.

Artemisia Maritima.

—

Polygamia frustranea:—In the flowers of this order, the florets of the disk or centre, are *perfect*, or supplied with both stamens and pistils, while the flat florets of the margin or circumference are *neuter*, that is, destitute both of stamens and pistils.

The common sun-flower, Jerusalem artichoke, and blue-bottle, are very frequent specimens of this order.

Polygamia necessaria:—In this order, the florets

of the centre are furnished with *stamens only*, while those of the margin or circumference, are merely supplied with *pistils*.

The family calendula or marygold is the most common you can consult for polygamia necessaria.

Polygamia segregata:—This order of syngenesia, embraces such plants as bear flowers, either simple or compound, but with *united tubular anthers*, and *with a partial calyx*, all included in one general calyx.

Examples of this order occur in the genera Echinops or globe-thistle, Elephantopus or elephant's-foot, and a few others.

All the Medical Plants we have mentioned, are not only syngenesious, but likewise arranged in one Natural Order.

This order is the Linnæan *compositæ*, because every plant which it embraces, produce compound flowers.

CLASS XX.—GYNANDRIA.

The plants of this class are furnished with perfect flowers, the stamens of which are *inserted* either upon the *style* or *germen* of the pistil. (F. 60.)

The general division of the class is into seven

orders; viz. *monandria*, *diandria*, *triandria*, *tetrandria*, *pentandria*, *hexandria* and *octandria*; according to *the number of stamens* in each flower.

Of these orders, *hexandria* is the only one which requires our attention.

Hexandria:—Every plant producing *six stamens* in each flower.

Even in this order, there is only one Medical Plant; viz. the *Aristolochia Serpentaria*, a native of North America, belonging to the natural order *sarmentaceæ*.

FIFTH DIVISION.

The classes which we have hitherto explained, are constituted by plants, the flowers of which are *perfect*, or in other words, furnished with both stamens and pistils. In the classes of this division, we shall ascertain that those organs may not only be in different flowers on the same plant, but also on different plants.

According to the nature of these differences, there are three classes, viz. *monœcia*, *diœcia* and *polygamia*.

CLASS XXI.—MONŒCIA.

The plants of this class, are particularly distinguished by their producing some flowers with

stamens only, and some flowers with *pistils only*, both kinds growing *on the same plant*.

Monandria, *diandria*, *triandria*, *tetrandria*, *pentandria*, *hexandria*, *polyandria*, *monadelphica* and *polyadelphica* are the orders.

The first six orders are established on *the number* of stamens *alone*; *polyandria* on the *number* and *insertion*; *monadelphica* on the *union* of the filaments into *one set*; and *polyadelphica* on the *union* of the filaments into *more than two sets*.

Tetrandria:—In this order are arranged such plants of the monœcious character, as produce barren flowers with *four* stamens.

Morus Nigra.

Polyandria:—Including those plants of the class which produce barren flowers with *more than seven* stamens.

Arum Maculatum.

Quercus Infectoria.

Quercus Pedunculata.

Quercus Robur.

Monadelphica:—Embracing those plants, the barren flowers of which, have their filaments *united into one set*.

Croton Cascarilla.

Croton Tiglium.

Cucumis Colocynthis.

Momordica Elaterium.

Pinus Abies.

Pinus Balsamea.

Pinus Larix.

Pinus Sylvestris.

Ricinus Communis.

Of the Medical Plants in monœcia there are scarcely two genera which belong to the same natural order.

Thus, *Morus* will be found among the *scabrideæ*; *Arum* in *pipcritæ*; *Quercus* in *amentacæ*; *Croton* and *Ricinus* in *tricocæ*; *Cucumis* and *Momordica* in *cucurbitacæ*, and *Pinus* in *coniferæ*.

CLASS XXII.—DIŒCIA.

The twenty-second class contains those plants which have no perfect flowers, but produce *flowers with stamens* on one plant, and *flowers with pistils* on another of the same species.

Like the preceding class, diœcia is also usually divided into nine orders; viz. *monandria*, *diandria*, *triandria*, *tetrandria*, *pentandria*, *hexandria*, *octandria*, *polyandria* and *monadelphia*.

The first eight, are derived from *the number* of stamens alone: *polyandria*, when there are more than eight stamens; and *monadelphia*, when the filaments of the stamens are united into one set.

Diandria:—Each barren flower having *two stamens*, as in the

Salix Alba.
Salix Caprea.
Salix Fragilis.

Pentandria :—Each barren flower having *five stamens*, as in the

Humulus Lupulus.
Pistacia Lentiscus.
Pistacia Terebinthus.

Hexandria :—Each barren flower having *six stamens*, as in the

Smilax Sarsaparilla.

Monadelphica :—The *filaments* of the stamens *united into one set*, as in the

Juniperus Communis.
Juniperus Sabina.
Myristica Moschata.

The six genera of Medical Plants belonging to this class, are nearly all of different natural arrangements.

Salix and Pistacia assist in forming the family *armen-taceæ* ; Humulus is classed with the *scabrideæ* ; Smilax, with the *sarmentaceæ* ; Juniperus with the *coniferæ* ; and Myristica with the *holeraceæ*.

CLASS XXIII.—POLYGAMIA.

This class includes such plants as produce three kind of flowers ; viz. some with *pistils* only, some with *stamens* only, and others with *both* ;

and these flowers situate on *the same* individual plant, or on *two* or *three* different plants of *the same species*.

The orders of polygamia are three; viz. *monœcia*, *diœcia* and *triœcia*.

The two former are named in accordance with the classes so called, and *triœcia* because with the plants which it embraces, there are *stamens only* on one plant, *pistils only* on another, and *both stamens and pistils on a third*, all of the same species.

Monœcia:—Including those plants which have *perfect* flowers, accompanied with *barren* or *fertile* flowers, or *both*, on *the same* plant.

Acacia Catechu.
Acacia Vera.

Stalagmatis Cambogioides.
Veratrum Album.

Diœcia:—Embracing those plants which have the three different flowers on *two* of the same species.

Ficus Carica*.
Fraxinus Ornus.

The Medical Plants of this class do not appear to have many natural affinities, since they are all arranged in different natural orders.

* Polygamia Triœcia.—Hort. Cantab.

The genus *Acacia* belongs to *lomentaceæ*; *Staglagmatis* to *tricoccæ*; *Veratrum* to *coronariæ*; *Ficus* to *scabrideæ*; and *Fraxinus* to *sepiariæ*.

SIXTH DIVISION.

This division brings us to the last class of the Linnæan Artificial System. The plants which belong to it are widely different to those we have considered.

CLASS XXIV.—CRYPTOGAMIA.

The class cryptogamia contains a vast assemblage of vegetables, in which the parts of fructification are, either from their minuteness or from their particular situation, entirely concealed or imperfectly visible.

The class has been divided into five natural orders—viz. *filices*, *musci*, *hepaticæ*, *algæ*, and *fungi*, each established on the distinguishing characters of the productions they embrace.

Of these, *filices*, *musci*, *algæ*, and *fungi*, form four orders in the Linnæan Natural System.

Filices or *Ferns*:—This order contains a selection of plants, the fructifications of which, are essentially different, at least in point of situation,

being generally diffused in spots or lines on the under surface of the leaf.

Aspidium Filix Mas.

Musci or *Mosses*:—These plants have roots and leaves something like those of other plants, but the fruit is very different. Small threads like the filaments of stamens generally grow out of the bosom of the leaves, and support little roundish bodies that resemble anthers, but which are really the capsules that contain the seed.

Hepaticæ or *Liverworts*:—The productions of this order, are a tribe of small plants resembling mosses, in which the herbage, generally speaking, is leafy, and the fructification originates from what is at the same time, both leaf and stem. The capsules have no lid or operculum, as in the the mosses.

Algæ or *Flags*:—The fourth order is constituted by plants in which the herbage is sometimes leafy, sometimes a mere crust, and sometimes of a leathery or gelatinous texture. The seeds are either embedded in the frond itself, or in some peculiar receptacle.

Fucus Vesiculosus.

Lichen Islandicus.

Lichen Rocella.

Fungi or Mushrooms:—This order is composed of a tribe of plants of a fleshy substance, generally of a quick growth and short duration, differing in firmness, from a watery pulp to a leathery or even woody texture.

Boletus Ignarius.

SECTION III.

CONTAINING GENERAL RULES FOR ASCERTAINING THE CLASS, ORDER, GENERA, AND SPECIES OF PLANTS ACCORDING TO THE LINNÆAN SYSTEM.

THE CLASS.

If you have a plant, and wish to know its *class*, you must remember, that the classes are founded on six circumstances connected with *the stamen*.

You must first examine the parts of fructification, and see to which *division* of the system the stamens correspond.

Having proved the *division*, you will have no difficulty to come at *the individual class*.

THE ORDER.

Some classes, it is remembered, are numerously subdivided, but by a little attention, you can soon reduce your plant to its proper *order*.

THE GENUS.

Your investigation being so far made, as to be

certain of the *class* and *order* to which your plant belongs, refer to the said class and order, in a good systematic arrangement or *genera plantarum*, and taking notice of the different *genera* by which the order is constituted, carefully examine the principal characters of the plant under examination, and mark which *genus* it *most* resembles.

THE SPECIES.

The *genus* being fixed upon, to which you think the plant belongs, read over the *species*, and by comparing the plant with what you read, there will be no difficulty in finding *its name*, though you might never have seen or heard of the plant before.

THE
LINNÆAN
NATURAL SYSTEM.

PART III.

EXPLAINING THE GENERAL MEANING OF THE DIFFERENT
ORDERS, WITH ALLUSIONS TO THE MOST FREQUENT
CHARACTERS POSSESSED BY THE MEDICAL PLANTS ENU-
MERATED UNDER EACH HEAD.

LINNEA

NATURAL SYSTEM

PART III

CONTAINING THE GENERAL PRINCIPLES OF THE
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THE
LINNÆAN
NATURAL SYSTEM.

ORDER I.—PALMÆ.

The tribe of *palms* is an entire natural and very distinct order, constituted by families of lofty plants with very peculiar frondose tops.

Cocos Butyraceæ.

This plant corresponds to the general character of the order.

Emollient in medicinal virtues : has a three-leaved calyx ; a corolla of six or three petals ; flowers monœcious ; stamens six ; and the seed a one-celled, smooth, and succulent drupe.

ORDER II.—PIPERITÆ.

The plants of this division have an acrid flavour, whence they are called *pepper-plants*.

Acorus Calamus.

Arum Maculatum.

Piper Cubeba.

Piper Longum.

Piper Nigrum.

—

In natural characters, the medical species are not very similar.

Natural Characters:—Root and stem indefinite; leaves sword-shaped, triangular, ovate or cordate; stamens two, six, or more; fruit a capsule or berry.

Medical Properties:—Acorus Calamus and the Peppers are considered stomachic, carminative, and stimulant; and the Arum Maculatum, stimulant, diuretic, and errhine.

ORDER III.—CALAMARIÆ.

Consisting of such plants as are usually called *reeds*, and most of which are very closely related to the true grasses.

ORDER IV.—GRAMINA.

This order embraces the *true grasses*, a very peculiar and extensive tribe of plants.

Avena Sativa.

Hordeum Distichon.

Saccharum Officinarum.

Triticum Æstivum.

Triticum Hybernium

—

The Medical Plants here mentioned, have several natural common characters.

Natural Characters:—They have fibrous roots; hollow stems or culms; inflorescence either a spike or panicle; calyx two-valved; from one to six stamens; and the germen superior, with two pistils.

Medical Properties:—The Saccharum Officinarum is reckoned nutrient and slightly aperient, and all the rest are valuable nutrients and emollients.

ORDER V.—TRIPETALOIDES.

The plants of this order, have flowers with *three petals* only, and are nearly allied to the grasses, but possess no very striking characters.

ORDER VI.—ENSATÆ.

The sword-shaped leaves of some plants, have established this order, hence they are called *sword-leaved plants*.

Crocus Sativus.

Iris Florentina.

The calyx is a kind of spurious spathe; corolla usually of six petals; seed-vessel a capsule of three cells and three valves, with many seeds.

ORDER VII.—ORCHIDÆ.

The plants of this order are of the *orchis tribe*, forming a peculiar selection of vegetables.

ORDER VIII.—SCITAMINEÆ.

This is an order of plants approaching the orchideæ in aspect. They are of an *aromatic* nature, from whence the name of the order is derived.

Curcuma Zedoaria.
Elettaria Cardamomum.
Zingiber Officinale.

These scitaminous plants have considerable natural affinities.

Natural Characters :—The roots are fleshy, mostly acid and aromatic ; stem simple ; leaves lanceolate, entire ; inflorescence either a spike or cluster ; flower superior ; one stamen ; one pistil ; calyx a perianth of three valves ; corolla irregular.

Medical Properties :—The three plants are all possessed of stimulating, carminative and stomachic properties.

ORDER IX.—SPATHACEÆ.

In this order are arranged those plants, which produce flowers with a *spathe* or *sheath*.

Allium Cepa. Allium Sativum.
Allium Porrum. Colchicum Autumnale.

These plants principally correspond in root, leaves and scape.

Natural Characters :—The roots are bulbous ; leaves

usually sheathing at the root, and either linear, or linear-lanceolate; stem, a round, two-edged or triangular scape; corolla one or more petalled; stamens six; pistils one or three; capsules three celled.

Medical Properties:—The three first are expectorant and diuretic, and the Colchicum Autumnale, narcotic, diuretic, and cathartic.

ORDER X.—CORONARIÆ.

An order so named from many of its plants producing flowers which were formerly used to decorate a *coronary* or garland.

Aloe Spicata.

Scilla Maritima.

Aloe Vulgaris.

Veratrum Album.

The plants before us are very similar in natural characters, and very fairly so in medical virtues.

Natural Characters:—Roots tuberous; stem simple, often a mere scape; flower of six petals; no calyx; six stamens; one or three pistils; germen superior; capsules three celled and three valved, with many seeds.

Medical Properties:—The two Aloes are of a warm stimulating cathartic nature; the Scilla Maritima emetic, expectorant, diuretic, and even cathartic; and the Veratrum Album, violently emetic, purgative and stimulant.

ORDER XI.—SARMENTACEÆ.

A set of plants so called from their being unarmed, long, weak, and of a trailing or twining habit.

Aristolochia Serpentaria.

Asarum Europeum.

Smilax Sarsaparilla.

The plants of this order do not agree very closely in their general characters, though bearing great similarity in medical properties.

Natural Characters:—They are all monocotyledonous; roots fibrous; stems various; leaves simple and undivided, sometimes cordate, kidney-shaped or ovate; flowers on stalks; corolla none or one petalled; stamens six or more; styles usually three; the fruit six or three-celled.

Medical Properties:—The Aristolochia Serpentaria is diaphoretic and diuretic; the Asarum Europeum, emetic, diaphoretic and diuretic; and the Smilax Sarsaparilla, diaphoretic and diuretic.

ORDER XII.—HOLERACEÆ.*

This order is intended to embrace those plants which are tender or brittle in the mouth. They are commonly called *pot-herbs*, and many of them are employed for culinary purposes.

Canella Alba.

Laurus Camphora.

Laurus Cassia.

Laurus Cinnamomum.

Laurus Nobilis.

Laurus Sassafras.

Myristica Moschata.

Polygonum Bistorta.

Rheum Palmatum.

Rheum Undulatum.

Rumex Aquaticus.

Rumex Acetosa.

* Incorrectly printed in many works *holoraccæ*.—Sir J. E. Smith.

The natural characters of these plants are very vague, as also are their medicinal qualities.

Natural Characters :—The roots are arborescent or otherwise ; stems various ; leaves usually entire and long ; inflorescence a cluster, panicle, spike or whorl ; corolla none one, or more petalled ; calyx sometimes wanting ; stamens and pistils indefinite ; seed-vessel a berry, drupe, legume, or capsule.

Medical Properties :—The *Canella Alba* is stimulant and stomachic ; the *Laurus Camphora* narcotic, diaphoretic and sedative ; the *Laurus Cassia*, laxative ; the *Laurus Cinnamonum* and *Myristica Moschata*, stimulant, carminative and narcotic ; the *Laurus Sassafras*, stimulant, sudorific, and diuretic ; the *Polygonum Bistorta*, astringent and tonic ; the *Rhubarbs* purgative and astringent ; the *Rumex Acetosa* diuretic ; and the *Rumex Aquaticus*, astringent.

ORDER XIII.—SUCCULENTÆ.

In this division, are arranged such plants as are of a fleshy and juicy nature.

ORDER XIV.—GRUINALES.

This order brings together those plants which have flowers somewhat resembling a *crane's bill*.

Guaiacum Officinale.	Oxalis Acetosella.
Linum Catharticum.	Quassia Excelsa.
Linum Usitatissimum.	Quassia Simarouba.

With the plants of this division, the natural

characters and medical properties are not very much alike.

Natural Characters:—The roots are arborescent or fibrous; stems erect; leaves obovate, lanceolate, obcordate, elliptical or oblong; inflorescence generally simple; corolla five petalled; calyx, five leaved; stamens, five or ten; pistils one or five; and the seed-vessel, a three or more celled capsule or a drupe.

Medical Properties:—The *Guaiacum Officinale* is called diaphoretic and stimulant; the *Linum Catharticum*, purgative; the *Linum Usitatissimum*, emollient; and the two species of *Quassia*, tonic.

ORDER XV.—INUNDATEÆ.

An order of plants, so called, because they grow in water, many of them under the surface, except their blossoms.

ORDER XVI.—CALYCIFLORÆ.

Plants of the shrub and tree kind having *the stamens* inserted into the calyx.

ORDER XVII.—CALYCANTHEMÆ.

Plants having the *corolla and stamens* inserted into the calyx.

Lythrum Salicaria.

A woody root; stem downy; leaves lanceolate; corolla of six petals inserted into a twelve-toothed calyx; from

twelve to nineteen stamens; one pistil; and a two-celled capsule with many seeds. Of tonic and astringent properties.

ORDER XVIII.—BICORNES.

So called because many of the plants which belong to it, have the anthers terminating in *two beaks or horns*.

Arbutus Uva Ursi.	Rhododendron Chrysanthemum.
Citrus Aurantium.	Styrax Benzoin.
Citrus Medica.	Styrax Officinale.

The plants of *bicornes* do not altogether differ very materially in natural affinities, or in medical virtues.

Natural Characters:—Root, arborescent; stem, shrubby; leaves, obovate, ovate, elliptical, oblong; inflorescence, a cluster, peduncle, or spike; corolla, one or five petalled; calyx, generally five-cleft; stamens, from four to ten; pistil, one; seed-vessel, a berry or drupe.

Medical Properties:—The Arbutus Uva Ursi, is recommended as a tonic and astringent; the juice of the Citrus Aurantium and Citrus Medica is refrigerant, and the rind tonic; the Rhododendron Chrysanthemum, stimulant, narcotic and diaphoretic, and the two species of Styrax are stimulant and expectorant.

ORDER XIX.—HESPERIDÆ.

This order is said to consist of aromatic and elegant shrubs and trees.

Melaleuca Leucodendron.	Myrtus Pimenta.
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These two plants have some natural characters alike, and correspond in medical virtues.

Natural Characters:—Root, arborescent or fibrous; stem, shrubby, branching; leaves, lanceolate, entire; corolla, five-parted; calyx, five-cleft; stamens, five or icosandrous; pistil, one; and the fruit, a capsule of many seeds.

Medical Properties:—The cajeput oil, or product of the *Melaleuca Leucodendron*, is stimulant, anti spasmodic, and diaphoretic; and allspice, the fruit of the *Myrtus Pimenta*, is stimulant and carminative.

ORDER XX.—ROTACEÆ.

Embracing plants with a *wheel-shaped* corolla.

Chironia Centaurium.

Gentiana Lutea.

Both the *chironia* and *gentiana* have natural and medicinal characters common to the two.

Natural Characters:—Root woody; leaves mostly sessile; elliptical, spear-shaped; corolla divided into five or eight narrow segments; calyx, five-cleft or a spathe; stamens five; pistil one or two; fruit a capsule. They are both tonic and stomachic.

ORDER XXI.—PRECIÆ.

A division of plants derived from *precins*, early; because they flower early in the spring.

Menyanthes Trifoliata.

Natural Characters:—The root of this plant is fibrous;

stem branched; leaves obovate; corolla, funnel-shaped, cleft into five deep segments; calyx, five-toothed; stamens five; pistil one; seed-vessel a capsule of one cell. In medical properties it is tonic, diuretic and purgative.

ORDER XXII.—CARYOPHYLLÆ.

This order consists of the tribes of pink and campion, with numerous other plants having natural affinities to the same.

Dianthus Caryophyllus.

Natural Characters:—A perennial plant with a fibrous root; leaves channelled, linear, glaucous; corolla, five petalled; calyx tubular, five cleft; stamens ten; pistils two; fruit a cylindrical capsule of one cell. In medical properties said to be aromatic.

ORDER XXIII.—TRIHILATÆ.

Containing plants with *three-celled* and *three-grained* fruit, all the cells being distinct, and each seed marked with the hilum or scar.

Æsculus Hippocastanum.

Swietenia Febrifuga.

These two trees have several natural affinities, and agree in medical properties.

Natural Character:—The root and stem, arborescent; leaves, digitated or abruptly-pinnated; inflorescence, a spike or panicle; corolla, five-petalled; calyx, five-cleft; the seed-vessel, a capsule.

Medical Properties:—They are both tonic, stomachic, and antiseptic.

ORDER XXIV.—CORYDALES.

Plants with irregular flowers, somewhat resembling a helmet.

ORDER XXV.—PUTAMINEÆ.

Plants having their fruit covered with a strong rind, or hard woody shell.

ORDER XXVI.—MULTISILIQUÆ.

Plants with *more than two* seed-vessels.

Aconitum Napellus.	Helleborus Niger.
Delphinium Staphisagria.	Ruta Graveolens.
Helleborus Fœtidus.	—

With an order established on such a slight basis for distinction as the present, it cannot be expected that its plants should agree one with the other.

Natural Character:—Roots and stems, indefinite; the leaves, palmated, pedate, or doubly-pinnate; inflorescence, simple, a spike, or a corymb; corolla, four, five, or more petalled; calyx, present in ruta graveolens, wanting in the others; stamens, ten or more; pistils, one, three, or many; fruit, pods or capsules.

Medical Properties:—The *Aconitum Napellus* is narcotic, sudorific, and deobstruent; the *Delphinium Staphisagria* and *Hellebores*, cathartic, emmanagogue and vermifuge; and the *Ruta Graveolens*, tonic and antispasmodic.

ORDER XXVII.—RHŒADÆ.

The order in question, is constituted by the poppy tribe, and a few other genera of plants.

Papaver Rhœas.

Papaver Somniferum.

With these two plants, the natural characters and medical virtues are very similar.

Natural Characters:—Roots, fibrous; stems, erect, smooth, or rough; leaves, sessile, pinnatifid, obtuse; corolla, four-petalled; calyx, two-leaved; stamens, polyandrous; pistil, one; and seed-vessel, a capsule of one cell.

Medical Properties:—The flowers of the first, are used for coloring, and the dried juice of the last, constitutes *opium*. The capsules, however, of both are considered sedative and anodyne.

ORDER XXVIII.—LURIDÆ.

An order of plants whose pale and gloomy appearance, indicate their baneful and noxious qualities.

Atropa Belladonna.

Capsicum Annum.

Datura Stramonium.

Digitalis Purpurea.

Hyoscyamus Niger.

Nicotiana Tabacum.

Solanum Dulcamara.

Strychnos Nux Vomica.

As respects medical properties, this is one of the most uniform orders in the system, each medical species being more or less poisonous.

Natural Character:—Root, principally fibrous; stem erect or climbing; leaves ovate, undulated, entire; corolla, bell-shaped, funnel-shaped, or tubular, sometimes five-cleft; stamens five or didynamous; pistil one; the seed-vessel, a berry or capsule, generally two-celled.

Medical Properties:—The whole set are more or less, narcotic, diuretic, diaphoretic, sedative and anodyne.

ORDER XXIX.---CAMPANACEÆ.

An order consisting of plants with *campanulate* or bell-shaped flowers.

Convolvulus Jalapa.

Convolvulus Scammonia.

These plants have large juicy roots, which send up many twining slender stems; the leaves in the former varying, in the latter arrow-shaped; corolla bell-shaped, plaited; calyx differing; stamens five; pistil one; and the seed-vessel a capsule. In Medical Properties they are both purgative and hydragogue.

ORDER XXX.—CONTORTÆ.

This order derives its name from the corolla being twisted in the bud contrary to the course of the sun.

Cinchona Cordifolia.

Cinchona Lancifolia.

Cinchona Oblongifolia.

The three plants here mentioned, have of course, the common generic characters, and also agree in their properties and habits.

Natural Characters:—The root and stems are arborescent; leaves differing; inflorescence in large, terminal, leafy panicles; corolla funnel-shaped, plaited; calyx, somewhat globular and five-toothed; stamens five; pistil one; capsule inferior and two-celled. In Medical Properties they are tonic, astringent, stomachic and febrifuge.

ORDER XXXI.—VEPREULÆ.

Derived from *veprecula* or little briar, and consisting of plants resembling the daphne.

Daphne Mezereum.

An ornamental shrub with a fibrous root; leaves lanceolate, sessile, entire, smooth; corolla monopetalous, tubular; four-cleft; calyx none; stamens eight; pistil one; fruit, a pulpy drupe containing one round seed. In small quantities it is diaphoretic and stimulant, and in large doses emetic.

ORDER XXXII.—PAPILIONACEÆ.

An extensive and very natural assemblage of plants, having *papilionaceous* or butter-fly shaped flowers.

Astragalus Verus.

Dolichos Pruriens.

Geoffræa Inermis.

Glycyrrhiza Glabra.

Pterocarpus Erinacea.

Pterocarpus Santalinus.

Spartium Scoparium.

—

Though a natural order as regards the figure of the corolla, the medical species will not be found, however, to bear such a striking uniformity.

Natural Characters:—Roots and stems indefinite; leaves ternate, pinnate, ovate; corolla papilionaceous; calyx, chiefly five-toothed; stamens diadelphous; the fruit a legume or a drupe.

Medical Properties:—The *Astragalus Verus*, and *Glycyrrhiza Glabra*, are demulcent; the *Dolichos Pruriens*, and *Geoffræa Inermis*, anthelmintic; the two *Pterocarpi*, astringent; and the *Spartium Scoparium*, astringent and diuretic.

ORDER XXXIII.—LOMENTACEÆ.

An order named from *lomentum*, a colour used by painters, because some of its plants are employed in the art of dyeing.

Acacia Catechu.	Hæmatoxylon Campechianum.
Acacia Vera.	Myroxylon Peruiferum.
Cassia Fistula.	Polygala Senega.
Cassia Senna.	Tamarindus Indica*.

These plants are not very similar in natural character or medical properties.

Natural Characters:—Roots and stems mostly shrubby or arborescent; leaves linear, elliptical, ovate, obcordate, ovato-lanceolate, pinnate, abruptly pinnate; corolla, mostly

* By some authors said to belong to the natural order *succulentæ*.

five-petalled; calyx, usually five-parted; stamens indefinite; pistil one; the fruit in all, a legume.

Medical Properties:—The *Acacia Catechu* and *Hæmatoxylon Campechianum*, are astringents; the *Acacia Vera*, demulcent; the two *Cassiæ*, laxative; the *Myroxylon Peruiferum*, stimulant and expectorant; the *Polygala Senega*, stimulant, expectorant, diaphoretic and diuretic; and the *Tamarindicus Indica*, laxative and refrigerant.

ORDER XXXIV.—CUCURBITACEÆ.

This order has received its name from *cucurbita*, a gourd, on account of its being constituted by plants similar to the gourd family.

Cucumis Colocynthis. *Momordica Elaterium.*

These plants in natural characters have trailing stems; the leaves on long petioles, rough; flowers axillary; corolla, bell-shaped, five-cleft; calyx, bell-shaped, five-toothed; stamens, monœcious; and the fruit a large berry. In medical virtues they are strong cathartics.

ORDER XXXV.—SENTICOSÆ.

So named from *sentis*, a briar, on account of its embracing the briar and bramble tribe.

Agrimonia Eupatoria.

Rosa Centifolia.

Geum Urbanum.

Rosa Gallica.

Rosa Canina.

Tormentilla Erecta.

The plants of *senticosæ* which are employed in

medicine, are all astringents, but in natural characters, they are more diversified.

In these plants we find erect stems, about two feet high, or more; leaves obovate, lyrate, oval, lanceolate, serrated; corolla four or five-petalled; calyx three, five or ten-cleft; stamens either icosandrous or dodecandrous; pistils either two or many; seeds mostly naked.

ORDER XXXVI.—POMACEÆ.

Pomaceæ from *pomum*, an apple, embracing the apple and plum tribe.

Amygdalus Communis.

Punica Granatum.

Prunus Domestica.

Pyrus Cydonia.

This is altogether a tolerable natural assemblage of trees, the medical species of which, bear some common and useful characters alike.

Natural Characters :—Root and stem are arborescent; leaves either elliptical, serrated or ovate; corolla, five-petalled; calyx five-cleft, superior or inferior; stamens icosandrous; pistils, one or five; fruit, a drupe or pome.

Medical Properties :—The Almond and Quince are demulcent; the Plum laxative; and the rind of the Pomegranate astringent.

ORDER XXXVII.—COLUMNIFERÆ.

From *columna*, a pillar, and *fero*, to bear; con-

sisting of plants, whose stamens are united in the form of a column or pillar.

Althæa Officinalis.

Malva Sylvestris.

In these plants, the root is spindle-shaped; stem, branched; leaves, five or seven-lobed, roughish, alternate, petiolate; corolla, five-petalled, cordate; calyx, double; stamens, monadelphous; and the fruit, a capsule with one seed.—They are both emollient and demulcent.

ORDER XXXVIII.—TRICOCCÆ.

Consisting of plants usually with a single three-cornered capsule, of three cells, each cell containing one seed.

Croton Cascarilla.

Ricinus Communis.

Croton Tiglium.

Stalagmatis Cambogioides.

Euphorbia Officinarum.

—

These plants are very analogous in medical virtues, but not so in natural characters.

Natural Characters:—Root and stem indefinite; leaves cordate, lanceolate, lobed, ovate; corolla none, or four or five petalled; calyx indefinite; stamens monœcious, dodecandrous, or polygamous; seed-vessel mostly a three-celled capsule.

Medical Properties:—The *Croton Cascarilla*, is tonic; the *Euphorbia Officinarum*, errhine; and the other three purgative and cathartic.

ORDER XXXIX.—SILIGUOSÆ.

Embracing the plants of the tetradynamia,

consequently, they are furnished with a *silicle* or short pod, or with a *siliqua* or long pod.

Cardamine Pratensis.

Sinapis Alba.

Cochlearia Armoracia.

Sinapis Nigra.

The plants of this order may be considered somewhat similar both in natural characters and medical virtues.

Natural Characters:—Spindle-shaped or tuberous roots; stem erect; leaves pinnated, lance-shaped, lobed; inflorescence a corymb or cluster; corolla, cruciform; calyx, four-leaved, spreading; stamens tetradynamous; and the seed-vessel a siliqua or silicle.

Medical Properties:—The Cardamine Pratensis, is stimulant, diaphoretic and anti-spasmodic; the Cochlearia Armoracia, stimulant and diuretic; and the two species of Sinapis, stimulant, diuretic, emetic and rubefacient.

ORDER XL.—PERSONATÆ.

Derived from *persona*, a mask, from the flowers being furnished with an irregular, gaping or grinning petal, in figure somewhat resembling the snout of an animal.

Gratiola Officinalis.

Veronica Beccabunga.

Scrophularia Nodosa.

Viola Odorata.

The plants in question, are neither much alike in general characters, or in medical properties.

Natural Characters:—Roots and stems indefinite; leaves

obovate, cordate, ovate; corolla four or five-petalled; calyx, four or five-parted; stamens two to ten; pistil one; fruit a capsule.

Medical Properties:—The *Gratiola Officinalis*, is anthelmintic, purgative, and diuretic; the *Scrophularia Nodosa* is externally anodyne and repellant; the *Veronica Beccabunga*, a supposed antiscorbutic; and the *Viola Odorata*, slightly laxative.

ORDER XLI.—ASPERIFOLIÆ.

The plants of this order are called *rough-leaved plants*, because of their usual rough or harsh habit.

Anchusa Tinctoria.

A perennial plant, with a woody fibrous root; round, hairy, rough, branched stem; purple flowers in clusters; a funnel-shaped corolla, with a five toothed expansion; a persistent five-cleft calyx; five stamens and one pistil.

ORDER XLII.—VERTICILLATÆ.

Consists of herbaceous vegetables, having four naked seeds, and the flowers placed in whorls round the stalks.

Hyssopus Officinalis.

Lavandula Spica.

Marrubium Vulgare.

Melissa Officinalis.

Mentha Piperita.

Mentha Pulegium.

Mentha Viridis.

Origanum Marjorana.

Origanum Vulgare.

Rosmarinus Officinalis.

Salvia Officinalis.

Teucrium Chamædrys.

Teucrium Marum.

The medicinal verticillatæ, do not bear very natural characters in common, and the medical virtues vary more or less.

Natural Characters :—The root is either woody or fibrous; stem mostly shrubby; leaves elliptical, linear, orbicular, lanceolate, ovate, lobed; inflorescence a spike, whorl or panicle; corolla, funnel-shaped, tubular, labiate; calyx, mostly tubular and five-toothed.

Medical Properties :—The *Hyssopus Officinalis*, is stimulant and expectorant; *Lavandula Spica*, *Rosmarinus Officinalis* and *Salvia Officinalis*, stimulant and tonic; *Marubium Vulgare*, and *Melissa Officinalis*, stomachic and diuretic; the three Mints and two Marjorams, stomachic and carminative; the *Teucrium Chamædrys*, tonic and stomachic; and *Teucrium Marum*, sternutatory.

ORDER XLIII.—DUMOSÆ.

From *dumus*, a bush, including plants of the shrub and tree kind, thick and bushy, rising from six to thirty, and even forty feet.

Amyris Elemifera.

Rhamnus Catharticus.

Amyris Gileadensis.

Rhus Toxicodendron.

Copaifera Officinalis.

Sambucus Nigra.

In natural affinities we cannot discover these plants to correspond much; but in medical virtues there is a great similarity.

Natural Characters :—Root branched; stem shrubby; leaves pinnate, ovate, or otherwise; inflorescence, a corymb,

raceme, spike, or cyme; corolla, four or five petalled, or five or six cleft; calyx none, or four toothed, five parted; stamens five, eight, nine or ten; seed-vessel, a drupe, a legume, a capsule, or a berry.

Medical Properties:—The three first are stimulant and more or less diuretic; the Rhamnus is cathartic; the Rhus Toxicodendron, stimulant and narcotic; and the berries of the Sambucus, aperient, flowers diaphoretic, and the bark purgative.

ORDER XLIV.—SEPIARIÆ.

From *sepes*, a hedge, the plants of which, from their use and habits, are particularly calculated for hedges.

Fraxinus Ornus.

Olea Europea.

These are both native trees of the south of Europe; the leaves of the former are pinnate, of the latter lanceolate; inflorescence a panicle or cluster; corolla none, or four parted; calyx none, or four cleft; seed-vessel, a capsule or drupe.

ORDER XLV.—UMBELLATÆ.

This is a very true and natural order of plants furnished with *umbels*; though all plants which bear umbels do not belong to it, but only those with five stamens, two pistils, and two seeds.

Anethum Fœniculum.

Daucus Carota.

Anethum Graveolens.

Daucus Sylvestris.

Angelica Archangelica.

Eryngium Maritimum.

Apium Petroselinum.	Ferula Assafœtida.
Bubon Galbanum.	Heracleum Gummiferum.
Carum Carui.	Pastinaca Opoponax.
Conium Maculatum.	Pimpinella Anisum.
Coriandrum Sativum.	Sium Nodiflorum.
Cuminum Cyminum.	—

The Medical Plants of this order, are upon the whole, considerably related to each other.

Natural Characters:—Root principally fusiform and fibrous; stem, herbaceous; leaves, indefinite, generally alternate, and repeatedly compound; corolla, principally five petalled; calyx, mostly five-leaved; stamens five; two pistils, and two seeds.

Medical Properties:—The seeds of the *Anethum Fœniculum*, *Anethum Graveolens*, *Angelica Archangelica*, *Carum Carui*, *Coriandrum Sativum*, *Daucus*, and *Pimpinella Anisum*, are carminative, and more or less diuretic; the gum of the *Bubon Galbanum*, *Ferula Assafœtida*, and *Heracleum Gummiferum*, is anti-spasmodic, deobstruent and expectorant; the *Conium Maculatum*, narcotic; the *Cuminum Cyminum*, anti-spasmodic; the *Pastinaca Opoponax*, anti-spasmodic and emmenagogue; the *Eryngium Maritimum*, diuretic and expectorant; and the *Sium Nodiflorum*, diuretic and stimulant.

ORDER XLVI.—HEDERACEÆ.

Hederaceæ from *hedera*, ivy, consisting of both herbaceous and shrubby plants, most of which, have creeping branches, which attach themselves by roots or tendrils, to other bodies.

Vitis Vinifera.

A native tree of Armenia and other temperate regions; root arborescent; stem climbing; leaves, lobed, sinuated, serrate, alternate; inflorescence a bunch; corolla, greenish white; calyx, very minute; fruit a berry.

ORDER XLVII.—STELLATÆ.

This order is named from the leaves of most of the plants which compose it, being placed four, six, or eight together, in the form of a star or *stella*, round the stem.

Rubia Tinctorum.

Spigelia Marilandica.

These plants have annual stems, quadrangular; leaves elliptical, or ovate-lanceolate; corolla, monopetalous, bell-shaped or funnel-shaped; stamens, four or five; pistil one; seed-vessel, a berry or capsule. The first is emmenagogue and astringent, and the second anthelmintic.

ORDER XLVIII.—AGGREGATÆ.

Embracing those plants which are furnished with aggregate flowers, that is, with flowers consisting of a number of partial flowers, each of which have a proper and common calyx.

Cephaelis Ipecacuanha.

Valeriana Officinalis.

Two perennials, with fibrous, branched roots; leaves, ovate or connate; inflorescence, a tuft or corymb; stamens three or five; pistil one; seed-vessel, a berry or capsule. The first, emetic, sudorific and expectorant; the second, antispasmodic, tonic, and emmenagogue.

ORDER XLIX.—COMPOSITÆ.

A very extensive order of plants having compound flowers, that is, flowers with many florets enclosed in one common calyx.

Anthemis Nobilis.	Centaurea Benedicta.
Anthemis Pyrethrum.	Inula Helenium.
Arctium Lappa.	Lactusa Sativa.
Arnica Montana.	Lactusa Virosa.
Artemisia Abrotanum.	Leontodon Taraxacum.
Artemisia Absinthium.	Solidago Virga Aurea.
Artemisia Maritima.	Tanacetum Vulgare.
Artemisia Santonica.	Tussilago Farfara.

These plants are not strikingly similar, though many are alike both in their natural characters and quality of virtue.

Natural Characters:—Root, principally fibrous and woody; stem, herbaceous; leaves, indefinite; inflorescence, of course, compound.

Medical Properties:—The Anthemis Nobilis is considered tonic and stomachic; the Anthemis Pyrethrum, sialagogue; the Arctium Lappa, aperient, sudorific and diuretic; the Arnica Montana, narcotic, stimulant, diaphoretic, and emmenagogue; the family Artemisia and Centaurea, tonic and stomachic; the Inula Helenium, expectorant, diuretic and emmenagogue; the Lactusæ, narcotic and diaphoretic; the Leontodon Taraxacum, aperient, diuretic and resolvent; the Solidago Virga Aurea, astringent, tonic and diuretic; the Tanacetum Vulgare, tonic, deobstruent and anthelmintic; and the Tussilago Farfara, demulcent and expectorant.

ORDER L.—AMENTACEÆ

Including a tribe of plants which have the species of calyx, called an *amentum* or catkin.

Pistacia Lentiscus.	Quercus Robur.
Pistacia Terebinthus.	Salix Alba.
Quercus Infectoria.	Salix Caprea.
Quercus Pedunculata.	Salix Fragilis.

The trees of this order are more or less alike each other, both in natural characters and remedial virtues.

Natural Characters:—Roots and stems arborescent; leaves alternate; inflorescence, monœcious or diœcious.

Medical Properties:—The resins of the two Pistaciæ are stimulant and diurectic; and the production of the Quercus and Salix tribe, tonic and astringent.

ORDER LI.—CONIFERÆ.

Consisting of a selection of plants, which have for their seed-vessel, a *strobile* or *cone*.

Juniperus Communis.	Pinus Balsamea.
Juniperus Lycia.	Pinus Larix.
Juniperus Sabina.	Pinus Sylvestris.
Pinus Abies.	—

The Medical Plants under consideration, are somewhat different both in natural characters,

and the peculiar property of the parts used in medicine.

Natural Characters:—In the genus Juniper, the *male* flower is an ovate amentum, the calyx a scale, no corolla, three stamens; the *female* flower has a three-parted calyx, three petals, three styles, producing an irregular three-sided berry, with the three tubercles of the calyx. In the Pinus genus, the *male* flower has no corolla, a four-leaved calyx, many stamens, and naked anthers; the *female* flower has no corolla; the calyx, a strobile, with a two flowered scale, pistil one, producing a species of nut, with a membranous wing.

Medical Properties:—The berries of the Juniperus Communis, are diuretic and carminative; the olibanum or resin of the Juniperus Lycia, stimulant; the leaves of the Juniperus Sabina, stimulant, diaphoretic, emmenagogue, anthelmintic and escharotic; and the products of the different firs, more or less stimulant and diuretic.

ORDER LII —COADUNATÆ.

From *coadunare*, to join—an order of plants established on the general appearance of the seed-vessels, which are numerous, being slightly *joined* below, so as to form a single fruit, the parts of which, however, are easily separated.

ORDER LIII.—SCABRIDEÆ.

Derived from *scaber*, rough — consisting of plants with rough leaves, somewhat resembling the *asperifolia*, only much rougher.

Dorstenia Contrayerva.	Morus Nigra.
Ficus Carica.	Ulmus Campestris.
Humulus Lupulus.	—

These plants are equally variable in natural characters and medicinal virtues.

Natural Characters:—Root and stem, mostly arborescent; leaves, irregular, cordate, serrate; corolla, none; calyx, indefinite; stamens, variable; fruit, a capsule, cone, or otherwise.

Medical Properties:—The root of the *Dorstenia Contrayerva* is tonic, stimulant, and sudorific; the fruit of the *Ficus Carica*, demulcent and suppurative; the *Humulus Lupulus*, anodyne, narcotic, and diuretic; the berries of the *Morus Nigra*, laxative; and the bark of the *Ulmus Campestris*, tonic, alterative, and diuretic.

ORDER LIV.—MISCELLANÆ.

This order consists of miscellaneous plants, or such genera as are not connected together by very numerous relations.

ORDER LV.—LVI.—LVII.—LVIII.

The four last orders, viz. *filices* or ferns, *musci* or mosses, *algæ* or flags, and *fungi* or mushrooms, are natural divisions of the class *cryptogamia* in the Artificial System, therefore do not require another explanation.

PLANTÆ DUBII ORDINIS.

Linnæus found numerous genera which he could not reduce to any of the foregoing orders; he has, in consequence, thrown them into an appendix, as plants of an uncertain or doubtful order.

THE
TERMINOLOGY
OF
BOTANY.

PART IV.

EXPLAINING THE MOST USEFUL AND PRACTICAL TERMS
EMPLOYED IN DESCRIPTIVE BOTANY, AS INTENDED TO
BE UNDERSTOOD IN MEDICAL WRITINGS.

THE MINERALOGY

OF GREAT BRITAIN

PART I

BY
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THE
TERMINALOGY
OF
BOTANY

Abrupt, truncated:—When the extremity of a part is apparently cut off transversely.

Abruptly-pinnate:—When a compound leaf does not have a terminating leaflet or tendril.

Acerose, acicular, or needle-shaped:—Applied to a leaf when it is linear and evergreen, sharp and rigid.

Acinaciform, scimitar-shaped:—Having one edge thick and straight, the other thin and curved.

Acotyledonous:—Plants whose seeds are either without, or with indistinct lobes.

Acuminate, sharp-pointed:—When terminating in a point.

Adnate, adhering:—Applied to parts which appear to grow together.

Alternate:—When not in pairs, but given off one after the other.

Angled:—When a circumference has considerable projections, which are not lobular.

Appendiculated, appendaged:—Signifying something in particular attached to a part.

Arborescent, tree-like:—Partaking of a woody nature.

Arillus, tunic:—Is either a complete or partial covering of a seed, fixed to its base only, and more or less loosely or closely enveloping its other parts.

Arrow-shaped, sagittate:—Resembling the point of an arrow.

Articulated:—Applied to parts when they are joined together, or divided into parts by peculiarity of structure.

Awl-shaped, subulate:—Thick at the base, and gradually attenuated to a sharp point.

Awn, arista:—A terminating spine or appendage.

Axilla:—Applied to the point of junction of a branch to the stem, or of a leaf to the stem or branch.

Axillary:—Situated or issuing from an axilla.

Bigeminate, twice-paired:—In compound leaves, when near the common leaf-stalk there is a single pair of secondary leaf-stalks, each of which support a pair of opposite leaflets.

Bilabiate:—Having two lips.

Bilocular:—Having two cells.

Binate:—Applied to a compound leaf consisting of two leaflets only, inserted at the same point on one leaf-stalk.

Bipinnate:—In compound leaves, when the secondary leaf-stalks are arranged in pairs on the common leaf-stalk, and each secondary leaf-stalk is pinnate.

Biternate:—In compound leaves, when the common foot-stalk supports three secondary leaf-stalks on its apex, and each of these support three leaflets.

Caducous:—Applied to leaves falling off before the end of the summer; to corollas, continuing only until expanded; and to calyces, falling off at the opening of the flower.

Calycine:—Attached or belonging to the calyx.

Calyculate:—Applied to a calyx, when there is a lesser one at the base of the great one.

Capillary:—Applied to parts when they are long, fine, and flexible.

Carinated:—Expressive of leaves and petals, when the back is longitudinally prominent, like the keel of a boat.

Cauline:—Springing from or attached to the stem.

Channelled:—Applied to leaves, stalks, or petioles, having grooves or longitudinal furrows on their surface.

Ciliated:—When parts are covered with soft parallel hairs, not closely set together.

Cirrose, circinate:—tipped with a cirrus or tendril.

Cleft:—Divided into parts, therefore said to be two-cleft, four-cleft, and so on.

Cloven:—When the margin or segments of any part are nearly straight lines.

Clubbed:—When parts are thicker towards their extremities than in the centre.

Conjugate:—Applied to leaves consisting of one pair of leaflets.

Connate:—When leaves are united at their base, so as to appear but one leaf.

Cordate, heart-shaped:—When a leaf is hollowed at the base into two lobes, and pointed at the apex.

Coriaceous:—When a part is thick, tough, and elastic.

Crenate:—When the margin of a leaf is notched in round forms, not directed to either end of the leaf.

Crenulated:—When the crenatures are very shallow, and at the same time perfect.

Cuculate, hooded:—When one part grows over another, so as to form a hood or covering.

Cuspidate, mucronate:—Terminating in a rigid spine.

Deciduous:—Applied to parts which fall off after they have performed the offices for which they are destined.

Decurrent:—When the flat part of a leaf runs down the stem or branch.

Decussated:—Parts in pairs alternately crossing each other.

Dichotomous:—Divided into two branches.

Dicotyledonous :—Plants whose seeds have two or more cotyledons.

Digitate :—When several, usually seven leaflets, proceed from the summit of a common foot-stalk, and have the appearance of fingers.

Distichous :—Applied to stems, leaves, &c. when they spread in two horizontal directions.

Dolabriform, hatchet-shaped :—Leaves compressed, with a very prominent dilated keel and a cylindrical base.

Elliptical, oval :—When a leaf is twice as long as it is broad, and nearly equally rounded at the extremities.

Emarginate :—When there is nearly a triangular notch in the summit of a leaf.

Embracing :—When leaves clasp the stem by their bases.

Ensiform, sword-shaped :—When a leaf is long, tapering to a point, very thin on both edges, and slightly curved.

Entire :—The margin of any part being perfectly free of notches or irregularities.

Erose:—Irregularly notched, having the appearance of being gnawed.

Fasciculated:—When several leaves or flowers spring from the same point.

Filiform, thread-shaped:—Having a thread-like appearance.

Follicle:—A membranous seed-vessel of one valve and one cell.

Furrowed:—Having several linear depressions.

Geniculated:—Expressive of parts bent like the knee.

Gibbous:—When both parts of a side are convex.

Glabrous:—Applied to stems and leaves, when shining and perfectly smooth.

Glaucous:—Being of a sea-green shade in color.

Globose:—Of a rounded or globular form.

Hastate, halberd-shaped:—When the sides of a leaf are protruded into two lateral spreading points or lobes near the base.

Herbaceous:—Stems which die annually down to the root.

Hirsute:—When the surface of any part is covered with longish hairs.

Hispid:—When the hairs are short and stiff.

Imbricated:—Parts placed one over another like tiles.

Incurvated:—Signifying parts turned inwards.

Inferior:—Applied to the corolla, when its receptacle is below the germen; to the calyx, when its base is below the germen; and to the germen, when it is placed beneath the calyx or corolla.

Interruptedly:—With compound leaves, when the principal leaflets are intermixed with smaller ones.

Irregular:—When there is no regularity of structure, or uniformity in the distribution of parts.

Labiate:—When parts assume the appearance of lips.

Laciniated:—When cut into numerous irregular divisions, which are termed segments.

Lanate:—When a part is covered with soft hairs, and have a woolly aspect.

Lanceolate, lance-shaped:—Of a narrow oblong form, tapering towards the end.

Linear:—Of equal breadth from the base to the apex.

Lingulate, tongue-shaped:—Of a thick oblong blunt figure in the shape of a tongue.

Lobed:—The segments of any part being rounded.

Lyrate, lyre-shaped:—Divided transversely into several segments, which increase towards the extremity.

Monocotyledonous:—Plants whose seeds have only one lobe or cotyledon.

Monophyllous:—When a calyx consists of only one leaf.

Muricated:—Covered with sharp points.

Multifid:—The margin of round leaves, cut from the apex almost to the base, without having any great intermediate sinuses.

Naked:—Applied to flowers without calyces, to stems without leaves, and to leaves without hair or down.

Nerved:—When the fibres or vessels of leaves are peculiarly prominent.

Obcordate:—Heart-shaped leaves when rounded at the apex.

Oblique:—When one part of the leaf is vertical, the other horizontal.

Oblong:—Three or four times longer than broad.

Obovate:—Egg-shaped, with the broad end uppermost.

Obtuse:—When any part forms the segment of a circle and is rounded.

Ovate:—When the length of a leaf is greater than the breadth, with both extremities rounded, but the base much broader than the apex.

Ovate-lanceolate:—Partaking of the ovate and lanceolate figure.

Palmated:—When a leaf is divided nearly down to the middle into several segments.

Panduræform, fiddle-shaped:—oblong, broad at the two extremities and contracted in the middle.

Papillose:—Covered with soft tubercles or dots.

Pectinate:—When the segments of a leaf are very narrow, linear, and parallel, like the tooth of a comb.

Peltate:—When the petiole is inserted into the disk of a leaf.

Pendent:—When the whole leaf droops.

Perfoliate:—When the stem runs through the leaf.

Permanent:—Applied to the calyx and corolla when they continue until the fruit is ripe.

Persistent:—Lasting many years and always green.

Pinnate:—When several leaves proceed laterally from one foot-stalk.

Pinnatifid:—Applied to parts cut transversely into deep oblong parallel segments.

Pluited:—Parts lying in folds like a fan

Plumous:—Having a feathery appearance.

Procumbent:—Lying on the surface of the ground.

Polycotyledonous:—Plants whose seeds have more than two lobes or cotyledons. This, however, is an unnecessary term, since the word *dicotyledonous* embraces the same meaning.

Quadripartite:—When a lacinated leaf is divided into five parts.

Quinate:—When there are five leaflets attached to the apex of the petiole.

Quinquifid:—Having five clefts.

Radical:—Situating on, or proceeding immediately from the root.

Reniform, kidney-shaped:—When the apex of a leaf is broad and rounded, and the base deeply hollowed out in the shape of a kidney.

Repand:—Bordered with numerous angles and segments of circles alternately.

Resupinate:—When the surface of a leaf, which is commonly undermost, is found uppermost.

Retuse:—When the apex is obtuse, with a broad shallow notch in the middle.

Rugose:—Applied to leaves with inequalities rising above the veins.

Runcinate:—When the expansion of a leaf is deeply cut into many transverse acute-angled segments, the points of which tend towards the base of the leaf.

Segments:—The division of leaves, corollas and calyces.

Serrated, sawed:—When the margin of a leaf has teeth like a saw.

Serrulated:—When the margin is minutely serrated.

Sheathing :—When leaves embrace the stem with their bases.

Sinuated :—When the margin of a leaf is cut, as it were, into roundish scollops.

Solitary :—Parts which stand singly or alone.

Spatulate :—When a leaf is round at the apex and gradually tapers towards the base.

Striated :—Marked with parallel lines

Sulcate :—Impressed with deep parallel lines.

Superior :—Applied to the corolla when its receptacle is above the germen; to the calyx when it is above the germen; and to the germen when it is included in the corolla or calyx.

Tergeminate :—When a compound leaf resembles the bigeminate in its foot-stalk divisions, and has besides a third pair of leaflets at the point where the secondary leaf-stalks originate.

Terminal :—Applied to parts when they are at the end of a branch or stem.

Ternate:—When leaves stand by threes round the stem.

Tomentose:—Covered with a downy pubescence.

Trichotomous:—Divided into three branches.

Tricuspid:—Terminating in three rigid spines.

Trifid:—When a cloven leaf has three clefts or divisions.

Tripartite:—A lacinated leaf divided into three parts.

Tripinnate:—In a compound leaf when along the sides of a common petiole, there are secondary foot-stalks supporting a ternary set, which are pinnate.

Triternate:—In a compound leaf, when the common petiole supports on its apex three secondary petioles, which each support three ternary foot-stalks, and on every one of these, three leaflets.

Trowel-shaped, deltoid:—When a leaf has three angles, and represents the Greek letter Delta.

Unarmed:—Devoid of spines or thorns.

Undulated:—Margins waved obtusely up and down.

Uncinate:—When any part is curved so as to resemble a hook.

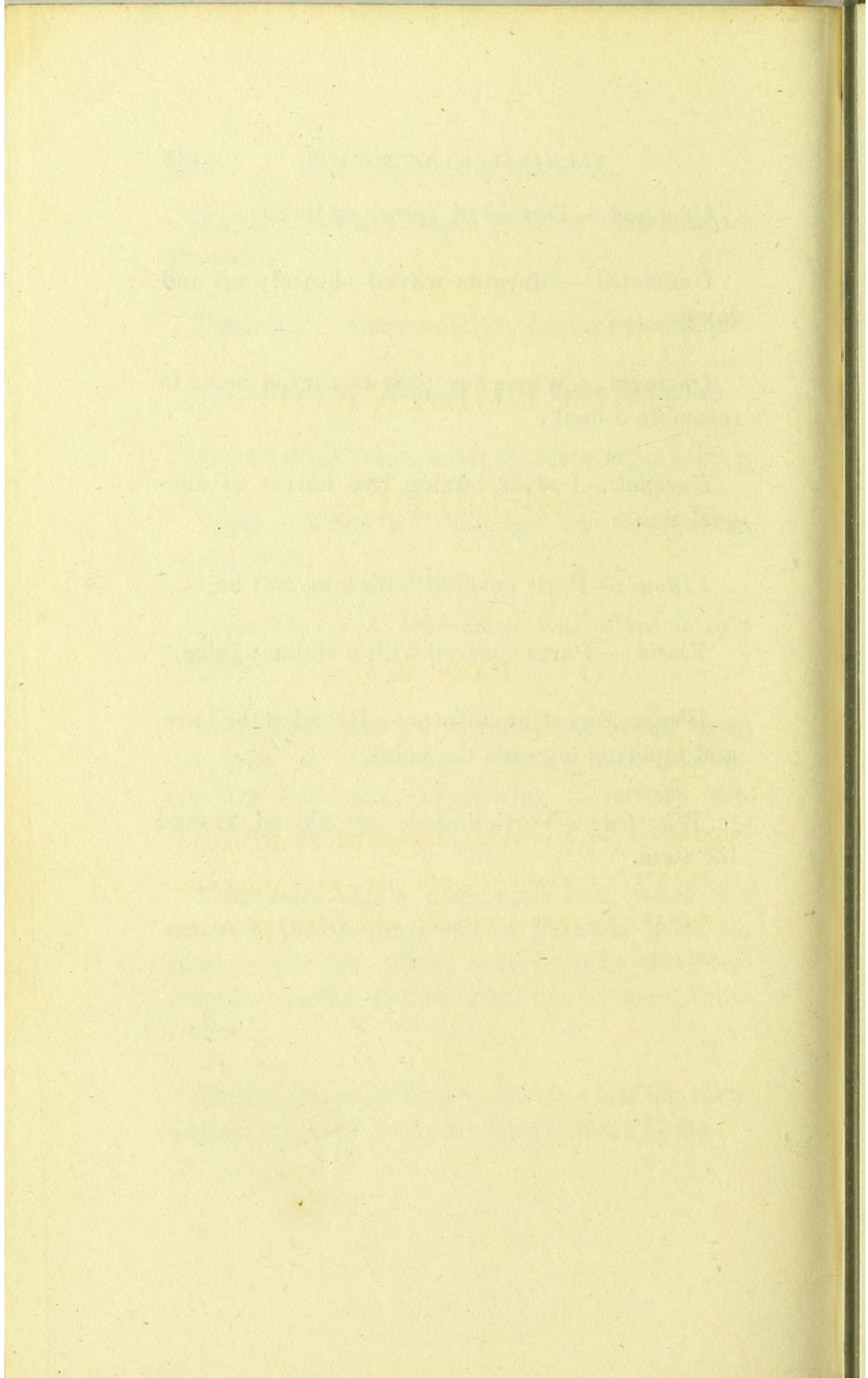
Unequal:—Leaves having two halves of unequal size.

Villous:—Parts covered with long soft hairs.

Viscid:—Parts covered with a clammy juice.

Wedge-shaped, cuneiform:—Broad at the base, and tapering towards the point.

Whorled:—Verticillated, or placed around the stem.



MISCELLANEOUS
SUBJECTS.

PART V.

CONSISTING OF A GENERAL ARRANGEMENT OF MEDICAL
PLANTS; A TABLE OF ENGLISH AND SYSTEMATIC
NAMES; A GENERAL INDEX; AND AN INDEX TO THE
PLATES.

PHYSICAL LAWS

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PART I

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PART II. OPTICS AND ELECTRICITY
PART III. HEAT AND MAGNETISM

IN THE FOLLOWING ARRANGEMENT, THE READER WILL
FIND A FEW ABBREVIATIONS USED FOR THE DISTINCTION
OF PLANTS, VIZ.—

A. annual. B. biennial. P. perennial. S. shrub.

T. tree.

AN ARRANGEMENT

SHEWING THEIR LINNÆAN OR SYSTEMATIC NAMES; THEIR
THEIR CLASS AND ORDER ACCORDING TO THE LINNÆAN
PLANTS.

<i>Linnæan Name.</i>	<i>English Name.</i>	<i>Flowering.</i>
1 Acacia Catechu	Medicinal Acacia	June
2 Acacia Vera	Egyptian Thorn	July
3 Aconitum Napellus	Aconite or Monkshood	June
4 Acorus Calamus	Sweet Flag	May
5 Æsculus Hippocastan.	Horse Chesnut	May
6 Agrimonia Eupatoria	Common Agrimony	June
7 Allium Ceba	Common Onion	June
8 Allium Porrum	Common Leek	April
9 Allium Sativum	Common Garlic	July
10 Aloe Vulgaris	Hepatic Aloe	May
11 Aloe Spicata	Socotorine Aloe	May
12 Althæa Officinalis	Marsh Mallow	June
13 Amygdalus Communis	Almond-tree	March
14 Amyris Elemifera	Elemi-tree	—
15 Amyris Gileadensis	Balm of Gilead	June
16 Anchusa Tinctoria	Common Alkanet	June
17 Anethum Foeniculum	Sweet Fennel	July

OF MEDICAL PLANTS.

ENGLISH DENOMINATIONS; THEIR TIME OF FLOWERING;
SYSTEMS; THEIR NATIVE SOIL; AND DISTINCTION OF

<i>Class.</i>	<i>Order.</i>	<i>Natural Order.</i>	<i>Soil.</i>	<i>Kd.</i>
1 Polygamia	Monœcia	Lomentaceæ	E. Indies	T
2 Polygamia	Monœcia	Lomentaceæ	Egypt	T
3 Polyandria	Trigynia	Multisiliquæ	Siberia	P
4 Hexandria	Monogynia	Piperitæ	Europe	P
5 Heptandria	Monogynia	Trihilatæ	Asia	T
6 Dodecandria	Digynia	Senticosæ	Britain	P
7 Hexandria	Monogynia	Spathaceæ	Spain	B
8 Hexandria	Monogynia	Spathaceæ	Switz.	B
9 Hexandria	Monogynia	Spathaceæ	Sicily	P
10 Hexandria	Monogynia	Coronariæ	Barbado.	P
11 Hexandria	Monogynia	Coronariæ	G. Hope	P
12 Monadelphia	Polyandria	Columniferæ	Britain	P
13 Icosandria	Monogynia	Pomaceæ	Barbary	T
14 Octandria	Monogynia	Dumosæ	Arabia	T
15 Octandria	Monogynia	Dumosæ	Carolina	T
16 Pentandria	Monogynia	Asperifoliæ	Europe	P
17 Pentandria	Digynia	Umbellatæ	Europe	P

<i>Linnæan Name.</i>	<i>English Name.</i>	<i>Flowering.</i>
18 Anethum Graveolens	Common Dill	June
19 Angelica Archangelica	Garden Angelica	June
20 Anthemis Nobilis	Common Chamomile	Aug.
21 Anthemis Pyrethrum	Pellitory of Spain	June
22 Apium Petroselinum	Common Parsley	June
23 Arbutus Urva Ursi	Bear's Whortleberry	June
24 Arctium Lappa	Common Burdock	July
25 Aristolochia Serpentaria	Virginian Snake-root	May
26 Arnica Montana	Mountain Arnica	July
27 Artemisia Abrotanum	Southernwood	May
28 Artemisia Absinthium	Common Wormwood	Aug.
29 Artemisia Maritima	Sea Wormwood	Aug.
30 Artemisia Santonica	Tartarian Southernw.	Sept.
31 Arum Maculatum	Wake Robin	May
32 Asarum Europæum	Asarabacca	May
33 Aspidium Filix Mas	Male Fern	June
34 Astragalus Verus	Tragacanth	July
35 Atropa Belladonna	Deadly Nightshade	June
36 Avena Sativa	Common Oats	July
37 Boletus Ignarius	Agaric of the Oak	—
38 Bubon Galbanum	Galbanum	June
39 Cephaelis Ipecacuhana	Ipecacuhana	Dec.
40 Canella Alba	White Canella	—
41 Capsicum Annuum	Cayenne Pepper	June
42 Cardamine Pratensis	Cuckoo Flower	April
43 Carum Carui	Common Carraway	May
44 Cassia Fistula	Purging Cassia	June
45 Cassia Senna	Egyptian Senna	July
46 Centaurea Benedicta	Blessed Thistle	June
47 Chironia Centaurium	Common Centaury	July
48 Cinchona Cordifolia	Yellow-bark'd Cinchona	May
49 Cinchona Lancifolia	Pale-barked Cinchona	May

<i>Class.</i>	<i>Order.</i>	<i>Natural Order.</i>	<i>Soil.</i>	<i>Kd.</i>
18 Pentandria	Digynia	Umbellatæ	Europe	P
19 Pentandria	Digynia	Umbellatæ	Britain	B
20 Syngenesia	Superflua	Compositæ	Britain	P
21 Syngenesia	Superflua	Compositæ	Arabia	B
22 Pentandria	Digynia	Umbellatæ	Sardinia	B
23 Decandria	Monogynia	Bicornes	Europe	S
24 Syngenesia	Æqualis	Compositæ	Britain	P
25 Gynandria	Hexandria	Sarmentaceæ	Virginia	P
26 Syngenesia	Superflua	Compositæ	Europe	P
27 Syngenesia	Superflua	Compositæ	Europe	S
28 Syngenesia	Superflua	Compositæ	Britain	P
29 Syngenesia	Superflua	Compositæ	Britain	P
30 Syngenesia	Superflua	Compositæ	Siberia	S
31 Monœcia	Polyandria	Piperitæ	Britain	P
32 Dodecandria	Monogynia	Sarmentaceæ	Britain	P
33 Cryptogamia	Filices	Filices	Britain	P
34 Diadelphia	Decandria	Papilionaceæ	Persia	S
35 Pentandria	Monogynia	Luridæ	Britain	P
36 Triandria	Digynia	Gramina	Asia	A
37 Cryptogamia	Fungi	Fungi	Europe	P
38 Pentandria	Digynia	Umbellatæ	G. Hope	P
39 Pentandria	Monogynia	Aggregatæ	Brazil	P
40 Dodecandria	Monogynia	Holeraceæ	W. Indies	T
41 Pentandria	Monogynia	Luridæ	S Ameri.	A
42 Tetradynamia	Siliquosa	Siliquosæ	Britain	P
43 Pentandria	Digynia	Umbellatæ	Britain	B
44 Decandria	Monogynia	Lomentaceæ	E Indies	T
45 Decandria	Monogynia	Lomentaceæ	Egypt	A
46 Syngenesia	Frustranea	Compositæ	Spain	A
47 Pentandria	Monogynia	Rotaceæ	Britain	A
48 Pentandria	Monogynia	Contortæ	Quito	T
49 Pentandria	Monogynia	Contortæ	Ayavaca	T

<i>Linnæan Name.</i>	<i>English Name.</i>	<i>Flowering.</i>
50 Cinchona Oblongifolia	Red-barked Cinchona	June
51 Citrus Aurantium	Seville Orange	May
52 Citrus Medica	Lemon-tree	May
53 Cocculus Palmatus	Calumba-tree	—
54 Cochlearia Armoracia	Horse-radish	June
55 Cocos Butyracea	Mackaw-tree	May
56 Colchicum Autumnale	Meadow Saffron	Sept.
57 Conium Maculatum	Spotted Hemlock	June
58 Convolvulus Jalapa	Jalap Plant	Aug.
59 Convolv. Scammonia	Scammony Plant	July
60 Copaifera Officinalis	Copaiba Balsam Tree	—
61 Coriandrum Sativum	Common Coriander	June
62 Crocus Sativus	Common Saffron	Sept.
63 Croton Cascarilla	Cascarilla Tree	July
64 Croton Tiglium	Purging Croton	Sept.
65 Cucumis Colocynthis	Bitter Cucumber	May
66 Curcuma Zedoaria	Common Zedoary	April
67 Cuminum Cyminum	Common Cumin	June
68 Cusparia Febrifuga	Cusparia or Augustura	May
69 Daphne Mezereum	Mezereon	March
70 Datura Stramonium	Thorn-apple	July
71 Daucus Carota	Garden Carrot	June
72 Daucus Sylvestris	Wild Carrot	June
73 Delphinium Staphisag.	Stavesacre	June
74 Dianthus Caryophyllus	Clove Pink	July
75 Digitalis Purpurea	Purple Foxglove	June
76 Dolichos Pruriens	Cow-itch or Cowhage	Sept.
77 Dorstenia Contrayerva	Contrayerva Plant	May
78 Elettaria Cardamomum	Cardamom Plant	—
79 Eryngium Maritimum	Sea Holly or Eryngo	July
80 Eugenia Caryophyllata	Clove Tree	—
81 Euphorbia Officinarum	Officinal Spurge	June

<i>Class.</i>	<i>Order.</i>	<i>Natural Order.</i>	<i>Soil.</i>	<i>Kd.</i>
50 Pentandria	Monogynia	Contortæ	Andes	T
51 Polyadelphia	Icosandria	Bicornes	Asia	T
52 Polyadelphia	Icosandria	Bicornes	Asia	T
53 .....	.....	.....	Africa	T
54 Tetradyamia	Siliculosa	Siliquosæ	Britain	P
55 Monœcia	Hexandria	Palmae	Brazil	T
56 Hexandria	Trigynia	Spathaceæ	Britain	P
57 Pentandria	Digynia	Umbellatæ	Britain	B
58 Pentandria	Monogynia	Campanaceæ	S Ameri.	P
59 Pentandria	Monogynia	Campanaceæ	Syria	P
60 Decandria	Monogynia	Dumosæ	Brazils	T
61 Pentandria	Digynia	Umbellatæ	Italy	A
62 Triandria	Monogynia	Ensatae	Britain	P
63 Monœcia	Monadelpkia	Tricoccae	Bahamas	T
64 Monœcia	Monadelpkia	Tricoccae	Molucca	T
65 Monœcia	Monadelpkia	Cucurbitaceæ	G. Hope	A
66 Monandria	Monogynia	Scitamineæ	E Indies	P
67 Pentandria	Digynia	Umbellatæ	Egypt	A
68 Pentandria	Monogynia	.....	America	T
69 Octandria	Monogynia	Vepreculæ	Britain	S
70 Pentandria	Monogynia	Luridæ	Egypt	A
71 Pentandria	Digynia	Umbellatæ	Britain	B
72 Pentandria	Digynia	Umbellatæ	Britain	B
73 Polyandria	Trigynia	Multisiliquæ	S Europe	B
74 Decandria	Digynia	Caryophylleæ	Italy	P
75 Didynamia	Angiospermia	Luridæ	Britain	B
76 Diadelphia	Decandria	Papilionaceæ	India	P
77 Tetrandria	Monogynia	Scabrideæ	W. Indies	P
78 Monandria	Monogynia	Scitamineæ	India	P
79 Pentandria	Digynia	Umbellatæ	Britain	P
80 Icosandria	Monogynia	Hesperideæ	Molucca.	T
81 Dodecandria	Trigynia	Tricoccae	Africa	P

<i>Linnæan Name.</i>	<i>English Name:</i>	<i>Flowering.</i>
82 <i>Ferula Assafoetida</i>	Assafoetida Plant	—
83 <i>Ficus Carica</i>	Fig Tree	June
84 <i>Fraxinus Ornus</i>	Flowering Ash	May
85 <i>Fucus Vesiculosus</i>	Bladder Fucus	Spring
86 <i>Gentiana Lutea</i>	Yellow Gentian	June
87 <i>Geoffræa Inermis</i>	Cabbage Tree	—
88 <i>Geum Urbanum</i>	Common Avens	May
89 <i>Glycyrrhiza Glabra</i>	Common Liquorice	Aug.
90 <i>Gratiola Officinalis</i>	Officinal Hedge Hyssop	June
91 <i>Guaiacum Officinale</i>	Officinal Guaiacum	—
92 <i>Hæmatoxylon Campe.</i>	Logwood Tree	March
3 <i>Helleborus Fætidus</i>	Stinking Hellebore	March
94 <i>Helleborus Niger</i>	Black Hellebore	Dec.
95 <i>Heracleum Gummifer.</i>	Ammoniacum Plant	June
96 <i>Hordeum Distichon</i>	Common Barley	June
97 <i>Humulus Lupulus</i>	Common Hop	July
98 <i>Hyoscyamus Niger</i>	Black Henbane	July
99 <i>Hyssopus Officinalis</i>	Common Hyssop	—
100 <i>Inula Helenium</i>	Elecampane	July
101 <i>Iris Florentina</i>	Florentine Iris	May
102 <i>Juniperus Communis</i>	Common Juniper	May
103 <i>Juniperus Lycia</i>	Lycian Juniper	May
104 <i>Juniperus Sabina</i>	Savine	May
105 <i>Krameria Triandra</i>	Medical Rhatany	—
106 <i>Lactusa Sativa</i>	Garden Lettuce	June
107 <i>Lactusa Virosa</i>	Strong-scented Lettuce	Aug.
108 <i>Laurus Camphora</i>	Camphor Laurel	—
109 <i>Laurus Cassia</i>	Cassia Laurel	July

<i>Class.</i>	<i>Order.</i>	<i>Natural Order.</i>	<i>Soil.</i>	<i>Kd.</i>
82 Pentandria	Digynia	Umbellatæ	Persia	P
83 Polygamia	Diœcia	Scabrideæ	Persia	T
84 Polygamia	Diœcia	Sepiariæ	Italy	T
85 Cryptogamia	Algæ	Algæ	Britain	P
86 Pentandria	Digynia	Rotaceæ	Alps, &c.	P
87 Diadelphia	Decandria	Papilionaceæ	Jamaica	T
88 Icosandria	Polygynia	Senticosæ	Britain	P
89 Diadelphia	Decandria	Papilionaceæ	Europe	P
90 Diandria	Monogynia	Personatæ	Europe	P
91 Decandria	Monogynia	Gruinales	Jamaica	T
92 Decandria	Monogynia	Lomentaceæ	S. Amer.	T
93 Polyandria	Polygynia	Multisiliquæ	Britain	P
94 Polyandria	Polygynia	Multisiliquæ	Austria	P
95 Pentandria	Digynia	Umbellatæ	Africa	S
96 Triandria	Digynia	Gramina	Tartary	A
97 Diœcia	Pentandria	Scabrideæ	Britain	P
98 Pentandria	Monogynia	Luridæ	Britain	A
99 Didynamia	Gymnospermia	Verticillatæ	Siberia	P
100 Syngenesia	Superflua	Compositæ	Britain	P
101 Triandria	Monogynia	Ensatæ	Europe	P
102 Diœcia	Monadelphia	Coniferæ	Britain	S
103 Diœcia	Monadelphia	Coniferæ	S. Europe	S
104 Diœcia	Monadelphia	Coniferæ	Levant	S
105 Tetrandria	Monogynia	.....	Java	—
106 Syngenesia	Æqualis	Compositæ	Europe	B
107 Syngenesia	Æqualis	Compositæ	Britain	B
108 Enneandria	Monogynia	Holeraceæ	Japan	T
109 Enneandria	Monogynia	Holeraceæ	Malabar	T

<i>Linnæan Name.</i>	<i>English Name.</i>	<i>Flowering.</i>
110 <i>Laurus Cinnamomum</i>	Cinnamon Laurel	—
111 <i>Laurus Nobilis</i>	Common Laurel	April
112 <i>Laurus Sassafras</i>	Sassafras Laurel	May
113 <i>Lavandula Spica</i>	Common Lavender	June
114 <i>Leontodon Taraxacum</i>	Common Dandelion	April
115 <i>Lichen Islandicus</i>	Iceland Moss	—
116 <i>Lichen Rocella</i>	Litmus Lichen	—
117 <i>Linum Catharticum</i>	Purging Flax	June
118 <i>Linum Usitatissimum</i>	Common Flax	July
119 <i>Lythrum Salicaria</i>	Loosetrife	July
120 <i>Malva Sylvestris</i>	Common Mallow	May
121 <i>Marrubium Vulgare</i>	Common Horehound	July
122 <i>Melaleuca Leucodend.</i>	Cajuput Oil Tree	July
123 <i>Melissa Officinalis</i>	Common Balm	July
124 <i>Mentha Piperita</i>	Pepper-Mint	Aug.
125 <i>Mentha Pulegium</i>	Penny-royal-Mint	Aug.
126 <i>Mentha Viridis</i>	Spear-Mint	Aug.
127 <i>Menyanthes Trifoliata</i>	Common Buckbean	May
128 <i>Momordica Elaterium</i>	Squirting Cucumber	June
129 <i>Morus Nigra</i>	Common Mulberry	June
130 <i>Myristica Moschata</i>	Nutmeg Tree	—
131 <i>Myroxylon Peruiferum</i>	Sweet-smelling Balsam	Aug.
132 <i>Myrtus Pimenta</i>	Allspice Tree	June
133 <i>Nicotiana Tabacum</i>	Virginian Tobacco	July
134 <i>Olea Europea</i>	European Olive	July
135 <i>Origanum Marjorana</i>	Sweet Marjoram	July
136 <i>Origanum Vulgare</i>	Common Marjoram	July
137 <i>Oxalis Acetosella</i>	Common Wood-sorrel	April
138 <i>Papaver Rhœas</i>	Red or Corn Poppy	June
139 <i>Papaver Somniferum.</i>	White Poppy	June

<i>Class.</i>	<i>Order.</i>	<i>Natural Order.</i>	<i>Soil.</i>	<i>Kd.</i>
110 Enneandria	Monogynia	Holeraceæ	Ceylon	T
111 Enneandria	Monogynia	Holeraceæ	Italy	T
112 Enneandria	Monogynia	Holeraceæ	N. Amer.	T
113 Didynamia	Gymnospermia	Verticillatæ	Europe	P
114 Syngenesia	Æqualis	Compositæ	Britain	P
115 Cryptogamia	Algæ	Algæ	Britain	P
116 Cryptogamia	Algæ	Algæ	Britain	P
117 Pentandria	Pentagynia	Gruinales	Britain	A
118 Pentandria	Pentagynia	Gruinales	Britain	A
119 Dodecandria	Monogynia	Calycanthem.	Britain	P
120 Monadelphia	Polyandria	Columniferæ	Britain	P
121 Didynamia	Gymnospermia	Verticillatæ	Britain	P
122 Polyadelphia	Icosandria	Hesperideæ	Amboyna	T
123 Didynamia	Gymnospermia	Verticillatæ	Europe	P
124 Didynamia	Gymnospermia	Verticillatæ	Britain	P
125 Didynamia	Gymnospermia	Verticillatæ	Britain	P
126 Didynamia	Gymnospermia	Verticillatæ	Britain	P
127 Pentandria	Monogynia	Preciæ	Britain	P
128 Monœcia	Monadelphia	Cucurbitaceæ	S. Europ.	P
129 Monœcia	Tetrandria	Scabrideæ	Persia	S
130 Diœcia	Monadelphia	Holeraceæ	Moluccas	T
131 Decandria	Monogynia	Lomentaceæ	S. Amer.	T
132 Icosandria	Monogynia	Hesperideæ	S. Amer.	T
133 Pentandria	Monogynia	Luridæ	America	A
134 Diandria	Monogynia	Sepiariæ	S. Europ.	T
135 Didynamia	Gymnospermia	Verticillatæ	Portugal	A
136 Didynamia	Gymnospermia	Verticillatæ	Britain	P
137 Decandria	Pentagynia	Gruinales	Britain	P
138 Polyandria	Monogynia	Rhœdeæ	Britain	A
139 Polyandria	Monogynia	Rhœdeæ	Asia	A

<i>Linnæan Name.</i>	<i>English Name.</i>	<i>Flowering.</i>
140 <i>Pastinaca Opoponax</i>	Rough Parsnip	July
141 <i>Pimpinella Anisum</i>	Common Anise	July
142 <i>Pinus Abies</i>	Norway Spruce Fir	April
143 <i>Pinus Balsamea</i>	Canada Fir	April
144 <i>Pinus Larix</i>	Common Larch	March
145 <i>Pinus Sylvestris</i>	Scotch Fir	May
146 <i>Piper Cubeba</i>	Cubeb Pepper	—
147 <i>Piper Longum</i>	Long Pepper	—
148 <i>Piper Nigrum</i>	Black Pepper	—
149 <i>Pistacia Lentiscus</i>	Mastic Pistacia	May
150 <i>Pistacia Terebinthus</i>	Turpentine Pistacia	June
151 <i>Polygala Senega</i>	Seneka-root Plant	June
152 <i>Polygonum Bistorta</i>	Great Bistort	May
153 <i>Prunus Domestica</i>	Common Plum Tree	April
154 <i>Pterocarpus Erinacea</i>	Kino Tree	—
155 <i>Pterocarpus Santalinus</i>	Red Saunders Tree	—
156 <i>Punica Granatum</i>	Quince Tree	May
157 <i>Pyrus Cydonia</i>	Pomegranate Tree	July
158 <i>Quassia Excelsa</i>	Bitter Quassia Tree	Oct.
159 <i>Quassia Simarouba</i>	Simarouba Tree	—
160 <i>Quercus Infectoria</i>	Gall or Dyer's Oak	May
161 <i>Quercus Pedunculata</i>	Pedunculated Oak	April
162 <i>Quercus Robur</i>	Oak Bark Tree	April
163 <i>Rhamnus Catharticus</i>	Purging Buckthorn	May
164 <i>Rheum Palmatum</i>	Palmated Rhubarb	May
165 <i>Rheum Undulatum</i>	Wave-leaved Rhubarb	May
166 <i>Rhododendron Chrysan.</i>	Rhododendron	June
167 <i>Rhus Toxicodendron</i>	Sumach or Poison Oak	June
168 <i>Ricinus Communis</i>	Castor Oil Plant	Aug.
169 <i>Rosa Canina</i>	Dog Rose or Wild Briar	June
170 <i>Rosa Centifolia</i>	Provins Rose	June
171 <i>Rosa Gallica</i>	French or Red Rose	June

<i>Class.</i>	<i>Order.</i>	<i>Natural Order.</i>	<i>Soil.</i>	<i>Kd.</i>
140 Pentandria	Digynia	Umbellatæ	S.Europ.	P
141 Pentandria	Digynia	Umbellatæ	Egypt	A
142 Monœcia	Monadelphia	Coniferæ	Europe	T
143 Monœcia	Monadelphia	Coniferæ	N. Amer.	T
144 Monœcia	Monadelphia	Coniferæ	Alps	T
145 Monœcia	Monadelphia	Coniferæ	Britain	T
146 Diandria	Trigynia	Piperitæ	Java	P
147 Diandria	Trigynia	Piperitæ	E. Indies	P
148 Diandria	Trigynia	Piperitæ	E. Indies	P
149 Diœcia	Pentandria	Amentaceæ	Levant	T
150 Diœcia	Pentandria	Amentaceæ	Barbary	T
151 Diadelphia	Octandria	Lomentaceæ	N. Amer.	P
152 Octandria	Trigynia	Holeraceæ	Britain	P
153 Icosandria	Monogynia	Pomaceæ	Asia	T
154 Diadelphia	Decandria	Papilionaceæ	Africa	T
155 Diadelphia	Decandria	Papilionaceæ	India	T
156 Icosandria	Pentagynia	Pomaceæ	S.Europ.	T
157 Icosandria	Pentagynia	Pomaceæ	Crete	T
158 Decandria	Monogynia	Gruinales	Surinam	T
159 Decandria	Monogynia	Gruinales	Jamaica	T
160 Monœcia	Polyandria	Amentaceæ	Asia	T
161 Monœcia	Polyandria	Amentaceæ	Britain	T
162 Monœcia	Polyandria	Amentaceæ	Britain	T
163 Pentandria	Monogynia	Dumosæ	Britain	S
164 Enneandria	Trigynia	Holeraceæ	China	P
165 Enneandria	Trigynia	Holeraceæ	Siberia	P
166 Decandria	Monogynia	Bicornes	Siberia	S
167 Pentandria	Trigynia	Dumosæ	N. Amer.	S
168 Monœcia	Monadelphia	Tricoccæ	Indies	A
169 Icosandria	Polygynia	Senticosæ	Britain	S
170 Icosandria	Polygynia	Senticosæ	S.Europ.	S
171 Icosandria	Polygynia	Senticosæ	S. Europ.	S

<i>Linnæan Name.</i>	<i>English Name.</i>	<i>Flowering.</i>
172 Rosmarinus Officinalis	Common Rosemary	April
173 Rubia Tinctorum	Dyer's Madder	June
174 Rumex Acetosa	Common Sorrel	July
175 Rumex Aquaticus	Great Water-dock	July
176 Ruta Graveolens	Common Rue	June
177 Saccharum Officinarum	Sugar Plant	—
178 Salix Alba	White Willow	April
179 Salix Caprea	Grt. round-leav. Willow	April
180 Salix Fragilis	Crack Willow	April
181 Salvia Officinalis	Garden Sage	June
182 Sambucus Nigra	Common Elder	June
183 Scilla Maritima	Squill or Sea Onion	April
184 Scrophularia Nodosa	Knobby-rooted Figwort	July
185 Sinapis Alba	White Mustard	June
186 Sinapis Nigra	Black Mustard	June
187 Sium Nodiflorum	Creeping Water Parsnip	July
188 Smilax Sarsaparilla	Sarsaparilla Plant	July
189 Solanum Dulcamara	Bitter Sweet	June
190 Solidago Virga Aurea	Common Golden Rod	July
191 Spartium Scoparium	Common Broom	May
192 Spilegia Marilandica	Perennial Worm-grass	July
193 Stalagmatis Cambogiod.	Gamboge Tree	—
194 Strychnos Nux Vomica	Poison-nut Plant	—
195 Styrax Benzoin	Benzoin Tree	—
196 Styrax Officinale	Common Storax	July
197 Swietenia Febrifuga	Febrifuge Swietenia	—
198 Tamarindus Indica	Tamarind Tree	June
199 Tanacetum Vulgare	Common Tansey	July
200 Toluifera Balsamum	Balsam of Tolu	—
201 Teucrium Marum	Common Marum	—
202 Teucrium Chamædrys	Wall Germander	June
203 Tormentilla Erecta	Common Tormentil	June

<i>Class.</i>	<i>Order.</i>	<i>Natural Order.</i>	<i>Soil.</i>	<i>Kd.</i>
172 Diandria	Monogynia	Verticillatæ	S. Europ.	S
173 Tetrandria	Monogynia	Stellatæ	S. Europ.	P
174 Hexandria	Digynia	Holeraceæ	Britain	P
175 Hexandria	Digynia	Holeraceæ	Britain	P
176 Decandria	Monogynia	Multisiliquæ	S. Europ.	P
177 Triandria	Digynia	Gramina	Indies	P
178 Diœcia	Diandria	Amentaceæ	Britain	T
179 Diœcia	Diandria	Amentaceæ	Britain	T
180 Diœcia	Diandria	Amentaceæ	Britain	T
181 Diandria	Monogynia	Verticillatæ	S. Europ.	P
182 Pentandria	Trigynia	Dumosæ	Britain	T
183 Hexandria	Monogynia	Coronariæ	S. Europ.	P
184 Didynamia	Angiospermia	Personatæ	Britain	P
185 Tetradynamia	Siliquosa	Siliquosæ	Britain	A
186 Tetradynamia	Siliquosa	Siliquosæ	Britain	A
187 Pentandria	Digynia	Umbellatæ	Britain	P
188 Diœcia	Hexandria	Sarmentaceæ	Virginia	P
189 Pentandria	Monogynia	Luridæ	Britain	S
190 Syngenesia	Superflua	Compositæ	Britain	P
191 Diadelphia	Decandria	Papilionaceæ	Britain	S
192 Pentandria	Monogynia	Stellatæ	Britain	P
193 Polygamia	Monœcia	Tricocœ	Ceylon	T
194 Pentandria	Monogynia	Luridæ	E. Indies	A
195 Decandria	Monogynia	Bicornes	Sumatra	T
196 Decandria	Monogynia	Bicornes	Levant	T
197 Decandria	Monogynia	Trihilatæ	E. Indies	T
198 Monadelphia	Triandria	Lomentaceæ	Indies	T
199 Syngenesia	Superflua	Compositæ	Britain	P
200 Didynamia	Gymnospermia	Verticillatæ	Britain	P
201 Didynamia	Gymnospermia	Verticillatæ	Spain	P
202 Decandria	Monogynia	Dumosæ	America	T
203 Icosandria	Polygynia	Senticosæ	Britain	P

<i>Linnæan Name.</i>	<i>English Name.</i>	<i>Flowering.</i>
204 Triticum Æstivum	Summer Wheat	July
205 Triticum Hybernum	Winter Wheat	Aug.
206 Tussilago Farfara	Common Coltsfoot	March
207 Ulmus Campestris	Common Elm	April
208 Valeriana Officinalis	Common Valerian	June
209 Veratrum Album	White Hellebore	July
200 Veronica Beccabunga	Broad-leaved Brooklim.	June
211 Viola Odorata	Sweet Violet	April
212 Vitis Vinifera	Common Grape Vine	June
213 Wintera Aromatica	Winter's Bark Tree	—
214 Zingiber Officinale	Officinal Ginger	Sept.

<i>Class.</i>	<i>Order.</i>	<i>Natural Order.</i>	<i>Soil.</i>	<i>Kd.</i>
204 Triandria	Monogynia	Gramina	.....	A
205 Triandria	Monogynia	Gramina	.....	A
206 Syngenesia	Superflua	Compositæ	Britain	P
207 Pentandria	Digynia	Scabrideæ	Britain	T
208 Triandria	Monogynia	Aggregatæ	Britain	P
209 Polygamia	Monœcia	Coronariæ	Europe	P
210 Diandria	Monogynia	Personatæ	Britain	P
211 Pentandria	Monogynia	Personatæ	Britain	P
212 Pentandria	Monogynia	Hederaceæ	Armenia	T
213 Polyandria	Tetragynia	T
214 Monandria	Monogynia	Scitamineæ	E. Indies	P

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Class	General
201	General
202	General
203	General
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206	General
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209	General
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213	General
214	General

A TABLE
OF
ENGLISH AND SYSTEMATIC
NAMES.

Acacia, Medicinal	Acacia Catechu.
Aconite or Monkshood	Aconitum Napellus.
Agaric of the Oak	Boletus Ignarius.
Agrimony, Common	Agrimonia Eupatoria.
Alkanet, Common	Anchusa Tinctoria.
Allspice Tree	Myrtus Pimenta.
Almond Tree	Amygdalus Communis.
Aloe, Hepatic	Aloe Vulgaris.
Aloe, Socotorine	Aloe Spicata.
Ammoniacum Plant	Heracleum Gummiferum.
Angelica, Garden	Angelica Archangelica.
Anise, Common	Pimpinella Anisum.
Arnica, Mountain	Arnica Montana.
Asarabacca	Asarum Europeum.

Assafœtida Plant	Ferula Assafœtida.
Avens, Common	Geum Urbanum.
Balm, Common	Melissa Officinalis.
Balm of Gilead	Amyris Gileadensis.
Balsam, Sweet smelling	Myroxylon Peruiferum.
Barley, Common	Hordeum Distichon.
Bear's, Whortleberry	Arbutus Uva Ursi.
Benzoin Tree	Styrax Benzoin.
Bistort, Great	Polygonum Bistorta.
Bitter-sweet	Solanum Dulcamara.
Bladder Fucus	Fucus Vesiculosus.
Blessed Thistle	Centaurea Benedicta.
Brooklime, Broad-leaved	Veronica Beccabunga.
Broom, Common	Spartium Scoparium.
Buckbean, Common	Menyanthes Trifoliata.
Buckthorn, Purging	Rhamnus Catharticus.
Burdock, Common	Arctium Lappa.
Cabbage Tree	Geoffræa Inermis.
Cajeput Oil Tree	Melaleuca Leucodendron.
Calumba Tree	Cocculus Palmatus.
Camphor Tree	Laurus Camphora.
Canella, White	Canella Alba.
Caraway, Common	Carum Carui.
Carrot, Garden	Daucus Carota.
Carrot, Wild	Daucus Sylvestris.
Cardamom Plant	Elettaria Cardamomum.
Cascarilla Tree	Croton Cascarilla.
Cassia, Purging	Cassia Fistula.
Cassia Tree	Laurus Cassia.
Cayenne Pepper	Capsicum Annum
Centaury, Common	Chironia Centaurium.
Chamomile, Common	Anthemis Nobilis.
Chinchona, Yellow-barked	Cinchona Cordifolia.

Chinchona, Red-barked	<i>Cinchona Oblongifolia.</i>
Chinchona, Pale-barked	<i>Cinchona Lancifolia.</i>
Cinnamon Tree	<i>Laurus Cinnamomum.</i>
Clove Pink	<i>Dianthus Caryophyllus.</i>
Clove Tree	<i>Eugenia Caryophyllata.</i>
Colt's-foot, Common	<i>Tussilago Farfara.</i>
Contrayerva Plant	<i>Dorstenia Contrayerva.</i>
Copaiba Balsam Tree	<i>Copaifera Officinalis.</i>
Coriander, Common	<i>Coriandrum Sativum.</i>
Cowitch or Cowage	<i>Dolichos Pruriens.</i>
Croton, Purging	<i>Croton Tiglium.</i>
Cuckoo-flower	<i>Cardamine Pratensis.</i>
Cubeb Plant	<i>Piper Cubeba.</i>
Cucumber, Bitter	<i>Cucumis Colocynthis.</i>
Cucumber, Squirting	<i>Momordica Elaterium.</i>
Cumin, Common	<i>Cuminum Cyminum.</i>
Cusparia or Augustura	<i>Cusparia Febrifuga.</i>
Dandelion, Common	<i>Leontodon Taraxacum.</i>
Deadly Nightshade	<i>Atropa Belladonna.</i>
Dill, Common	<i>Anethum Graveolens.</i>
Egyptian Thorn	<i>Acacia Vera.</i>
Elder, Common	<i>Sambucus Nigra.</i>
Elecampane	<i>Inula Helenium.</i>
Eleni Tree	<i>Amyris Elemifera.</i>
Elm, Common	<i>Ulmus Campestris.</i>
Fern, Male	<i>Aspidium Filix Mas.</i>
Fig Tree	<i>Ficus Carica.</i>
Fig-wort Knobby	<i>Scrophularia Nodosa.</i>
Fir, Canada	<i>Pinus Balsamea.</i>
Fir, Norway Spruce	<i>Pinus Abies.</i>
Fir, Scotch	<i>Pinus Sylvestris.</i>
Flax, Common	<i>Linum Usitatissimum.</i>

Flax, Purging	Linum Catharticum.
Flowering Ash	Fraxinus Ornus.
Foxglove, Purple	Digitalis Purpurea.
Galbanum	Bubon Galbanum.
Gamboge Tree	Stalagmatis Cambogioides.
Garlic, Common	Allium Sativum.
Gentian, Yellow	Gentiana Lutea.
Ginger, Officinal	Zingiber Officinale.
Golden-rod, Common	Solidago Virga Aurea.
Grape-vine, Common	Vitis Vinifera.
Guaiacum Officinal	Guaiacum Officinale.
Hedge-hyssop	Gratiola Officinalis.
Hellebore, Black	Helleborus Niger.
Hellebore, Stinking	Helleborus Foetidus.
Hellebore, White	Veratrum Album.
Hemlock, Spotted	Conium Maculatum.
Henbane, Black	Hyoscyamus Niger.
Hop, Common	Humulus Lupulus.
Horehound, Common	Marrubium Vulgare.
Horse-chesnut, Common	Æsculus Hippocastanum.
Horse-radish, Common	Cochlearia Armoracia.
Hyssop, Common	Hyssopus Officinalis.
Iceland Moss	Lichen Islandicus.
Ipecacuanha	Cephaelis Ipecacuhana.
Iris, Florentine	Iris Florentina.
Jalap Plant	Convolvulus Jalapa.
Juniper, Common	Juniperus Communis.
Juniper, Lycian	Juniperus Lycia.
Kino Tree	Pterocarpus Erinacea.

Larch, Common	<i>Pinus Larix.</i>
Laurel or Sweet Bay	<i>Laurus Nobilis.</i>
Lavender, Common	<i>Lavandula Spica.</i>
Leek, Common	<i>Allium Porrum.</i>
Lemon Tree	<i>Citrus Medica.</i>
Lettuce, Garden	<i>Lactusa Sativa.</i>
Lettuce, Strong-scented	<i>Lactusa Virosa.</i>
Liquorice, Common	<i>Glycyrrhiza Glabra.</i>
Litmus Lichen	<i>Lichen Rocella.</i>
Logwood Tree	<i>Hæmatoxylon Campechianum.</i>
Loosestrife	<i>Lythrum Salicaria.</i>
Mackaw Tree	<i>Cocos Butyracea.</i>
Madder, Dyer's	<i>Rubia Tinctorum.</i>
Mallow, Common	<i>Malva Sylvestris.</i>
Marjoram, Common	<i>Origanum Vulgare.</i>
Marjoram, Sweet	<i>Origanum Marjorana.</i>
Marsh-mallow, Common	<i>Althæa Officinalis.</i>
Marum, Common	<i>Teucrium Marum.</i>
Mastiche Tree	<i>Pistacia Lentiscus.</i>
Meadow-saffron, Common	<i>Colchicum Autumnale.</i>
Mezereon	<i>Daphne Mezereum.</i>
Mulberry, Common	<i>Morus Nigra.</i>
Mustard, Black	<i>Sinapis Nigra.</i>
Mustard, White	<i>Sinapis Alba.</i>
Nutmeg Tree	<i>Myristica Moschata.</i>
Nux Nomica or Poison Nut	<i>Strychnos Nux Vomica.</i>
Oak, British	<i>Quercus Robur.</i>
Oak, Dyer's	<i>Quercus Infectoria.</i>
Oak, Pedunculated	<i>Quercus Pedunculata.</i>
Oats, Common	<i>Avena Sativa.</i>
Olive, European	<i>Olea Europea.</i>
Onion, Common	<i>Allium Ceba.</i>

Opoponax Plant	Pastinaca Opoponax.
Orange, Seville	Citrus Aurantium.
Parsley, Common	Apium Petroselinum.
Pellitory of Spain	Anthemis Pyrethrum.
Pennyroyal	Mentha Pulegium.
Pepper, Black	Piper Nigrum.
Pepper, Long	Piper Longum.
Pepper-Mint	Mentha Piperita.
Plum Tree, Common	Prunus Domestica.
Pomegranate Tree	Punica Granatum.
Poppy, Red or Corn	Papaver Rhœas.
Poppy, White	Papaver Somniferum.
Quassia Tree	Quassia Excelsa.
Quince Tree	Pyrus Cydonia.
Red Saunders Tree	Peterocarpus Santalinus.
Rose, Dog or Wild	Rosa Canina.
Rose, French or Red	Rosa Gallica.
Rose, Provins	Rosa Centifolia.
Rosemary, Common	Rosmarinus Officinalis.
Rhatany, Medical	Krameria Triandra.
Rhododendron	Rhododendron Chrysanthemum.
Rhubarb, Palmated	Rheum Palmatum.
Rhubarb, Wave-leaved	Rheum Undulatum.
Rue, Common	Ruta Graveolens.
Saffron, Common	Crocus Sativus.
Sage, Garden	Salvia Officinalis.
Sarsaparilla Plant	Smilax Sarsaparilla.
Sassafras Tree	Laurus Sassafras.
Savine	Juniperus Sabina.
Scammony Plant	Convolvulus Scammonia.
Sea Holly or Eryngo	Eryngium Maritimum.

Sea Wormwood	<i>Artemisia Maritima.</i>
Seneka-root Plant	<i>Polygala Senega.</i>
Senna, Egyptian	<i>Cassia Senna.</i>
Simarouba Tree	<i>Quassia Simarouba.</i>
Squill or Sea Onion	<i>Scilla Maritima.</i>
Spear Mint	<i>Mentha Viridis.</i>
Spurge, Official	<i>Euphorbia Officinarum.</i>
Sorrel, Common	<i>Rumex Acetosa.</i>
Southernwood, Common	<i>Artemisia Abrotanum.</i>
Southernwood, Tartarian	<i>Artemisia Santonica.</i>
Stavesacre	<i>Delphinium Staphisagria.</i>
Storax, Common	<i>Styrax Officinale.</i>
Sugar Plant	<i>Saccharum Officinarum.</i>
Sumach or Poison Oak	<i>Rhus Toxicodendron.</i>
Sweet Fennel, Common	<i>Anethum Fœniculum.</i>
Sweet Flag, Common	<i>Acorus Calamus.</i>
Swietenia, Febrifuge	<i>Swietenia Febrifuga.</i>
Tamarind Tree	<i>Tamarindus Indica.</i>
Tansey, Common	<i>Tanacetum Vulgare.</i>
Thorn Apple	<i>Datura Stramonium.</i>
Tobacco, Virginian	<i>Nicotiana Tabacum.</i>
Tormentil, Common	<i>Tormentilla Erecta.</i>
Tragacanth	<i>Astragalus Verus.</i>
Turpentine Pistacia	<i>Pistacia Terebinthus.</i>
Valerian, Common	<i>Valeriana Officinale.</i>
Violet, Sweet	<i>Viola Odorata.</i>
Virginian Snake-root	<i>Aristolchia Serpentaria.</i>
Wake-robin, Common	<i>Arum Maculatum.</i>
Wall Germander	<i>Teucrium Chamædrys.</i>
Water-dock, Great	<i>Rumex Aquaticus.</i>
Water-parsnip, Creeping	<i>Sium Nodiflorum.</i>
Wheat, Summer	<i>Triticum Æstivum.</i>

Wheat, Winter	<i>Triticum Hybernum.</i>
Willow, White	<i>Salix Alba.</i>
Willow, Round-leaved	<i>Salix Caprea.</i>
Willow, Crack	<i>Salix Fragilis.</i>
Winter's-bark Tree	<i>Wintera Aromatica.</i>
Wood-sorrel, Common	<i>Oxalis Acetosella.</i>
Worm-grass, Perennial	<i>Spigelia Marilandica.</i>
Wormwood, Common	<i>Artemisia Absinthium.</i>
Zedoary, Common	<i>Curcuma Zedoaria.</i>

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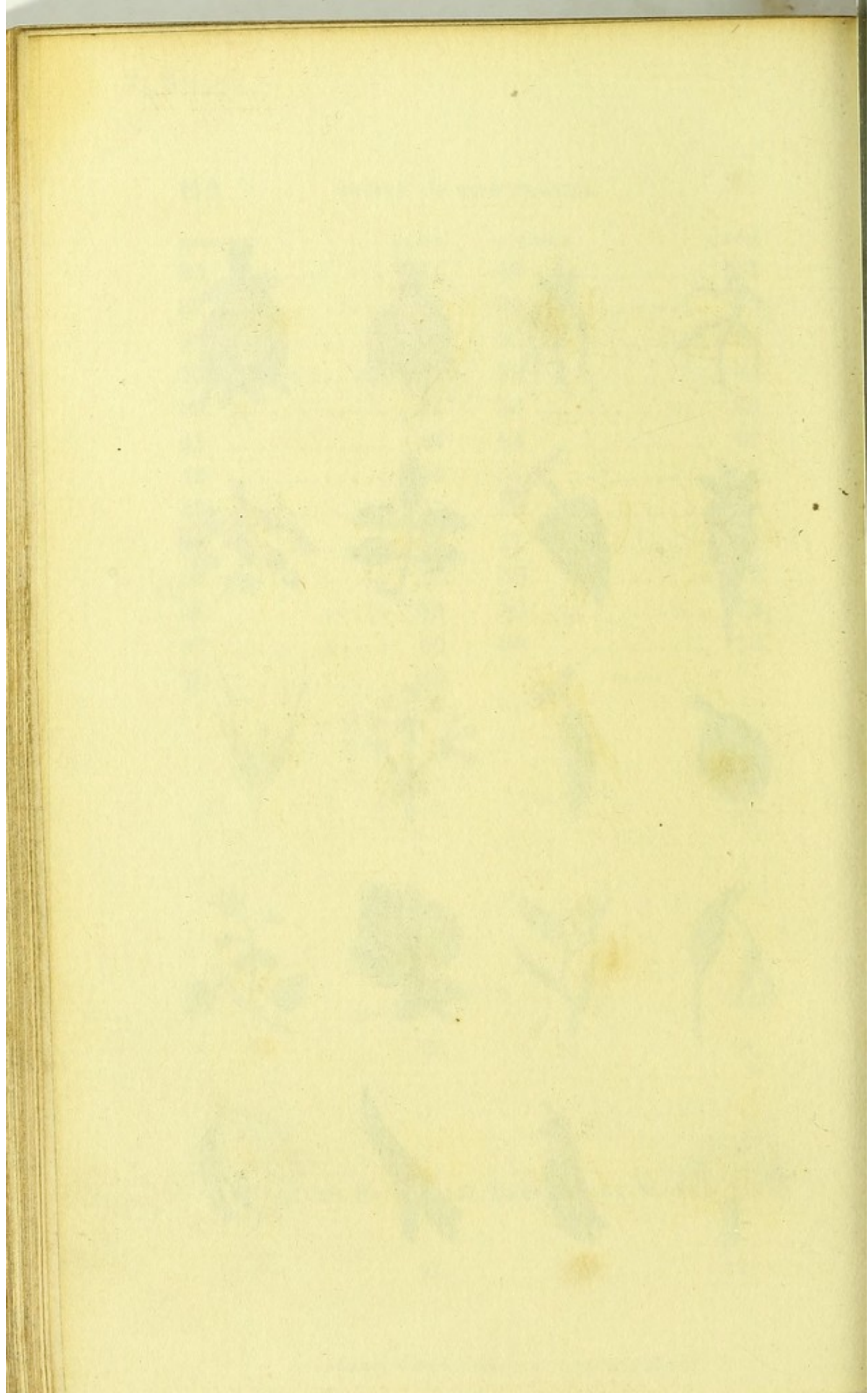
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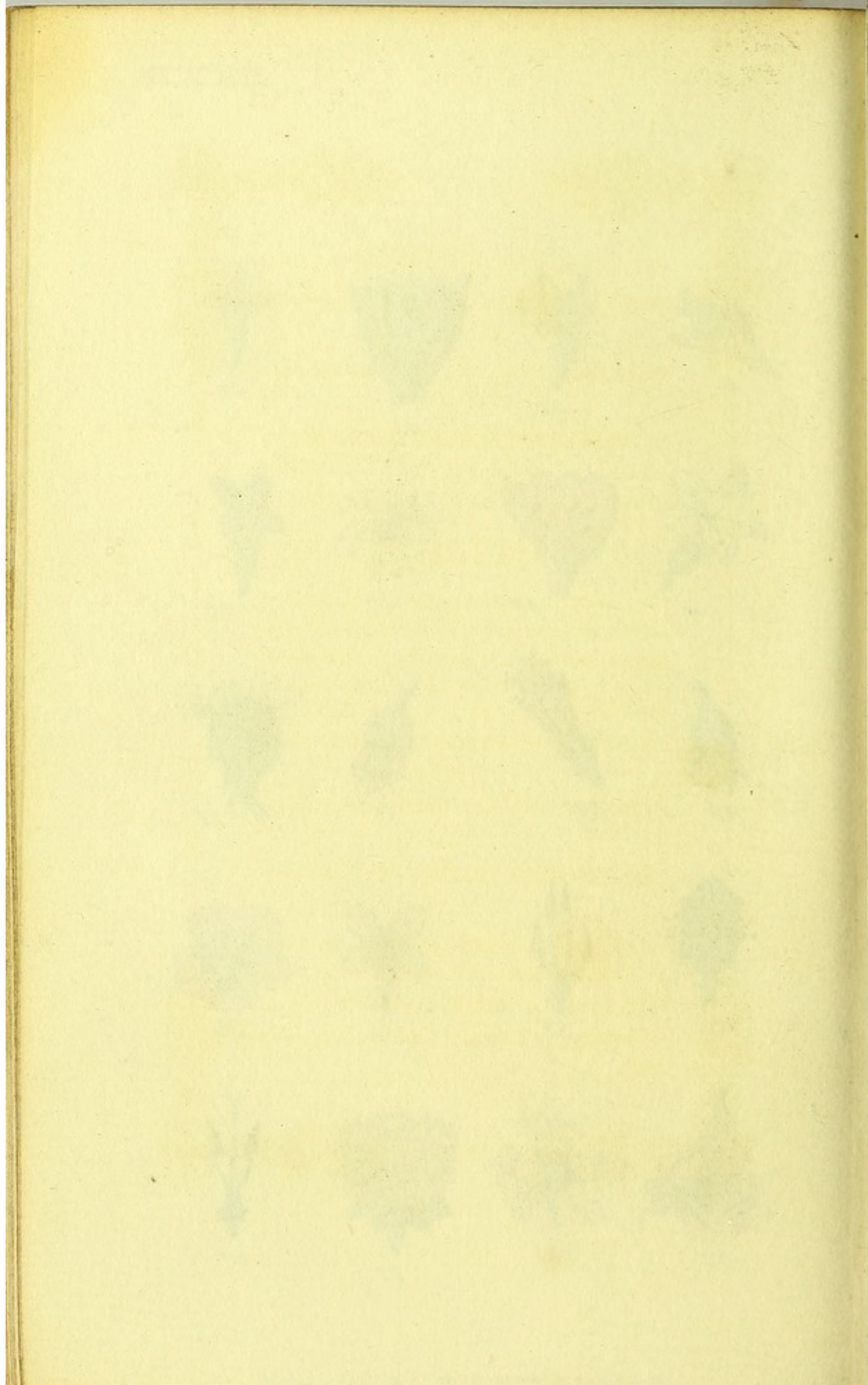
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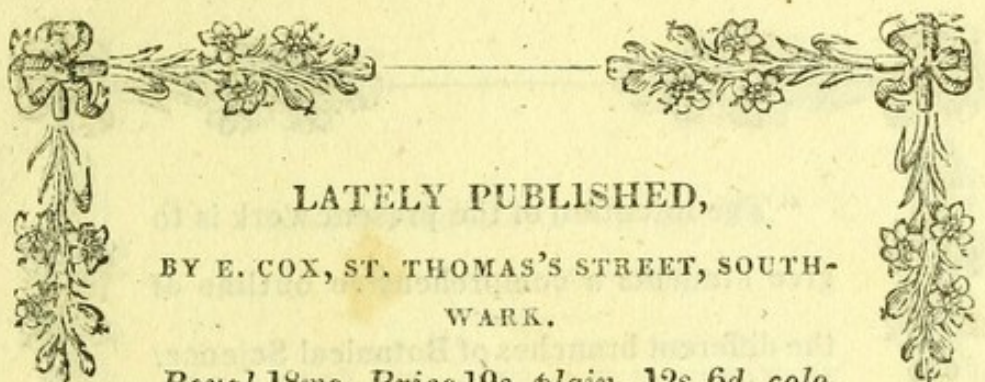


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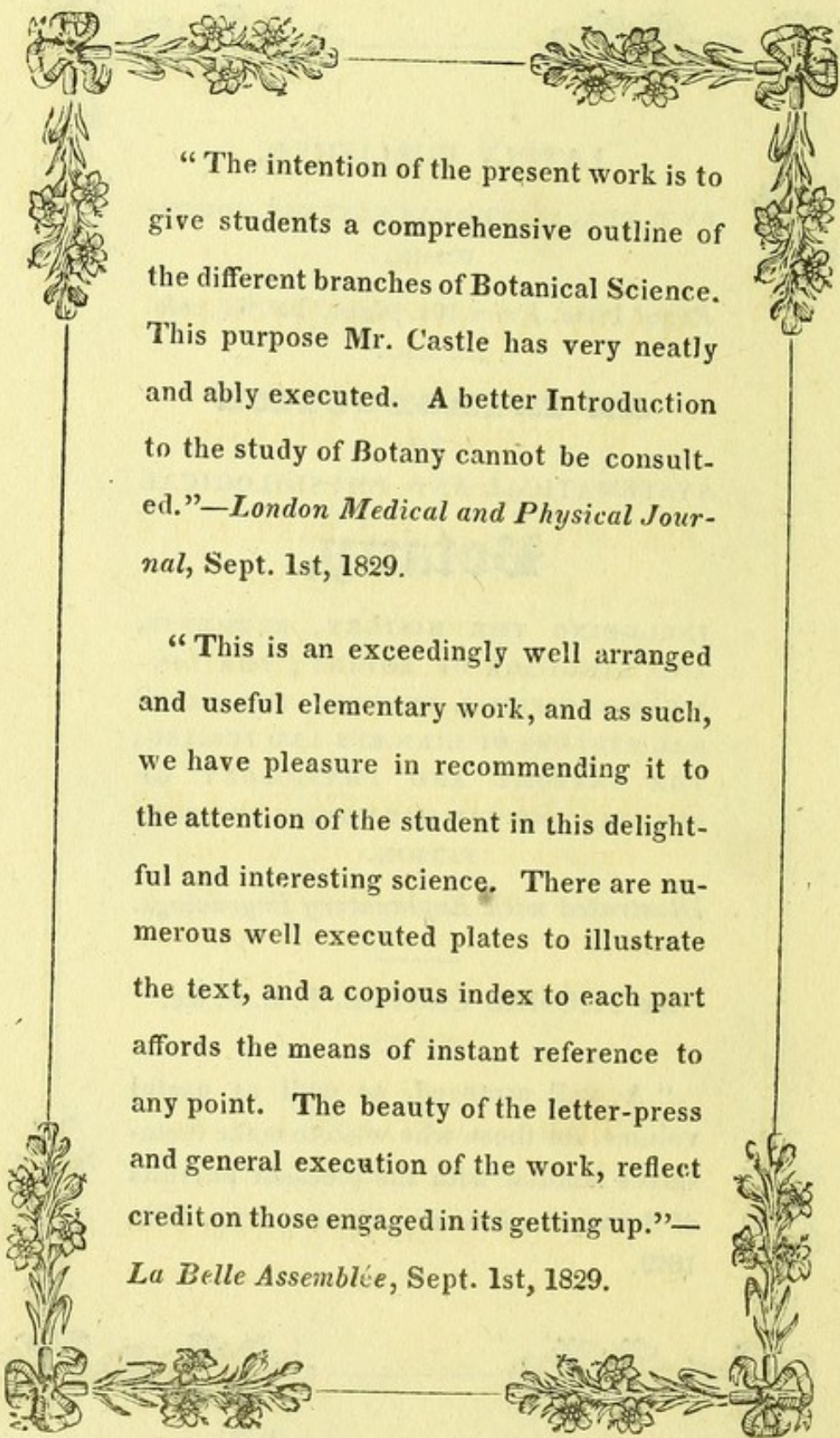
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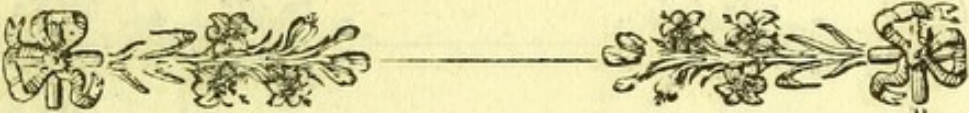
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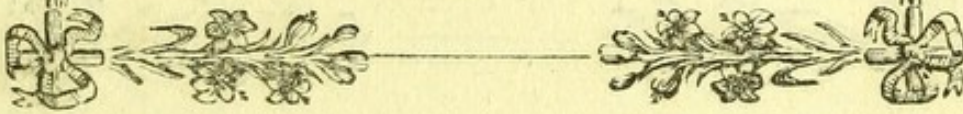
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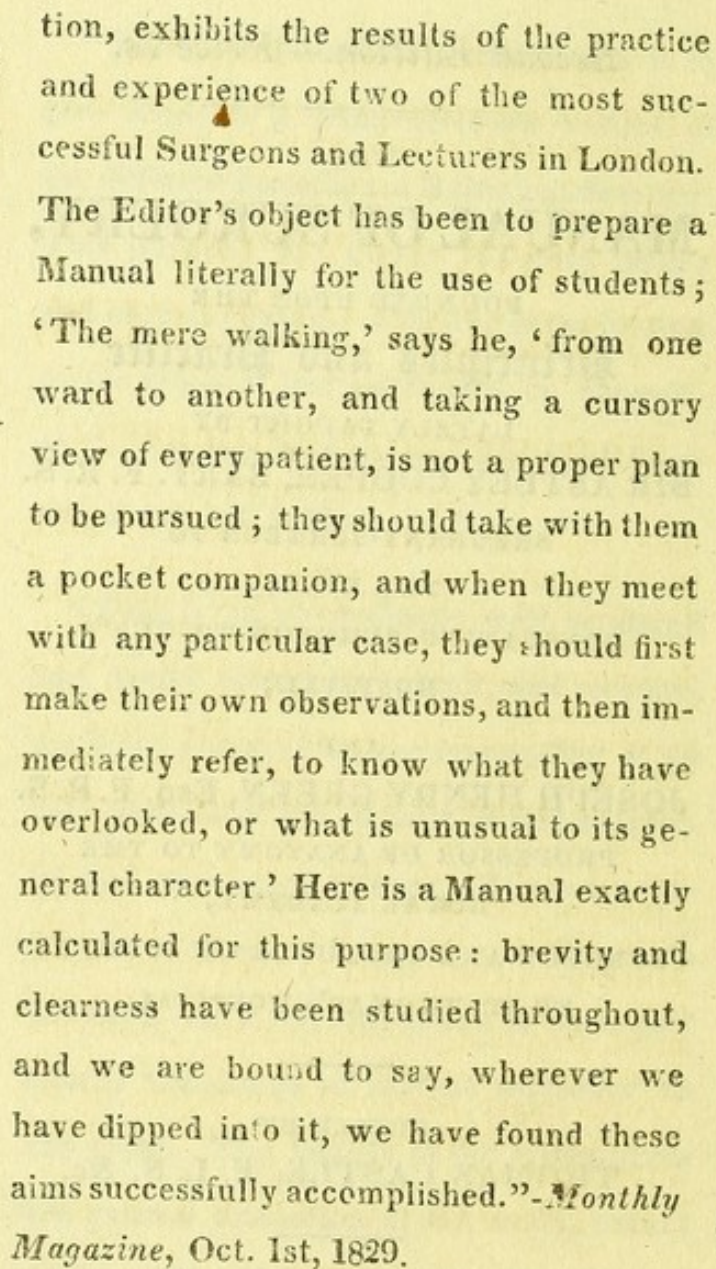
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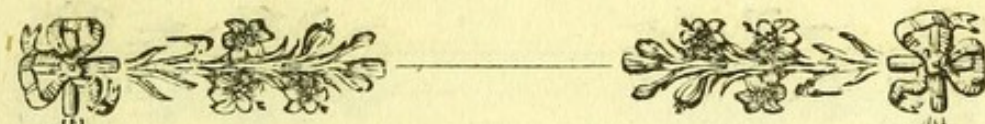
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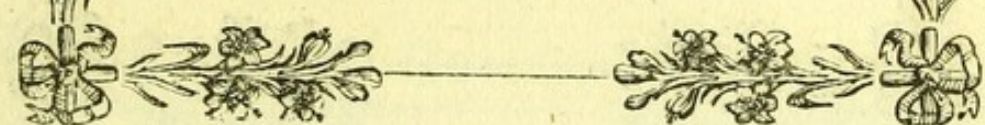
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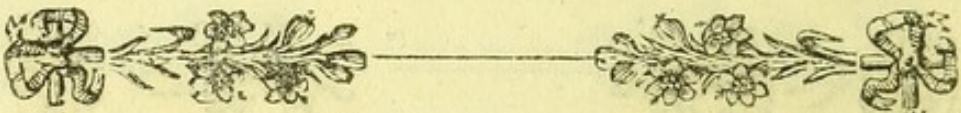
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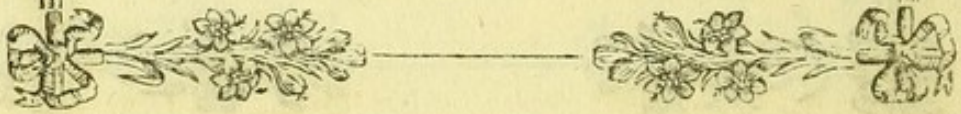
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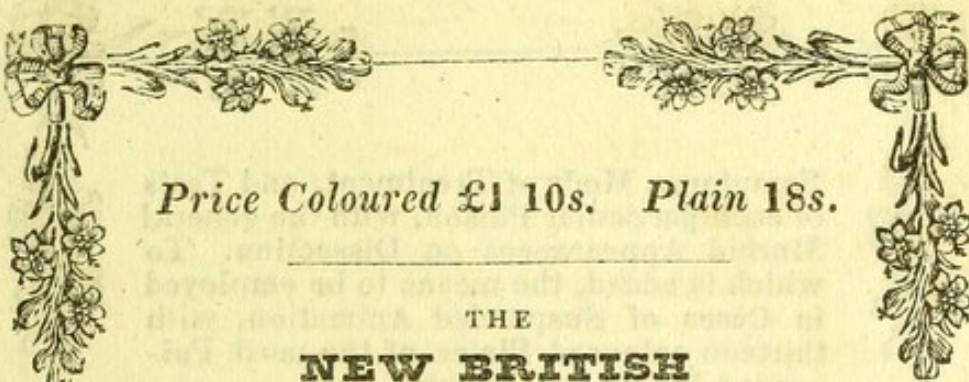




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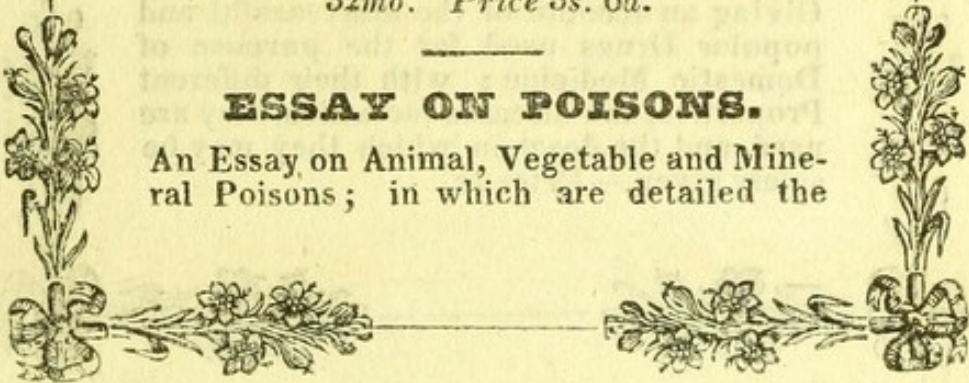
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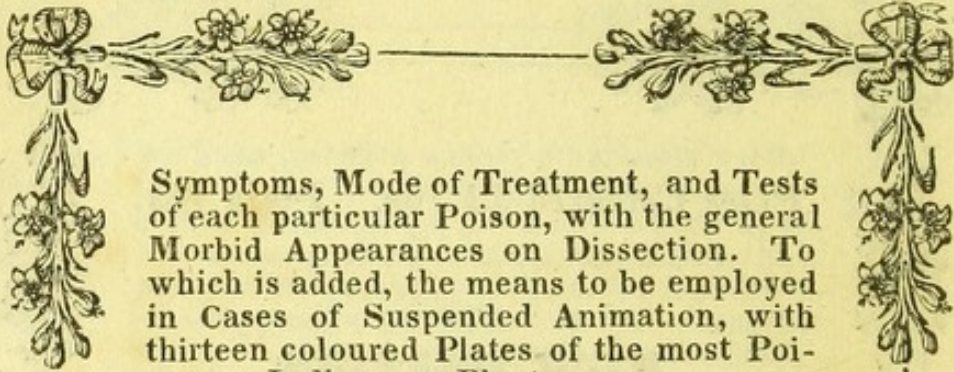
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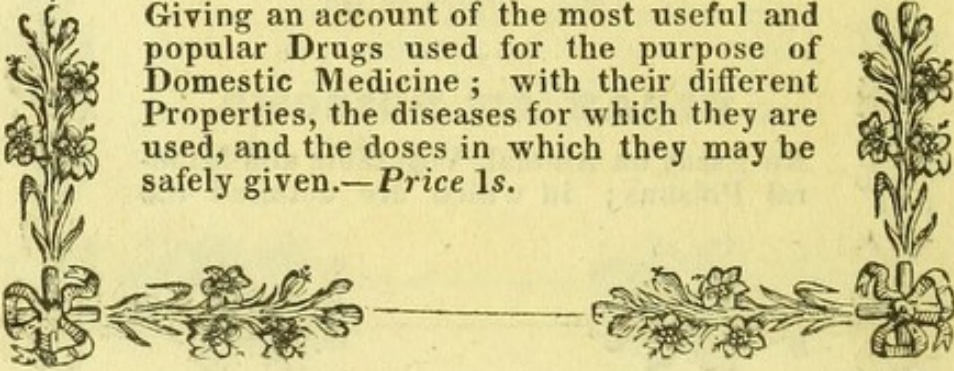
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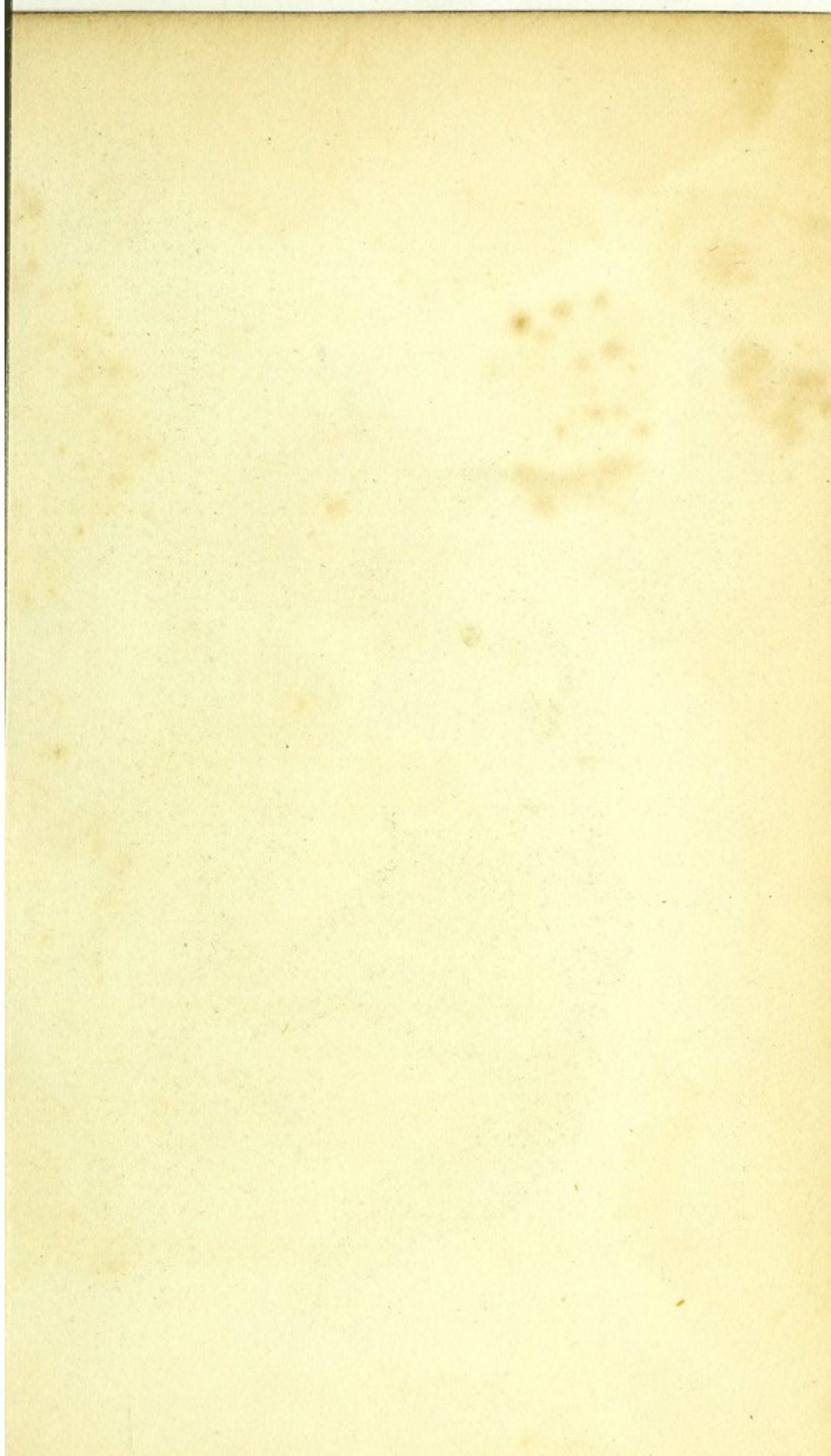
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