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THE

AMERICAN

ECLECTIC MATERIA MEDICA,

CONTAINING

ONE HUNDRED AND TWENTY-FIVE ILLUSTRATIONS,

OF

TREES AND PLANTS

OF THE

AMERICAN CONTINENT.

BY

HENRY HOLLEMBAEK, M. D.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS IN THE ECLECTIC MEDICAL COLLEGE OF PENNSYLVANIA.

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TO

JOSEPH SITES, M. D.,

Professor of Obstetrics and Diseases of Women and Children in the Eclectic Medical College of Pennsylvania,

for his long devotion and untiring energy in the Eclectic Medical Profession,

THIS VOLUME

IS RESPECTFULLY INSCRIBED

by

THE AUTHOR.

THE CHARTER

OF THE

ECLECTIC MEDICAL COLLEGE

OF PENNSYLVANIA,

GRANTED IN 1850,

WAS COMMENCED IN 1851,

AND HAS SINCE

HELD ITS REGULAR SESSIONS ANNUALLY.

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1865.

This College has held its annual sessions regularly from 1850, to the present date, 1865.

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INTRODUCTION.

It is quite unnecessary to offer any special plea for the publication of this work upon the ground that it or one similar is needed by the profession, since the demand for Eclectic Materia Medica is far greater than the present supply; and the fact that we have received nearly two hundred subscribers for this volume before it was put to the press, is sufficient evidence of the truth of the assertion.

We cannot refrain from expressing our doubts and fears that this work may, in some particulars, be defective; that some errors may be found in the elucidation of different articles; that some technical words, or grammatic construction, or misspelled words may be found within its pages. But to us these faults would not appear strange, since in each of the many volumes that we have perused on this branch, many errors have been noticed. Indeed, we doubt if any work of so extended a character can well be published without defects in some way or other.

We neither expect nor desire to escape the notice of critics; for whether their opinions be laudatory or otherwise, they will seek, if possible, some avenue of extended reading, which will give the criticised work a *notice*. We ask only that this publication be received upon its own merits.

In this volume of Eclectic Materia Medica, the arrangement is in alphabetical order. The course of some few authors has been to classify according to the therapeutical action of different agents, as cathartics, stimulants, &c.; and in this particular many advantages are to be derived, because of the easy access of agents to relieve the immediate wants of the physician at

particular times. But this volume embraces most of the medical agents of America, including some not before mentioned in text-books; hence the alphabetical order is adopted; and especially because there are so many agents that are classed under different heads of therapeutical action, as emetics, tonics, emollients, diaphoretics, cathartics, &c.; that is, one article may possess such medicinal properties as to be classed under several different heads of therapeutical action. Both modes of classification have advantages and disadvantages.

This volume is specially devoted to the great cause of Eclectic Medical reform. Twenty years ago, its author received the honors of the Alopathic School of Philadelphia; but the fatal errors of its teachings and practice appeared so palpably plain that they could not be conscientiously adopted, and the only course was to accept of the philosophical truths of the new Reformed School of America. The history of American medicine has not yet been published, although there is all the material extant for the hand of a bold, skilful, and unbiased writer. Such a desirable work would require over a thousand pages of printed matter, and would be well patronized in the folds of over three thousand Eclectic physicians. Who will try it? It is quite time, for the early pioneers who have the records are passing away.

With great deference to all the several branches of medicine so essential to the student and physician, we assert the established fact, that the Materia Medica is, and always must be, the life of the profession. It was so in the early ages of the world, even in the time of Hippocrates, five hundred years before Christ; and so in the second year of the Christian era, when Galen appeared, whose teachings constituted the "Old Practice," and in the sixteenth century, when Paracelsus appeared, and effected a revolution in medicine, based upon the fatal dogmas of the metallic and mineral agents.

Paracelsus was a bold, able, reckless medical revolutionist. He it was who introduced the internal use of quicksilver or mercury, and other destructive mineral agents; and from this fact, he and his followers received the name of quacks, and hence came the profession of the Alopathic School of to-day.

During the seventeenth, eighteenth, and the first quarter

of this, the nineteenth century, the fatal teachings and practice of Paracelsus and his followers, although they had divested the profession of much of the superstitious notions of past ages, and made many improvements in the science of medicine, the people knew nothing else but submission to the cruelties of their arbitrary laws, and received the most horrible inflictions the world ever suffered in so short a time. They were, in fact, a *New School*, which completely revolutionized the Galenic or *Old School* of medicine.

In the first quarter of this, the nineteenth century, a counter-revolution in medicine was commenced, when the former New School of Paracelsus and followers was known as the Old or Mercurial or Mineral School, in contra-distinction to the then rising New or Reformed School of America. For a clear view, we state that, from the second to the sixteenth century, the teachings of Galen, based upon the doctrines of Hippocrates, were the *Old School* of medicine; when Paracelsus appeared with his mineral or mercurial practice, and established then the *New School*, which became known as the *Old School*, in contra-distinction to the Reformed or *New School* of America.

We now merely advert to the New or Reformed Eclectic School of America. The priority of individual claims is only of importance so far as merit and history are concerned. So far as the evidence appears, Samuel Thomson, of New Hampshire, inaugurated the first opposition to the teachings and practice of the followers of Paracelsus, now known as the old or Alopathic profession. He depended alone upon the vegetable kingdom for remedial agents. We believe that his first work was published in 1822, entitled the "New Guide to Health." His doctrine of life was announced with boldness, that, "heat is life, and cold is death," although this view was not first advanced by him, for, many years previous, it had been suggested by Dr. Brown.

The doctrines and practice of Dr. Thomson were so peculiar and bold as to attract the attention of the people. His creed spread west and south with rapidity. In the year 1837, "The Thomsonian Society of Philadelphia" numbered over three hundred members. Similar organizations extended into Maryland, Kentucky, Ohio, and other States.

Dr. Wooster Beach, of New York, has claims upon the gratitude of our profession. He was a graduate of the Alopathic practice in the early part of the present century. His sound convictions of judgment were such that he could not follow the pernicious dogmas of his Alma Mater; and in opposition to which he delivered lectures before the public, if we mistake not, about 1820. His teachings and publications were scientific and systematic; more of utility than of theory. Thomson was the bold medical revolutionist; Beach the systematic medical reformer. The works of Beach are distributed in thousands of copies throughout our country. His late revised editions are text-books in the Eclectic profession at this time, and found in the libraries of all classes of physicians. His long life has been devoted to the cause of suffering humanity, and, more than any other man, has aided the cause of the Eclectic profession. He has labored more for the future than for himself. He is truly a patriarch, verging upon the grave; and, alas! like many other self-devoted philanthropists, is in limited means. Dr. Elisha Smith, of Brooklyn, N. Y., appeared in a valuable work, about the time of Dr. Beach. His work added great strength to the cause.

Of those who succeeded the above authors, we do not accurately speak. However, Dr. Horton Howard, of Ohio, published an improved work upon Thomson in 1836. At that time, his work was invaluable, giving renewed impetus to the cause, for which his love and devotion had no bounds. After this, came the works of Dr. Mattison, of New York; Dr. Comfort, of Philadelphia. Dr. Sperry, of Connecticut, published a work; then the lectures of Dr. Robinson, of Ohio, which are jewels to-day.

About 1843, there had arisen some differences of opinion among reformed physicians, because large numbers were advancing in the several branches of medical science, extending the Materia Medica, and adopting more enlarged views in the art of healing. This advance finally culminated in the recognition of the reformed practice into that of the Eclectic Medical practice.

The first recognition of this title was in the formation of a Reformed Eclectic Medical Association of Philadelphia, in

1841, of which Dr. P. F. Sweet was President, and Dr. Henry Hollembaek Secretary, who published a Medical Journal in Philadelphia, to support the advanced doctrines of the profession—Dr. Thomas Cook, editor.

About 1848, our cause received a renewed impetuous by the aid of a college, organized in Columbus, Ohio, under the auspices of Dr. T. V. Morrow, to whom we desire to pay this tribute—that he was a man of spotless character. In a few years, the above college was removed to Cincinnati, under the chartered title of the Eclectic Medical Institute. About this time, Dr. A. Curtis, a talented reformer, organized a college in Cincinnati. Other Reformed and Eclectic Colleges soon appeared in Kentucky, Massachusetts, Tennessee, Syracuse, N. Y., Philadelphia, Rochester, N. Y., Macon, Ga.; and a second school (the American) in Philadelphia.

By the year 1853, there were, or had been, ten Reformed and Eclectic colleges in operation, nearly or quite equal in number to the Alopathic schools. This large number of Reformed colleges could be maintained for a few years only, because there were not sufficient students to support them. These colleges gradually diminished; when, in 1863, there were but two in existence, viz.: the "Eclectic Medical College of Pennsylvania," and the "Eclectic Medical Institute of Ohio."

The Eclectic Medical College of Pennsylvania was chartered in 1850, and opened in 1851, in the city of Philadelphia. With increasing popularity, it has held its annual sessions regularly to the present date, 1865. Its honors have been sought and received by Alopathic physicians in the United States, the Canadas, and England. It has been liberally supported by Eclectic students, whom it recognizes and honors; and its degree is acknowledged by the laws of the United States and Canada.

During the past twenty-five years, there have been numerous medical works issued on the Reformed and Eclectic practice, the most of which we are able to notice, viz.: Thomson's Guide to Health; Beach's American Practice, with many revised editions; Smith's Practice; Howard's do, John Thomson's do, Mattison's do; Robinson's Lectures; Fonarden's do; Rafinesque's Medical Flora; Peter P. Good's do; Kost's Materia

Medica; Comfort's Practice; Jones' and Morrow's do; Hill's Surgery; Caulkins & Newton, on Thoracic Diseases; Newton's Surgery; King's Obstetrics and American Dispensatory; Sherwood's Practice; Scudder's do; Jones and Scudder on Obstetrics; Powell & Newton's Practice; Keith's Concentrated Agents. Undoubtedly numerous other Reformed works have been issued; but the above sufficiently illustrate the enlarged medical literature of the present Eclectic School of American Medicine.

We have not space here to enumerate the hundreds of our pioneers in medical reformation, nor is it in our power to do so. We do know, however, that many have labored long without sufficient pecuniary reward, and have sunk to final rest. Of these, we may mention Professor T. Cooke, Drs. Sweet, Brooks, and Burton, of Philadelphia; also Dr. Simms, of Delaware; Dr. Newton, of Massachusetts, and Dr. Jones, of Ohio. We would be glad to collect and perpetuate the names of many others who have devoted their labors to the cause of medical reformation.

American Eclectic medicine, to-day, stands before the world clear, distinct, and bold. By the self-sacrifice of its early pioneers, suffering from persecutions, contemptible falsehoods, and all the obliquy and sarcasm that the Alopathic profession could possibly heap upon them, the principles and practice of the Eclectic profession have become established facts in the history of mankind. Our profession includes within its folds many thousand physicians, whose labors are appreciated by the people at large. It is a school of medical science having its distinctive features well understood by those holding our collegiate degree. Our leading and essential distinction is found in the Materia Medica. In this branch, the Alopathic profession is following close behind us, and abandoning their former "heroic" remedies, as the lancet, mercury, &c. To inform our own profession, we must necessarily give advantages to our opponents, who are seeking our text-books for this purpose. We must look well to our own interests to defend the public good.

A great fault in the Alopathic profession has been its blind adherence to the *mineral* agents in the cure of disease; for,

with two or three exceptions, these agents do not assimilate with the solids and fluids of the human body; hence they are positively injurious. They are beginning to see this great error in themselves; but a more forcible evidence to them is, that public opinion is gradually, with increasing force, turning against them; and thus, for their own safety, they are compelled to follow close at the heels of our profession.

There are other important points of distinction between the Alopathic and Eclectic Schools, particularly in the general and special treatment of diseases, which they do not and cannot understand except they attend our collegiate lectures.

The Alopathic colleges are abandoning their deadly remedies, adopting those peculiar to the Eclectic School, giving themselves the credit (there are some honorable exceptions) of our improvements; and in this dishonorable way they hope to perpetuate themselves, and engulph the Eclectic profession. We shall disappoint them. Let every Eclectic physician be proud of his distinction and well-gained reputation in the noblest of causes for the amelioration of the family of man.

The Alopathic profession may use our published remedies, as they have a right to do. Beyond this, they fail, for they do not comprehend our principles of action.

We acknowledge that every physician has the right to employ any remedy for the benefit of his patient; but when a new remedy appears, due credit should be given where it justly belongs. A few of the lecturers in the Blockley Hospital, Philadelphia, have the manliness to give us credit for some of the remedies which they now employ; but their college professors are more dogmatical, and in most cases take credit for our discoveries.

With some few exceptions, the plain object of the Alopathic profession is to adopt the Eclectic remedies as their own—to advance themselves at our expense, and to submerge us from public favor and future patronage. To maintain our clear distinction, title, honors, and triumph, chiefly devolves upon the many thousand Eclectic physicians of America. They should maintain a proper dignity, be careful of their own rights, unite together as a band of brothers, and use every exertion to support our colleges, text-books, and journals.

Our text-books must, of necessity, impart all possible information to our profession; and in this respect others must be benefitted. This is a natural consequence. All classes of physicians seek these works, especially the Materia Medica.

To day, Eclectic colleges and physicians are revolutionists and innovators upon the Mineral or Alopathic profession, which was founded by Theophrastus Bombastus Paracelsus. Two hundred years ago, they (the Alopathics) were innovators upon the old Galenic practice which had prevailed for about two thousand years. The Galenic practice consisted of simple remedies, very imperfect in theory and principles, and poorly explained. The Alopathic practice combined improvements with science, which has caused terrible destruction to human life. The American Eclectic practice is an improvement upon all past theories and dogmas in medicine, using means only adapted to the natural laws of the human economy.

I do, under great obligations, most respectfully acknowledge the aid of Professor Joseph Fitler, M. D., and all other members of the Faculty of the Eclectic Medical College of Pennsylvania.

This volume is specially devoted to the cause of the Eclectic medical profession of America; and to each and every one of its honorable members who conscientiously seek the real happiness of their fellow beings, the work is particularly commended.

AMERICAN

ECLECTIC MATERIA MEDICA.

PART I.

ABIES BALSAMEA.

NATURAL ORDER — Pinaceæ. SEXUAL SYSTEM — Monœcia Monadelphia.

Common Names.—Balm of Gilead, Fir Tree.

DESCRIPTION.—This tree is found in our Northern States and Canada. It is beautiful and erect, growing to the height of forty feet. The trunk at its base is eight to twelve inches in diameter, gradually tapering to its apex. About fifteen feet from the ground, the large branches spread out, so that its foliage presents a pyramidal form. The leaves are small, narrow and flat, silver-white beneath, and green on the upper side. Flowers, yellow, and as the leaves, about three-fourths of an inch in length.

HISTORY.—From this tree we derive the article known as *Fir*, or *Canada Balsam.* It is sometimes collected by opening the blisters or vesicles found on the tree, but the most available mode is to "box" with an axe, making a cavity sufficient to hold a quart of the resinous juice as it exudes out.

PROPERTIES, &c.—The Fir Balsam is stimulant, diuretic and anthelmintic. Applied externally, it is detergent and cleansing. Very useful in form of salves for ulcers and cancers, by adding white wax, powdered root of San. Can., or Phytolacca. It is valuable in gonorrhea and gleet, in form of pills, combined with powdered cubebs. *Dose*—In fluid state, five to eight drops twice daily. Its special action is on the mucous surface; easily formed into pills for lung diseases, for gonorrhea, &c., by the addition of powdered slippery elm.

ABIES NIGRA.

NAT. ORD.—Pinaceæ. SEX. SYST.—Monœcia Monadelphia.

Common Name.—Black Spruce.

DESCRIPTION.—Found in the Northern States and Canada. Leaves, dark green and short. Either as or in place of fruit, it presents scaly cones about an inch in length.

HISTORY.—Many of these trees grow sixty feet high. At the base fifteen inches in diameter, gradually tapering twenty or thirty feet before the limbs spread out. They are used for lumber in some sections. If any knots or seams are in the tree, a resinous juice exudes out, that hardens by exposure to the atmosphere. This is collected, and known in market as *spruce gum.* It is sometimes adulterated with other gums, and covered with thin sheet lead, sold in drug stores as *chewing gum.*

PROPERTIES.—The Spruce is considered alterative, diaphoretic, and slightly stimulant. The gum is but little used for medicine. The leaves and small stems in form of decoction, aids to form the *spruce beer* that is frequently used in the North, both for a pleasant spring beverage, and for the cure of scurvy and scrofulous diseases.

ABIES CANADENSIS.

NAT. ORD.—Pinaceæ. SEX. SYST.—Monœcia Monadelphia.

Common Name.—Hemlock Tree.

DESCRIPTION.—This is among the largest of forest trees, reaching over a hundred feet in height. The *base* of the tree has attained three feet in diameter. Its outer bark is rough, in broken ridges. Its leaves are numerous, irregular opposite, half inch in length, dark green above, and silvery beneath. Cones scaly, attached at the end of the leaf-stems.

HISTORY.—The Hemlock tree is abundant in Canada, the Eastern, Northern, and Middle States. It forms a large part of the lumber trade, for building purposes. Bark used for tanning.

REMARKS.—Besides the above species of the Spruce tree, Rafinesque, one of the best of authors, mentions the *nigra* or

black, and the *alba* or white Spruce, and six others which he found in Oregon.

PROPERTIES.—Astringent, stimulant and diaphoretic.

Bark.—Its infusion, half an ounce of inner bark to a pint of boiling water, is useful in hemorrhage of stomach and lungs, and for diarrhea. By injection for dysentery and leucorrhea. Dr. S. Thomson gave it prominent notice in his valuable system of practice.

Leaves.—The infusion or decoction of leaves becomes of great use in colds, pleurisy and febrile diseases, by drinking warm and freely. Very useful in the vapor bath.

Gum.—For plasters, combined with Burgundy pitch or wax softened, with fir balsam or tar.

The *oil* and *essence* but little used, may be obtained by distillation of the leaves. Three to eight drops on sugar, is said to produce a powerful impression on the uterus, but of a doubtful character.

ABIES LARIX.

NAT. ORD.—Pinaceæ. SEX. SYST.—Monœcia Monadelphia.

Common Names.—Larch, Tamarac.

DESCRIPTION.—Its trunk is erect, straight and slender.

Leaves, small, thread-like, about two inches long, numerous, starting off from its scaly cones or buds. *Cone* composed of oblong scales.

HISTORY.—The Tamarac tree is found in Canada, Northern New York and New England. It stands erect, with but few limbs until near its top, which reaches sixty and eighty feet high. Generally found in wet and heavy soil with the hemlock, black spruce, and other heavy timber. Its wood is hard and heavy, containing considerable oleo-resinous substance. The inner bark is used for medicine.

PROPERTIES, &c.—The bark is diuretic, alterative, tonic laxative, and slightly cathartic. It has been employed for jaundice and other deranged conditions of the liver. To induce secretions of the kidneys in dropsical affections, to give tone and strength to the alimentary canal, for dyspepsia, dysentery and diarrhea; the decoction has generally been employed. Sometimes for injections of mucous discharges of the rectum, uterus and vagina; and as a wash for sores and ulcers. The bark is not unpleasant to chew.

Decoctum Larix.— Inner bark, ℥ ii. Water, O. iss. Boil ten or fifteen minutes. *Dose*—fl℥ ii to iii.

ABRUS PRECATORIUS.

Common Names.—Liquorice Buds, Red Bean, Love Peas.

DESCRIPTION.—A small ornamental and medical shrub, found from Florida to Brazil, also in Egypt and East Indies. It belongs to monadelphia enneandria, and to the leguminose tribe.

HISTORY.—Well known by its beautiful scarlet seeds with a black spot, used as beads by the Hindus and Mahometans.

PROPERTIES, &c.—The roots and leaves are equivalents to liquorice; sweet, mucilaginous, demulcent and expectorant; a tea of the leaves used for colds and fevers. The seeds, although farinaceous, are hard and tough, yet they are eaten in Egypt. In America, they are considered purgative and deleterious. Perhaps our American is different from the Asiatic kind.

ABUTILON CONDALUM.

Common Name.—Yellow Mallow.

PROPERTIES AND USES.—Common from Canada to Mexico. Equivalent of *Malva* or common Mallow, being mucilaginous, emollient and demulcent. A tea is used in Virginia for internal inflammations, stranguary, gonorrhea, &c. The leaves are edible; the negroes use them in the South in soups, gombos, and calalous. It was one of the plants affording a kind of hemp to the Southern Indians to make nets, fringes, coarse twist cloth, and the frame of the fine feather mantles.

ACALYPHA VIRGINIANICA.

Common Name.—Mercury Weed.

Common from Canada to Florida. Dr. Atkins has found it expectorant and diuretic; useful in asthma, ascites and anasarca. Empirics of the South use it for other purposes. This plant deserves further investigation.

ACER.

Common Name.—Maple Trees.

DESCRIPTION.—Large valuable trees found in the Eastern, Northern, Middle States and Canada. There are several

species. The *A. rubra* colors wool brown. The *A. striatum*, or bird's-eye maple, is used for many articles of furniture. The *A. saccharinum* yields the maple sap from which many thousand pounds of maple sugar are made every spring by Northern farmers.

The *rubra* or red maple (the inner bark), has been used in decoction for inflammatory sore eyes.

ACHILLEA MILLEFOLIUM.

NAT. ORD.—Asteracea. SEX. SYST.—Syngenesia Superflua.

Common Names.—Yarrow, Milfoil.

DESCRIPTION.—The early leaf-stems are radical, three to six inches long. The *leaves* are in double rows, pinnate and crowded, and half an inch long. The flower-stems eight to twelve inches long, giving off alternate small leaves. *Flower*, light dirty color, flat top, double corymb.

HISTORY.—Common to Europe and America. Found in fields, along fences, and skirts of woods. The *A. ptarmica* is occasionally seen in this country.

PROPERTIES.—Astringent and tonic. The expressed juices from the green leaves may be used in three to five drop doses, trraturated with sugar, for hemorrhage of the stomach, and for dysentery. The bruised leaves may be inserted in the nostrils to arrest epistaxis. An infusion of half an ounce to a pint of boiling water, used by enema to arrest dysentery, and per vagina, for relaxed conditions of the uterus. The *yarrow salve* is used in many parts of the country for ulcers and cancers. Half pound of the leaves gently boiled in a pound of fresh lard or suet, then strain through linen, and add white or bayberry wax, sufficient to harden for use.

Achilleine, one of the active principles of this plant, has been used in Europe for intermittent fever.

ACHRAS SAPOTA.

Common Name.—Sapodil.

This is a tree growing in Florida and Bahama. Its fruit is said to be excellent. The seeds acrid, diuretic, useful in emulsion for nephritis, disury and diseases of the urethra.

ACONITUM NAPELLUS.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Monogynia.

Common Names.—Monk's Hood, Wolf's Bane.

DESCRIPTION.—*Roots* perennial, tapering, fibrous. Stem annual, erect, smooth, three to five feet high, terminating in a long sparse spike of flowers. Flowers, a cerulean blue, on erect axilary pubescent pedicles. Calyx composed of three to six sepals. Corolla, three to fifteen petals. Stamens, indefinite number. Anthens adnate. Ovary numerous. Seeds numerous.

HISTORY.—In America there are three species of the aconitum: the *A. uncinatum*, the *A. napellus*, both of which are cultivated in gardens, and in some sections found spontaneous along fences, gardens and fields. The *A. nastum* is a native of America, being found west of the Rocky Mountains, also in Missouri and Virginia.

This plant has been known in Europe for several centuries. The ancient physicians, Theophrastus and others, are supposed to have used the aconite for medical purposes. It has always been known as a poison, presenting various and peculiar symptoms, the most prominent of which are numbness and tingling sensation of throat and

mouth, the extremities lose their power of action sometimes, the pupil contracted, nausea, sometimes vomiting, the heart's action decreases gradually, and death ensues generally in from three to six hours. The faculties generally unaffected. In most all cases, the patient places the hand upon the throat, as if to relieve the pressure there felt.

The plant contains an alkaloid principle called *aconita* oil, albumen, fatty matter, starch and some other properties. Its root and leaves are employed for *tincture* and *extract;* some prefer the root, others the leaves, though they lose their strength and value by drying. Especially when green, the whole plant has a nauseous smell and acrid taste, which soon imparts a pungent feeling followed by numbness and other symptoms. For antidotes but little is known, except that emetics and stimulants are indicated. In this country, is an ornamental though dangerous garden plant.

PROPERTIES, &c.—Narcotic, sedative, sudorific, diuretic. It has been administered for many diseases, some of which are neuralgia, rheumatism, gout, paralysis, epilepsy, and hypertrophy of the heart. For intermittent and other fevers, phthisis, scrofula, amaurosis and uterine diseases. Yet for all these, much uncertainty attends its use.

Powder.—The leaves well cured, dried and pulverized. *Dose*—One to two grains increased. Seldom used.

Tincture.—Dried root in coarse powder, four ounces; pure alcohol one pint, digest several days and filter. *Dose*—Three to five drops three to four times daily. In this form it is generally used to allay the heart's action in fevers, and especially to stop neuralgic and rheumatic pains. In these diseases, its action is more prompt by its paralyzing effects. So soon as it produces symptoms peculiar to itself, the doses should be lessened or stopped altogether. Some of our physicians are very partial to its use, relying upon it in febrile and nervous diseases. The best English authority believes it of doubtful utility.

Extract.—The tincture, either of the leaves or roots, may be reduced by water-bath in the ordinary way, to the consistence of cream. *Dose*—One half to one grain, gradually increased until some of its effects are noticed. Employed for the same diseases as other forms.

Aconita.—This concentrated or alkaloid principle is sometimes used. Uncertain in its action; and sometimes adulterated.

ACORUS CALAMUS.

NAT. ORD.—Acoracea. SEX. SYST.—Hexandria Monogynia.

Common Names.—Sweet Flag, Flag Root.

DESCRIPTION.—Root perennial, horizontal, jointed, rugose, nearly cylindrical, from six to twenty-four inches long; joints

from half an inch to an inch long, white, with triangular shades, or rings of brown and rose. The inside is spongy, and loses much by dessication. Bunches of course fibres hang downwards, and hairy brown fibres spread upwards.

The leaves are all radical, sheathing at the base, and variegated of white, rose and green. They become flat above, green and smooth, with a ridge on each side in the middle. The end is very sharp; length from one to three feet. The stems are similar to the leaves, but commonly longer, and bearing near the middle, on one edge, the spadix or thick spike of flowers.

HISTORY.—This plant abounds in this country, along streams and in marshes. It is found in China, India and Europe. *Acorus* is a name derived from the Greek, and alludes to a belief that it was beneficial for diseases of the eyes. To some extent, the roots are an article of commerce.

PROPERTIES.—The root is the officinal part. It is stimulant, diaphoretic, and tonic. The *infusion*, half ounce to a pint of boiling water, taken as warm as possible, removes capiliary obstructions from colds, relieves colic and flatulency. It is valuable to cover the taste and smell of unpleasant medicine. Equal parts of wine and the infusion, valuable in debilitated dyspeptic cases. The *syrup* of Calamus—half ounce of dried root in half pint of water, reduced one half by boiling, strain; add and incorporate, by gentle heat, one pound of white sugar. A valuable adjunct in prescriptions.

The root may be chewed as a substitute for tobacco. It acts on the salivary glands. The extract used in half-drachm doses, though seldom resorted to.

AGARICUS.

NAT. ORD.—Fungacea. SEX. SYST.—Cryptogamea Fungi.

Common Names.—Punk, Spunk, Touchwood.

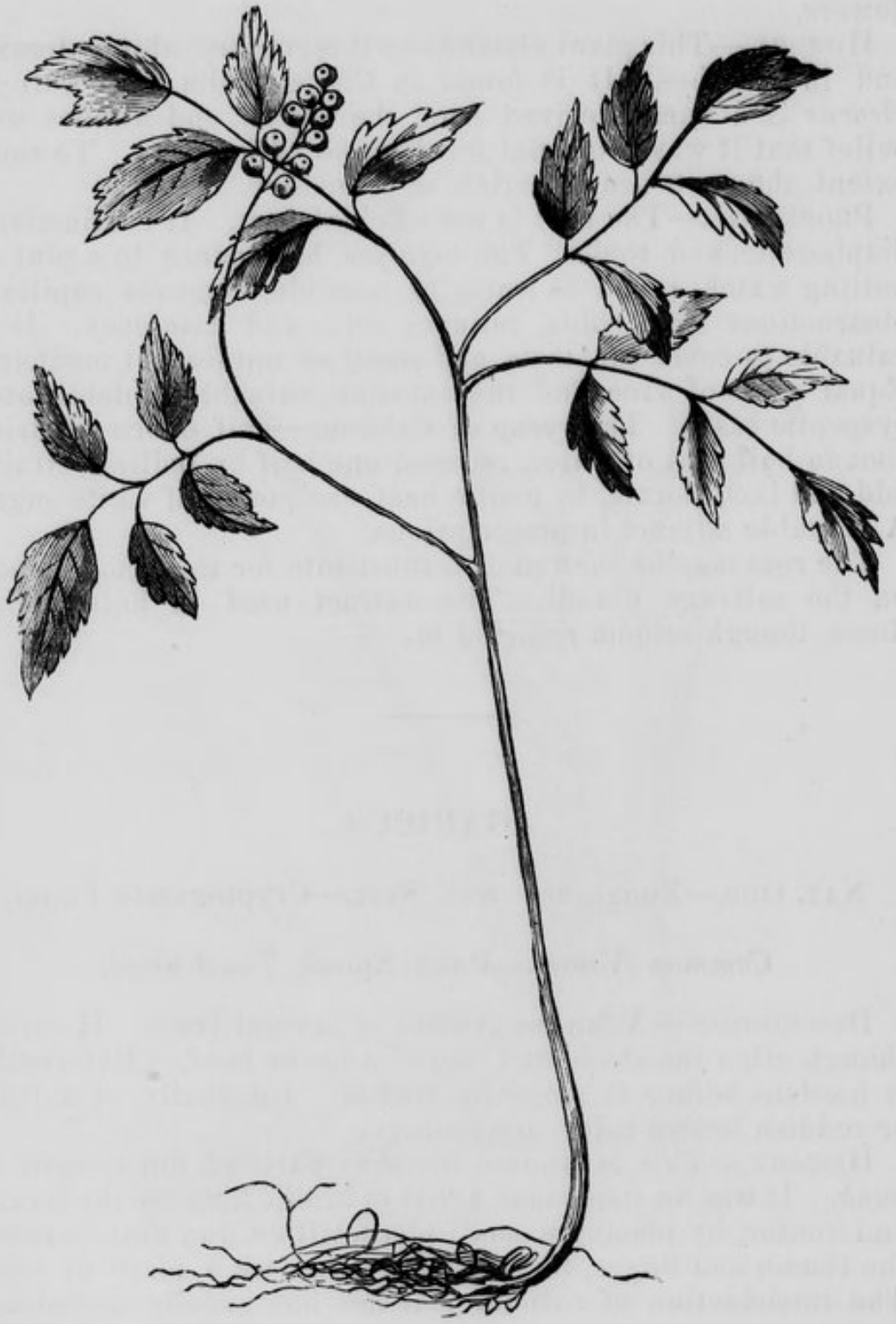
DESCRIPTION.—A fungus growth of several trees. It varies, though often the shape and size of a horse hoof. Externally, it hardens before it stops its growth. Internally, of a light or reddish brown color, and spungy.

HISTORY.—This is known in many parts of our country as *punk*. It was an important agent to kindle fires for the farmer and hunter, by placing a small piece, with a gun flint, between the thumb and finger, then striking fire with a piece of steel. The introduction of sulphur matches has greatly diminished its use.

PROPERTIES.—Astringent. Used in form of peroden, to arrest slight hemorrhages. Seldom resorted to.

ACTEA ALBA.

NAT. ORD.—Actea. SEX. SYST.—Polyandria Monogynia.
Common Names.—White Cohosh, Bane Berry.



DESCRIPTION.—Root two to three inches long, with many small fibres; dark green color. Stem smooth, light green,

two feet high, branching near the top. Leaves inch and a half wide, two and a half long, oval, acute; some partly lobed, serrated, notched; deep green above, light green beneath. Flowers, calyx, four leaves; coralla, four white petals. Pistil, one. Stamens, many. Berries in raceme form of two inches long, white, wax-like, round, tipped with black, on short peduncles.

HISTORY.—Found in Canada, our Northern and Middle States, in rich soil and heavy woods. No one ventures to taste its berries, because they are thought to be poison. This may be a mistake. Gaze on its beauty, but taste not its virtue.

MEDICINAL PROPERTIES.—The profession has but little knowledge of the properties and therapeutical action of this plant. Some writers suppose its virtues similar to the Blue Cohosh.

ADIANTUM PEDATUM.

NAT. ORD.—Filices. SEX. SYST.—Cryptogamea.

Common Name.—Maiden Hair, Rock Fern.

DESCRIPTION.—Large, fibrous, perennial, brown root. The stem is eight or ten inches high, and branching into several

leaf stems, that give off the pinnated fonds or leaves. The shape is oblong, quadrangular; the outside or end being rounded and crinate, while two sides are square. The upper side is jagged, and bears the fructification. Color, pale green; surface smooth, with many oblique nerves.

HISTORY.—The Rock Fern is found in Canada, and most of our States. Like most of the ferns, it has a pleasant, aromatic odor. Rafinesque says that it has been exported from Canada to England, as a substitute for the *A. Capilveneris* of Europe. It should not be mistaken for the Sweet Fern shrub.

The old English works say that it is good for "falling sickness, and other diseases of the brain. The lye of it, bathed upon bald places, causeth the hair to grow again;" and used to prevent enchantments.

PROPERTIES.—Expectorant, refrigerant, and slightly astringent. The infusion forms a pleasant, cooling drink in febrile diseases; especially in pleurisy and pneumonia it is invaluable. The syrup, infusion, and decoction are the modes of preparation.

ADICEA GLABERRIMA.

Common Names.—Cool Weed.

HISTORY.—Grows in all parts of the country, and different from the nettles.

PROPERTIES.—Cooling and antispeptic. The leaves, applied externally, relieves local inflamation and pain. Externally, the infusion is used for the poison of Rhus or Sumac. The Osage Indians called it *Newasha*, meaning, as cool as ice.

AGAVE AMERICANA.

NAT. ORD.—Bromeliacea. SEX. SYST.—Hexandria Monogynia.

Common Names.—American Aloes, Century Plant.

DESCRIPTION.—An evergreen plant, with radical leaves from two to six feet long. The central stem grows in a few months eighteen to twenty feet high, bearing a beautiful pyramid of yellow blossoms..

HISTORY.—Found in Florida and Mexico. According to Rafinesque, it blossoms once in fifteen or twenty years, when the stem and leaves die, and lateral offsets start from the root. The Mexicans use the old leaves for making thread and cloth. Sheep feed on the blossoms.

PROPERTIES.—G. Perrin, M. D., recommends the juice of this plant for scorbutus. Thought to be diuretic and anti-syphilitic.

ACTEA RUBRA.

NAT. ORD.—Actea. SEX. SYST.—Polyandria Monogynia.

Common Names.—Red Cohosh, Poison Berry, Bane Berry.

DESCRIPTION.—Root, many spreading fibres; reddish brown color. Stem round, smooth, twelve to eighteen inches high,

branching near the top; purple color. Leaves ovate, acute, serrated; yellowish green above, bluish green beneath. Flowers, four white petals. Pistil, one. Stamens, many. Berries oval, oblong, red, on raceme, inch and a half long.

HISTORY.—Found in Canada, the Northern and Middle States. Same locality as the Actea Alba, each contrasting their beautiful forms and color. Indian tradition says they are poison, and the white man lets them alone. Who will put them in the right place as therapeutical agents?

MEDICINAL PROPERTIES.—Not fully ascertained.

AGAVE VIRGINIANICA.

NAT. ORD.—Amarillidacea. SEX. SYST.—Hexandria Monogynia.

Common Names.—Virginia Aloes, Rattlesnake's Master.

DESCRIPTION.—Root tuberous. Leaves radical, fleshy and lanceolate. Flowers funnel shape, green, yellow, in spike-like form, on the flower-stem that arises from the centre of the plant.

HISTORY.—Found in most of the Southern States, on dry and rocky ground.

PROPERTIES.—Bitter, tonic, and carminative properties. Used in form of tincture for colic. Leaves chewed to relieve diarrhea, and applied to arrest the poisonous bites of reptiles.

ALCHEMILLA ALPINA.

Common Name.—Ladies' Mantle.

HISTORY.—A plant found in Canada, and on the White Mountains.

PROPERTIES.—Astringent and tonic. Used for hemorrhages and relaxed condition of stomach and bowels.

AGRIMONIA EUPATORIA.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Digynia.

Common Names.—Cockle Bur, Stickwort.

DESCRIPTION.—Root perennial. Stem hairy, rounded, one or two feet high; seldom branched. Leaves alternating, the inferior larger, hairy, pinnate or compound, having from five to nine larger folioles, and some smaller ones interposed, which are broad, but short, and much divided. All the folioles are sessile and opposite, except the last. Shape oval or oblong, acute at both ends; margin deeply and unequally serrated. Flowers small, sessile. Calyx green, bearing the corolla and stamina, bristly, five-toothed. Corolla yellow, with five oblong petals. Stamina yellow, short, anthers oval. Fruit, a small green bur, formed by the permanent calyx, enclosing two seeds.

HISTORY.—This plant is found plentifully in this country, along fences, in uncultivated fields of dry soil. It grows in Europe and Asia. Noticed in works of two centuries past, as useful to "fortifiy the liver; helps pissing of blood, and the bites of serpents."

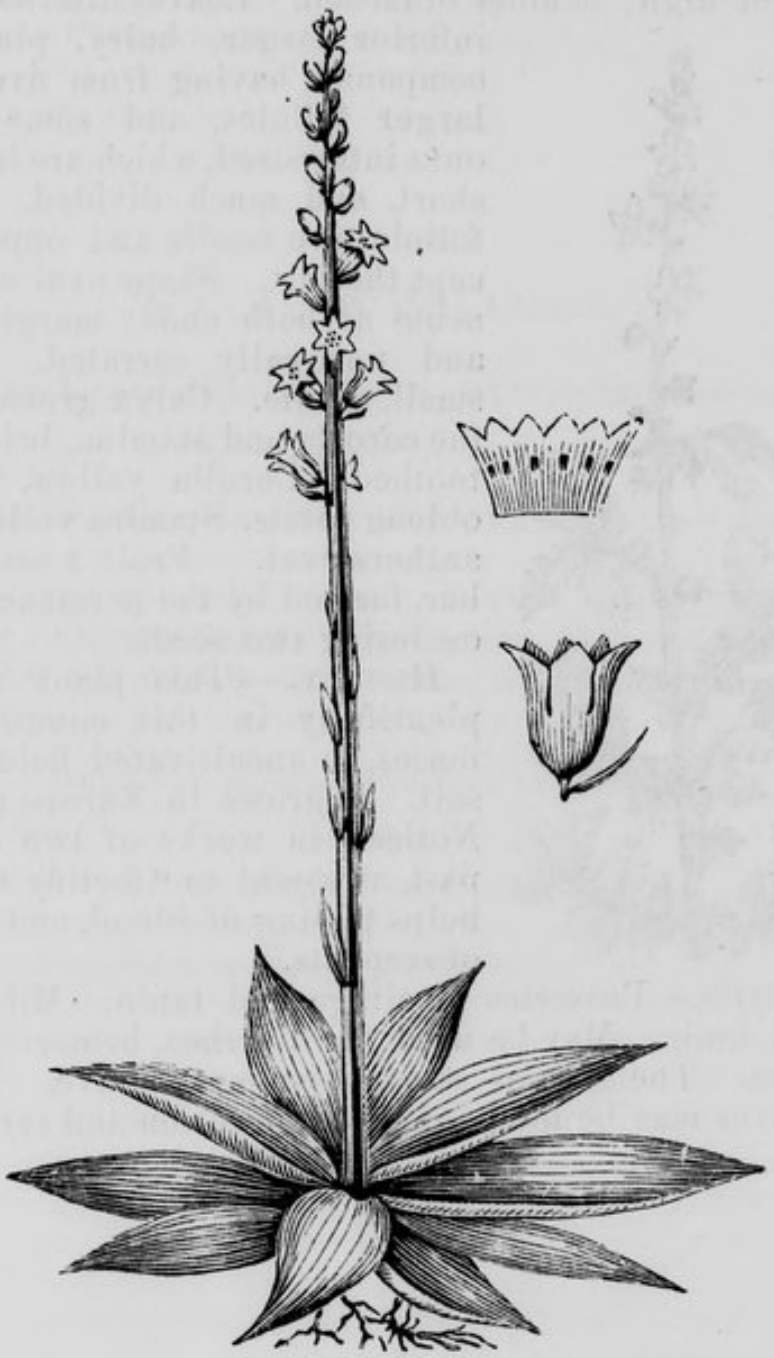
PROPERTIES.—Possesses mucilage and tanin. Mild, astringent and tonic. May be used for diarrhea, hemorrhages and leucorrhea. The root is said to be most active. The powdered leaves may be used—infusion, decotion and syrup.

ALETRIS FARINOSA.

NAT. ORD.—Aloides. SEX. SYST.—Hexandria Monogynia.

Common Names.—Blazing Star, Star Grass.

DESCRIPTION.—Root perennial, one to two inches long; profusely set with small light-colored fibres. It contains woody



fibres, and when dry, not easily broken. Leaves radical, six to twelve, spreading on the ground like a star; unequal in size, lanceolate, entire, smooth, longitudinal veins, and sharp at the end. Flower-stem or scape, from the centre of the leaves,

twelve to eighteen inches high. Flowers white, forming a long, slender, scattered spike on the upper third of the flower-stem.

History.—Nearly all American writers confound this plant (the *Alteris Farinosa, Blazing Star,*) with the Helonias Dioica, or Devil's Bit. The only resemblance in these two plants is found in the appearance of their radical leaves. The roots and flowers are quite different from each other. The Blazing Star is found in most sections of our country.

PROP., &c.—Bitter tonic. Useful in debilitated condition of stomach. May be used in decoction, tincture and syrup. Most of the works ascribe properties and uses to this plant that evidently belong to Helonias Dioica.

ALLIUM CEPA.

NAT. ORD.—Liliacea. SEX. SYST.—Hexandria Monogynia.

Common Name.—Onion.

DESCRIPTION.—The Onion is a biennial plant, with an oval, flattened bulb, covered with thin membrane. Leaves round, hollow, or fistular. Flower-stem fistular, one to three feet high, bearing on its top a cluster of greenish white flowers.

History.—Found in all parts of the world. Noticed in the early records of the ancients. Some authors suppose it referred to in the Bible—Numbers xi., 12. The bulb varies in size and in its color.

Allium Porrum.—Leek.—This small, bulbous plant inhabits all parts of the world, though in many species. It grows wild, and most plentiful in heavy timbered woods. Its bulb small, white and oval. Leaves starting from its spathe, two or three in number, expanding three inches in width, and six or more in length. *Properties* similar to the Onion.

Allium Sativum.—Garlic.—Known in all countries, and cultivated in our gardens, for sale. The English garlic has the preference, being the largest, and extensively imported to this country. The garlic has several bulbs clustered together in the same white, silvery membrane. Its properties more active than the *Leek.* Its chief use is for drafts on the feet, as counter-irritating and revulsive. It contains a volatile oil.

PROP., &c.—Stimulant and diuretic. Used as food in the fresh state, it increases the appetite. Over doses excites gastric irritation and febrile action. It increases the secretions of the kidneys. When boiled, they become deprived of the active volatile principle, and make a wholesome diet. When

roasted, useful, applied to boils, to hasten suppuration. The ancients used the onion and garlic "against the plague, for warming a cold stomach, to provoke the terms and bring away the secundines."

ALNUS SERRULATA.

NAT. ORD.—Betulacea. SEX. SYST.—Monoecia Tetrandia.

Common Name.—Tag Alder.

DESCRIPTION.—This shrub or bush grows in clusters. The stem is smooth, branched near the top, five to fifteen feet high.

Leaves ovate, veined, serrate, two and a half inches wide, to three and a half long, on short petioles. Flowers reddish color.

History.—Found from Canada to Florida, in wet ground, along rivers and swamps. The wood, burnt to charcoal, has been used in making gunpowder. The Alnus is different from the Prinos, or *Black* Alder, that is much used by the Eclectic profession. Several other species, the *Alnus Undulata*, *A. Glutina*, and the *A. Glauca*, are found in this country.

PROP., &c.—Astringent and emetic. The decoction of the bark has been employed to arrest hemorrhages of the lungs and stomach. It is also useful in syphilitic and scrofulous affections. An active principle, called *Alnuin*, has been obtained from this alder, and used in doses of one to two grains.

ALTHEA OFFICINALIS.

NAT. ORD.—Malvacea. SEX. SYST.—Monadelphia Polyandria.

Common Name.—Marsh Mallow.

DESCRIPTION.—The root is one to two feet long, branching; dark brown color outside, white within. Stem erect, downy,

three to five feet high; few branches. Leaves opposite, ovate, serrate, acute, downy, ribbed. Flowers at the top of stem, thick, heavy; reddish purple color.

History.—The Marsh Mallow is found along the borders of our sea coast, and occasionally in prairies and wet ground. The root should be collected in the fall, carefully scraped and dried, when it is ready for use.

The root of the Althea Officinalis of Europe is much imported and used in this country, though probably not better than

ours; and both contain a large proportion of mucilage and starch, with a crystalizable principle called *Altheine*—phosphate of lime and woody fibre. In France, it is a favorite expectorant remedy, affording both nutriment and medicinal properties.

PROP., &c.—The Althea is a valuable demulcent, with mild diuretic properties. The infusion or syrup is one of our most useful vehicles for the administration of other remedies, in the treatment of pneumonia, gastritis, enteritis, nephritis, stranguary, gleet and gonorrhea. For local internal inflammation, it should be drank in large quantities, at discretion. The infusion should be prepared for immediate use, because in a few days fermentation is likely to take place.

Infusum Althea.—Take of the root, broken or bruised, ℥ss; boiling water, Oi. Sweeten if desirable, and use at discretion.

Syrupus Althea.—Take of a good, fresh root, ℥vii; water, Oiv. Boil to two pints, and then strain through muslin, allowing this to stand twenty hours; turn off, and add sugar, lbs. iiss; then simmer gently for half an hour, and, when cool, bottle for use, standing in a cool place. This is a most valuable syrup for compounding with other agents for inflammation of the stomach, bowels, kidneys, for gonorrhea, &c., &c.

AMARANTHUS.

NAT. ORD.—Amaranthacea. SEX. SYST.—Monoecia Pentandria.

Common Names.—Amaranth, Prince's Feather.

DESCRIPTION.—Of this large plant, there are two or more species. The *A. Hypocondriacus* has an upright stem of three to four feet. Its leaves are oblong and acute, with purple spots. The flowers are dark red, in plume-like clusters. The *A. Melancholicus* has smaller leaves. The flowers are red, on long racemes, and drooping.

History.—The first of these two is often called *cock's-comb*, or *prince's feather*. The last is the *love lies bleeding*. They are found in gardens, cultivated for their beauty.

PROP., &c.—The Amaranth is an active astringent, though seldom used. It has been resorted to for diarrhea, dysentery and immoderate flow of the menses. Used in decoction.

AMBROSIA.

NAT. ORD.—Asteracea. SEX. SYST.—Monoecia Pentandria.

Common Names.—Rag Weed, Hog Weed.

DESCRIPTION.—The *A. Elatior* has a slender stem one to two feet high. Leaves opposite. Flowers in terminal racemes, small and green.

History.—It is found in dry fields, in most parts of our country. It is avoided by cattle and horses.

PROP., &c.—Considered emolient and antiseptic. Has been used in warm and cold poultices, to discuss swellings and reduce inflammation. Seldom used.

The *A. Trifida* is a large annual plant, four to six feet high. Leaves opposite, broad, lobed and serrated. Flowers obscure, in leafless spikes. It is aromatic, stimulant and astringent.

AMYGDALUS COMMUNIS.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Monogynia.

Common Name.—Almond Tree.

DESCRIPTION.—A tree fifteen or twenty feet high. Leaves oblong, lanceolate, accuminate, three inches long, and one in width; light green. Flowers pink color, starting before the leaves. Calyx reddish. Petals five in number. Many stamens, which are shorter than petals. Drupe, or fruit-shell, flattened, ovoid, pitted. Fruit oblong and flattened. Shell and fruit yellow, brown and cream color.

History.—The Almond tree is a native of Asia. Cultivated in Florida and farther South. Grown, and imported from the South of Europe.

There are several varieties of the Almond tree. The chief in use are the *Amygdala Amare*, or *Bitter Almond*, and the *A. Dulcis*, or *Sweet Almond.*

The *Sweet Almond* is extensively imported from Malaga, and found in many of our shops and stores. The fruit, expressed, yields a fixed oil. The bitter almond yields a fixed oil, a little essential oil, and hydrocyanic acid.

PROP., &c.—The oil of *Sweet Almonds* is a demulcent. Has been often used in combination to allay irritation of the alimentary canal, the kidneys and urethra. Two or three drops in the ear often relieves pain and restores hearing, by allaying irritation and softening the wax. The oil of Bitter Almond seldom. These oils are combined with potassa and lard, to form the Almond *soap.*

AMYGDALUS PERSICA.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Monogynia.

Common Name.—Peach Tree.

DESCRIPTION.—This small tree rises from eight to twelve feet, branching. Leaves numerous, alternate on the branches, ovate, accuminate, serrated edges, two inches wide, three in length, with short petioles. Flowers pink color. Calyx five cleft. Petals five. Fruit fleshy. Nucleus, or seed shell, compressed oval. Kernel flattened, reddish.

History.—Known to the Indians before the discovery by Columbus. Found in Asia, and formerly in Europe. The Eastern States and Canada too cold for its growth. Extensively cultivated in the Middle States for its delicious fruit. The tree is short-lived, and requires great care. Before the leaves appear, it presents its beautiful pink blossoms, which is known in love's vocabulary, as "Here I fix my love."

PROP., &c.—Arterial, sedative, mild purgative, and vermifuge. Has been employed for worms, nephritis and gravel. To a very good effect I have used the infusion of the leaves for bilious colic. Leaves (green) one ounce, boiling water one pint. When cold, give in wine-glass doses every four hours. The kernels contain an oil similar to the bitter almond. They are a valuable adjuvant in the Comp. Tinct. Myrrh (No. 6).

AMYRIS FLORIDIANA.

NAT. ORD.—Terebinthacea. SEX. SYST.—Octandria Monogynia.

Common Name.—Florida Balsam.

History.—This plant is found in Florida. It is similar to the *A. Elemifera*, which yields a gum resin, and obtained from the West Indies.

The berries of the Florida Balsam are black and fragrant, the leaves aromatic. It also yields the *Gum Elemi*, Balm of Gilead, &c.

PROP.. &c.—Diaphoretic and stimulant. Powdered leaves used as a cephalic snuff, and the infusion a wash for weak eyes.

ANACARDIUM OCCIDENTALE.

NAT. ORD.—Terebinthacea. SEX. SYST.–Enneandria Monogynia.

Common Name.—Cachewnut.

History.—A tree found from Florida to Brazil. Its wood admits of fine polish. It yields a nut, from which is obtained the oil *Cachew.*

PROP., &c.—Astringent and caustic. Used to arrest hemorrhages, and for skin diseases.

ANAGALLIS ARVENSIS.

NAT. ORD.—Primulacea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Red Pimpernel.

DESCRIPTION.—Stem procumbent. Leaves ovate, on opposite branches. Flowers scarlet.

History.—Grows from Canada to Carolina. Europe said to be its native place.

PROP., &c.—Said to be nervine, expectorant, and stimulant. The ancients used it for hydrophobia. In Europe, used for mania, epilepsy and melancholy.

ANGELICA ATROPURPUREA.

NAT. ORD.—Apiacea. SEX. SYST.—Pentandria Digynia.

Common Names.—Masterwort, Angelica.

DESCRIPTION.—Root perennial, reddish. Stem smooth, hollow, purple, three to five feet high. Leaves pinnate, partially lobed, serrated. Flowers white, tinged with green.

History.—Found in Canada, and most parts of the United States. The roots possess a strong, disagreeable smell. The taste is acrid, and blisters the lips.

PROP., &c.—Carminative, stimulant, and emmenagogue. The infusion has been used for colic and hysteria. *Dose*—thirty grains of the powder. Seldom used. The Indians have used it for suicide.

ANDROMEDA ARBOREA.

NAT. ORD.—Ericides. SEX. SYST.—Decandria Monogynia.

Common Name.—Sorrel Tree, Elk Wood.

DESCRIPTION.—A small tree from fifteen to forty feet high. Branches cylindrical, slender. Bark of the stem light brown, of the old branches reddish, of the young shoots green.

Leaves large, crowded, alternate and petiolate, from three to six inches long, from one to two broad, oblong, base acute, end acuminate, margin entire, nerve with regular veins, surface smooth, glossy, green above, glaucous beneath.

Flowers white, terminal, one-third of an inch long, forming a large, loose panicle. Calyx small, greenish, with five acute teeth. Stamina and pistil inside of the corolla; ten equal filaments, anthers small mutic linear. Pistil one, germ oval, style pentagonal persistent, stigma obtuse. Capsul ovate mucronate, reddish brown, with five cells containing many small subulate seeds, imbricate and membranaceous.

History.—The Alleghany mountains, and the hills and valleys diverging from them, as far as their most southern

limits in Georgia and Alabama; but seldom met north of Virginia and Kentucky, although Schoepf gives New York as its northern range. It is unknown in the alluvial and limestone regions.

The *A. Ovalifolia*, *A. Polifolia*, *A. Mariana*, and some others, none of which are trees, are said to be poisonous.

PROP., &c.—The leaves and wood are a fine astringent acid, refreshing, cooling, allaying thirst, and anti-febrile. Clayton says that a decoction of the leaves mitigates the ardor of fevers, and helps their cure. It is useful in all cases where a refrigerant astringent is needed. A kind of lemonade can be made with it. It may be substituted to the *Rhus glabrum*, or sumac, and the cranberries. Like sumac, the leaves impart a black color to wool. The wood is soft, reddish, and will not burn; but like the buck-eye wood, may be used to make chip hats and paper.

ANETHUM FENICULUM.

Common Name.—Fennel.

History.—Cultivated in gardens, and found in fields.

PROP., &c.—Seeds aromatic and pungent. A substitute for Anisseed, but different taste. The sweet fennel of Italy is bleached and eaten like celery.

ANGELICA LUCIDA.

NAT. ORD.—Apiacea. SEX. SYST.—Pentandria Digynia.

Common Names.—Angelic Root, Belly-ache Root.

History.—A plant found in most of the States. Root like Ginseng, taste similar, smell like anisseed. Highly valued by the Southern Indians, and cultivated by them; used as a carminative, and in cookery. This root is said to give the excellent flavor to Virginia hams and pork, when hogs feed on it.

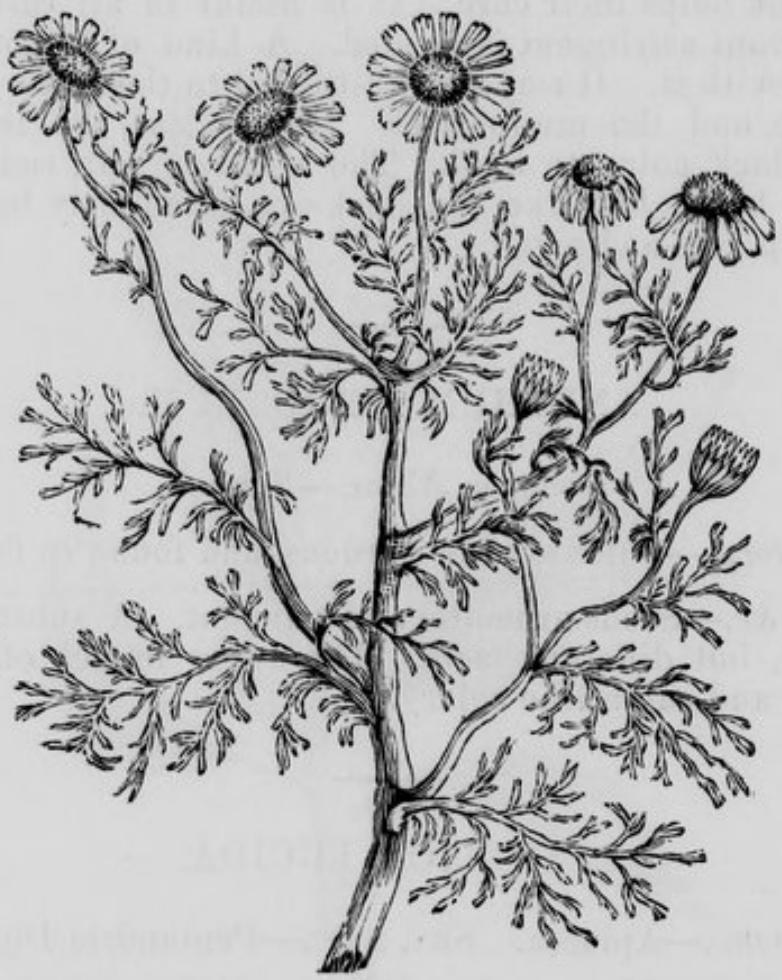
PROP., &c.—Aromatic, tonic, nervine, emmenagogue. It is useful in colics, hysterics, menstrual suppressions, chlorosis, anorexia, &c. The powdered seeds kill lice. Schoepf and Henry mention the *A. sylvestris* as American, which is erroneous, they meant this species. Henry adds that it is sialagogue and repellent, useful to disperse tumors, and the root an antidote against yellow fever, chewed when visiting the sick.

ANTHEMIS COTULA.

NAT. ORD.—Polygamia. SEX. SYST.—Syngenesia.

Common Names.—Wild Chamomile, Mayweed.

DESCRIPTION.—Root annual, crooked, fibrous. Stem and leaves covered with short, adpressed, wooly hairs. Stem from



one to two feet high, erect, and very much branched, irregularly angular and striated. Branches corymbose. Leaves alternate, sessile, flat, doubly pinnatifid, or almost pinnate, carinate beneath in the middle. Pinnules flat, unequal, linear, acute, entire or trifid. Flowers, many, forming a terminal corymb, each on a naked peduncle, erect, grooved, and thicker upwards. Calyx hemispherical, imbricated, hairy, rough. Scales linear, pale green, nearly equal, scariose on the margin and end. The central florets of the disk are numerous, and bright yellow; those of the rays are ligular, from seven to twelve, and white. Phoranthe, or common receptacle, conical, covered with short, bristly chaff, or palea. Central florets tubular, glandular, five-toothed, with five stamina; anthera

united. Germ inferior, obvate. Style filiform, bifid. Stigmas two, filiform reflexed. Seeds brown, obovate, four sided, grooved, and tuberculated.

History.—Our plant is indigenous, and not naturalized, as mentioned by some botanists. It is spread all over the United States, from Maine to Louisiana, but confined almost everywhere to open fields. It is never found in woods, but delights in the sun, road-sides, stony places and old fields, or near towns and villages.

PROP., &c.—The same as the Anthemis Nobilis, but weaker and less pleasant to the taste; it may be substituted thereto with safety. It is an active tonic, sudorific, stimulant, anodyne, emetic and repellent; extensively used throughout the country for rheumatism, hysterics, epilepsy, dropsy, asthma, scrofula, &c., both internally and externally. The external use in warm baths or fomentations is proper in rheumatism, hysteric fits, suffocations, hemorrhoidal swellings, pains and contusions. The decoction and infusion are given for colds, fevers, rheumatism, asthma, &c., but a single cupful, if too strong, may produce vomiting, and even a weak infusion nauseates the stomach. It acts always as a sudorific, promoting copious sweating, and is often beneficial as an auxiliary to an emetic. In large doses it becomes emetic; in small doses it is a gentle tonic and diaphoretic, useful whenever it is needful to promote perspiration in fevers.

APIOS TUBEROSA.

Common Names.—Indian Potato, Potato Pea.

History.—A valuable plant, cultivated by some of the Indian tribes for the roots, which are similar to potatoes. Eaten boiled, roasted and in soups.

APIUM GRAVEOLENS.

NAT. ORD.—Unbellifera. SEX. SYST.—Pentandria Digynia.

Common Name.—Celery.

History.—When the stems are bleached, it is good for soups and other culinary purposes. It stimulates the digestive organs, increasing the appetite. Has been used for liver complaints. When raw, it corrects a fetid breath.

APIUM PETROSELINUM.

NAT. ORD.—Apiacea. SEX. SYST.—Pentandria Digynia.

Common Name.—Parsley.

DESCRIPTION.—Root three to six inches long, branched and fleshy. Stem smooth, jointed, branched, two to three feet high. Leaves compound; pinnate, wedge-shape at the base, acute. Flowers whitish green.

History.—Found in gardens and cultivated fields. Boiled for eating, by some. The root has a sweetish taste.

PROP., &c.—Diuretic and sudorific. In decoction, increases the urine, relieving stranguary, nephritic pains and gonorrhea: In form of poultice, useful for local inflammation, as boils, tumors, swelled breast and glands. It produces an oil, said to be diuretic. The seeds have been used for syphilis.

APLOCERA MARITIMA.

Common Name.—Toothache Grass.

History.—Grows in the Southern States. When cows eat it a bad taste is given to the milk.

PROP., &c.—The root is acrid, bitter, sialagogue. Used for the toothache.

APOCYNUM CAMNABINUM.

NAT. ORD.—Apocynacea. SEX. SYST.—Pentandria Digynia.

Common Name.—Indian Hemp.

DESCRIPTION.—Like the *A. Androsemifolia*, only with smaller leaves and shorter panicles.

History.—Same locality as the *A. Androsemifolium.* The *A. Hypericifolium* is also another variety of the genus Apocynum.

PROP., &c.—The properties, action and indication similar to the *A. Androsemifolia.*

Concentrated.—The *Apocynin*, containing resinous and neutral principles, is a convenient form of administration. *Dose*—One fourth to one half grain, as diaphoretic and alterative. For a cathartic, use larger doses.

APOCYNUM ANDROSEMIFOLIUM.

NAT. ORD.—Apocynacea. SEX. SYST.—Pentandria Digynia.

Common Names.—Bitter Root, Dog's Bane.

DESCRIPTION.—Root perennial, large, bitter and milky, like the whole plant. Stem very smooth, as well as the leaves,

with a tough fibrous bark; from three to five feet high, with few branches and leaves, cylindrical, often rose colored; forked several times upwards. Leaves opposite, petiolate, pale beneath, ovate, acute, entire, two or three inches long, with one large nerve. Flowers on cymose racemes, lateral and terminal; always longer than the leaves, lax nodding and few flowered. Minute acute bracts on the peduncles. Calyx short, five cleft, acute. Corolla white, tinged with red, similar to a little bell, divided into five spreading acute segments at the top. Stamina five, with short filaments, anthers connivent arrow-shaped, cohering with the stegyne or singular body, covering and concealing the pistils (mistaken for a stigma by many botanists); it is thick and round. Five glandular corpuscles (called nectaries by some), alternate with the stamina. Two pistils ovate, concealed, two sessile stigmas. Fruit a pair of follicles, slender, linear, acute, drooping, cylindrical. Seeds numerous

oblong, embricate, seated on a central receptacle or spermophore, and crowned by a long down.

History.—Rather a common plant, found from Canada to Georgia and Missouri. It grows in woods, hills, dry or sandy soils, along fences, and over old fields. It contains a white milky juice, intensely bitter. It contains a bitter principle, imparted to water and alcohol, a volatile oil, and caoutchouc, a principle similar to India rubber. Rafinesque says, from its stem may be obtained thread similar to hemp, which can be made into cloth; from its pods, cotton; from its blossoms, sugar.

PROP., &c.—Emetic, cathartic, diuretic, sudorific, anthelmintic, expectorant. It has been used in dropsy, hepatic affections, scrofula and venereal diseases. The Indians used the milky juice for syphilis. It has been employed for intermittent fevers, and as emetic and cathartic, to avoid great prostration. The powdered bark, the infusion and extract, has been used.

Dose—Three to four grains of powder, alterative. Cathartic and emetic, twenty-five to thirty-five grains.

AQUILEGIA CANADENSIS.

Common Name.—Red Columbine.

History.—A beautiful native plant, adorning rocky ground, and by some cultivated for its beauty. Similar to the *A. Vulgaris*, of Europe; the seeds, roots and flowers of which are used.

PROP., &c.—Diuretic, emmenagogue and sudorific.

ARABIS RHOMBOIDES.

Common Name.—Meadow Cress.

History.—It is equivalent to the water cress. Its tuberous roots are edible, as well as the leaves, and similar to the radishes.

ARACHIS HYPOGEA.

Common Names.—Ground Nut, Pea Nut.

HISTORY.—Cultivated in Florida and other Southern States, and by the Indians before the discovery by Columbus, and by them called *Mani.*

PROP., &c.—The seeds or nuts contain a large amount of oil, fit for various uses. Large quantities of this fruit are roasted and used as a luxury by the people.

ARALIA NUDICAULIS.

NAT. ORD.—Araliacea. SEX. SYST.—Pentandria Pentagynia.

Common Names.—Spikenard, Sarsaparilla, Wild Liquorice.

DESCRIPTION.—Root perennial, brown, yellowish, cylindrical, creeping, twisted, sometimes many feet long, thickness of the finger. The stem is straight, leafless, cylindric, with three small, simple, naked umbels at the end. Leaf ovate, oblong, rounded at the base; end acuminate, margin serrulate, surface smooth. Flowers from twelve to thirty in each umbel, pedunculate, small, yellowish. Calyx greenish, obconical, united to the pistil, crowned with five teeth. Petals five, oboval, obtuse, yellowish white. Five stamina and five styles filliform. Berries small, round, similar to the elder-berries in size.

History.—The genus *Aralia* is the type of a natural tribe, the Aralides, to which *Panax* or Ginseng belongs likewise; this last differing only by having two styles and two cells, instead of five. This family differs from the Umbellate by producing berries instead of two seeds. All the plants of this genus and family have active properties. Two other American species, *A. Racemosa* and *A. Hispida*, have the same properties as this, and may be used for each other. The *A. Spinosa*, or Angelica tree, partakes of the same, and also of the properties of Angelica root and *Xanthoxylum*.

The Spikenard is found in all sections of the country, in good soil, deep woods, groves and valleys.

PROP., &c.—Stimulant, diaphoretic, alterative, and expectorant. It possesses balsamic properties, a fragrant odor, a warm, sweetish, mucilaginous taste. By country physicians, and by families, it has beeu used as a substitute for sarsaparilla for venereal diseases, scrofula, gout, rheumatism, and to purify the blood. In fermentations for erysipelas, ring-worm and other skin diseases. As an expectorant, for colds and pulmonary diseases, and for jaundice. The root is officinal. Infusion and syrup the ordinary forms of its use.

ARALIA HISPIDA.

NAT. ORD.—Araliacea. SEX. SYST.—Pentandria Pentagyni a.

Common Names.—Dwarf Elder, Tooth Tree, Angelica Tree.

DESCRIPTION.—Stem erect, one to two feet high, its lower half covered with prickles. Leaves bipinnate, compound, ser-

rate, oval, pointed. Flowers on long peduncles, followed by dark blue berries, of a nauseous taste.

History.—Found in open woods, in fields and road-sides.

PROP., &c.—Diuretic, sudorific, alterative. Used for diseases of the urinary organs, dropsy, gravel, &c. The root is used, and infusion or decoction the mode of preparation.

ARALIA SPINOSA.

NAT. ORD.—Araliacea. SEX. SYST.—Pentandria Pentagynia.

Common Names.—Prickly Elder, Shot Bush, Pigeon Tree.

DESCRIPTION.—A small tree, ten to thirty feet high, branching near the top. The small branches have some prickles. The flowers are white, in clusters, followed by dark blue berries, when ripe. Leaves bipinnate, oval, serrate, with small prickles on the edges.

History.—Grows in the middle and Southern States. It is found in some gardens to the height of forty feet. The bark of this tree is grayish outside. When chewed, it imparts a pungent, aromatic taste, similar to prickly ash.

PROP., &c.—Stimulant, sudorific, emetic, cathartic, sialagogue. It is said to cure the bite of rattlesnakes by emesis, &c. The Indians use it for dropsy, syphilis, toothache, colic, rheumatism, &c., in decoction. The extract is also useful. The fresh roots are almost poisonous in the green state; they must be roasted and pounded. Even then they act as a violent emetic. The berries are said to be a certain cure for spring intermittents, united to the bark. They have a good smell, and are eaten by wild pigeons. The bark has an aromatic taste, very useful in chronic rheumatism. Equivalent of *Xanthoxylum*, but milder. The leaves and seeds are expectorant. The juice of the berries and oil of the seeds have been used for ear-ache and deafness.

ARBUTUS UVA URSI.

NAT. ORD.—Ericinus. SEX. SYST.—Decandria Monogynia.

Common Names.—Uva Ursi, Upland Cranberry.

DESCRIPTION.—Roots perennial, creeping, slender. Stem procumbent, trailing, the young shoots tending upwards, cylin-

dric, cuticle pealing off. Leaves numerous, scattered, variable in shape, narrow or broad, always acute and alternate at the base, on short petioles, thick, evergreen, smooth; shining above and pale beneath. Flowers in a small racemose cluster, from six to twelve together, of a pale, rosy, flesh color. Peduncles shorter than the flowers, colored, reflexed, with some minute acute bracts, two of which are in the middle. Calyx colored, with five rounded, acute segments. Corollo ovate, urceolate, white, with a rosy tinge; transparent at the base, contracted above, hairy inside, with five acute, short, and reflexed segments or teeth. Ten equal stamina inserted at the base of the corollo, with hairy, short, cuneate filaments, anthers equal in length, bifid, each part with two pores. Germ round, style straight, longer than the stamina, stigma obtuse. A black, indented and persistent ring around the base of the

germ, called nectary, or gynophore. Berries globular, depressed, of a scarlet color, pulp insipid, mealy, five seeds almost coalescent together.

History.—This plant is scattered throughout the Northern hemisphere, in Europe, Asia and America. In Europe, found from Lapland to the Pyrenees and Appenines. In Asia, from Armenia and the Volga to the Kamtschatka; while in America it grows from Iceland and Greenland to Hudson Bay and Alaska, extending south to Canada, New England, the highlands and hills of north New Jersey. It covers dry, stony and gravelly soils, barren spots, and even sandy woods. The Indians smoke them like tobacco, and call them Sagack-homi in Canada. They dye black.

Prop., &c.—Astringent, tonic, and diuretic. It is used for nephritis, gravel, suppression of urine, dropsy, gonorrhea, ulceration of kidneys and bladder. It changes the color and increases the amount of urine. Resin, gum tannin, salts, bitter extractive oil, and a principle called *Ursin*, which is thought to contain the diuretic properties. The Uva Ursi is mild in its action, and requires a continuance for several days.

Dose of powdered leaves, ten to thirty grains.

Decoction, one ounce of leaves to a pint of water, reduced one half by boiling, given in ounce doses.

ARGEMONE MEXICANA.

Nat. Ord.—Papaveracea. Sex. Syst.—Polyandria Monogynia.

Common Names.—Thorn Poppy.

History.—A Mexican plant, and found in the Southern States. The *A. Flava* with yellow flowers, and *A. Albiflora*, white flowers. It has a bitter yellow juice when dried, similar to gamboge.

Prop., &c.—Anodyne, diuretic, cathartic and emetic. Has been used for skin diseases, dropsy, jaundice and sore eyes. The seed, smoked, are narcotic, and the infusion has been used for opthalmia. The capsules, by infusion, for diarrhea and dysentery. As a substitute for opium, said to be worthy of attention.

ARCTIUM LAPPA.

NAT. ORD.—Asteracea. SEX. SYST.—Syngenesia Equalis.

Common Name.—Burdock.

DESCRIPTION.—Root biennial, fleshy, tapering, few fibres. Stem erect, branching, succulent. Leaves large, ovate, cor-

date, on long footstalks. Flowers purple, terminal panicles. Calyx, imbricated scales, with hooked extremities, catching to objects, as the hand, clothing, or the legs of cattle.

History.—Common to Europe and America. Not a handsome plant, but familiar to all, and troublesome to farmers.

PROP., &c.—Diuretic, alterative, slightly diaphoretic. The

root is used in decoction and syrup, for scrofula, syphilis, rheumatism, dropsy and other forms of diseases. It contains a bitter extractive matter, and salts of potassa. The leaves, in form of ointment, have been used for cutaneous diseases. The seeds, both in infusion and tincture, have been used for nephritis and inflammation of the bladder.

The Burdock is slow in performing its office, but it is justly esteemed a useful agent to produce a change in the fluids of the system. The watery extract has been employed.

ARISTOLOCHIA SERPENTARIA.

NAT. ORD.—Aristolochiacea. SEX. SYST.—Gynandria Hexandria.

Common Name.—Virginia Snakeroot.

DESCRIPTION.—Root perennial, knotty and gibbose, brown and very fibrous, fibres long, small, yellow when fresh. Stems round, slender, weak, flexuose, jointed, less than a foot high, bearing from three to seven leaves, and from one to three flowers. Leaves alternate and petiolate, oblong or lanceolate, base cordolate, end acuminate, margin entire, sometimes undulote, surface smooth or pubescent, of a pale green. Flowers nearly radical and solitary, on peduncles curved, jointed, colored, with some small scales. Germ inferior, perigone reddish or purple, tube crooked, limb bilabiate, upper lip notched, lower entire, both short and lobular. Six sessile anthers, oblong obtuse, attached to the sides of a large round sessile stigma. Capsule oboval, with six angles, six cells, and many minute seeds.

History.—The genus Aristolochia includes a large family of plants. Most of these species have been men-

tioned by different authors. But those that are found in the market are the *A. Serpentaria*, *A. Hasta*, *A. Hirsuta*, *A. Reticulata*, and *A. Tomentosa*, though the first named is thought to be most abundant. All possess like properties. They are found in the open, shady woods, in the Eastern and Middle States, but the Southern States furnish the markets with the article.

PROP., &c.—Diaphoretic, tonic, anodyne, anti-spasmodic. A pleasant aromatic odor, and pungent, bitter taste. It contains *camphor, resin, volatile oil, starch, albumen, phosphate of lime.* The infusion of snakeroot is useful in cases of prostration by typhus, bilious, examthematous fevers. When warm its tendency is to induce perspiration, to allay pain and nervous excitement. The cold infusion gives tone and strength to the system, increases the appetite, and as an anti-periodic, valuable in intermittent fevers. It is a popular remedy for pleurisy, colic and rheumatism. The whole plant officinal. *Powder*—Ten to twenty grains. *Infusion*—Half ounce to pint of boiling water. *Tincture*—Three ounces (bruised) in two pints of alcohol.

ARNICA.

NAT. ORD.—Asteracea. SEX. SYST.—Synganesia.

Common Name.—Leopard's Bane.

DESCRIPTION.—Root perennial, wood horizontal, many fibres of brownish color. Stem a foot or more in height, several branches bearing flowers. Leaves four radical, those above in pairs, oblong, ovate, nerved. Flowers large, golden yellow colors. Calyx greenish with lanceolate scales. Florets about fourteen in number, longer than the calyx.

History.—The Anica plant is found most abundant in Europe and Siberia, also in our North-western States.

PROP., &c.—Stimulant, narcotic. It contains gallic acid, gum, albumen, resin, and a bitter principle. Has been used for gout, rheumatism, intermittent fever, nephritis, dropsy, chlorisis, and in typhus fevers. In over doses it is narcotic, and causes vertigo. But little used internally.

The *tincture* is the chief external stimulant of the homeopathic profession.

Dose of powder, five to ten grains.

Infusion.—Four drachms in a pint of boiling water. *Dose*—One ounce.

Tincture—Two ounces in a pint of alcohol. *Dose*—One to two teaspoonfuls.

ARONIA OVALIS.

NAT. ORD.—Drupacea. SEX. SYST.—Icosandria Pentagenia.

Common Name.—June Berry, Shad Tree.

DESCRIPTION.—Leaves oval, acute, glabrous. Flowers on raceme.

History.—This genus is divided into several species by Rafinesque and Eaton, and not mentioned in most of our text-books. Rafinesque mentions the *A. Ovalis*, *A. Alnifolia*, *A. Cordata.* Eaton gives *A. Arbutifolio*, red choak-cherry; *A. Botryapium*, shad-bush, June berry; *A. Sanguinea*, bloody choak-cherry; *A. Melanocaepa*, black choak-cherry; *A. Ovalis*, medler bush; and *A. Alnifolia* of the South. The June berries pleasant fruit.

ARONIA SANGUINEA.

NAT. ORD.—Drupacea. SEX. SYST.—Icosandria Pentagynia.

Common Name.—Choak Cherry.

DESCRIPTION.—Small trees, six to ten feet high, in clusters. Found in the Middle States, in meadows and along the edges of woods, on heavy land. Leaves oval, obtuse at both ends, blunt, serrate, smooth beneath. Flowers raceme form. Calyx smooth. Petals linear, obtuse.

History.—The choak-cherry is by some classed under *Cerasus* Virginianica, and also *Prunus*, which includes the wild cherry, red cherry, and the damson plum.

Barton places the several species of choak-cherries under the genus *Aronia.*

Cerasein is a resinoid and neutral principle, prepared from the choak-cherry, which is classed under the genus *Cerasus* by the manufacturers, Keith & Co.

PROP., &c.—The *Cerasein* is tonic, anti-periodic and astringent. It is recommended as a substitute for quinine in intermittent fever, also in typhus fever, dysentery, diarrhea, night-sweats and general debility, indigestion, chorea and spermatorrhea. The average dose of the Cerasein is five grains, and may be increased to ten. It is prepared from the bark of the choak-cherry. The berries are astringent.

ARUM DRACONTIUM.

NAT. ORD.—Aracea. SEX. SYST.—Monœcia Polyandria.

Common Name.—Green Dragon.

DESCRIPTION.—Root many spreading fibres. Leaf-stems starting from the root. Leaves deeply divided, into oblong, pointed

segments, five to fifteen in number. Spathe arising from the root, expanding, waving edges, tapering, pointed at the apex. Spadix arising from the base or calyx of the spathe, convoluted, and nearly as long as the spathe.

History.—A scarce plant in most sections of the country. Found in the Western States, in low rich ground, near streams,

PROP, &c.—Not well defined. Its green leaves have acrid stimulating properties, similar to the *A. Triphyllum*.

ARUM TRIPHYLLUM.

NAT. ORD.—Aracea. SEX. SYST.—Monœcia Polyandria.

Common Names.—Indian Turnip, Wild Turnip, Dragon Root.

DESCRIPTION.—Root perennial, round, flattened, tuberous, with many white fibres around the base; skin dark, loose and wrinkled. Leaves, one or two on long sheathing petioles, three folioles very smooth and sharp, pale beneath, oval or rhomboidal or oblong, entire or undulated, with regular parallel nerves. Scape or leafless stem, tunicated at the base by vaginated membranaceous acute sheaths, supporting one large upright spathe, tubular at the base, hooded at the top, either green or purple, or variegated with both colors in stripes within. Spadix cylindric, obtuse at the top, also variable in color, bearing the flowers at the base where it is contracted. Anthers two or four on short crowded filaments. Pistils crowded below, round, without styles, stigma punctiform. Sometimes abortive pistils and stamina intermixed. The upper part of the spadix withers with the spathe, while the pistils grow into a large compact head of shining scarlet berries.

History.—Is found in most all parts of America, and in South America and Brazil. It grows in rich shady soil. The whole plant, and particularly the root, is violently acrid, pungent, and even caustic to the tongue, but not to the skin. The active principle is a peculiar substance, *Aroine*, highly volatile, having no affinity with water, alcohol, oil or acids, and becoming an inflammable gas by heat or distillation. The roots yield one-fourth of their weight of a pure amylaceous matter, like starch or arrow-root, or a fine white delicate nutritive fecula.

A. Dracontium has a large pedate leaf, with five to fifteen oblong segments, and grows in the Southern and Western States.

A. Virginicum has sharp, wide, cordate leaves, and grows in Virginia, &c.

A. Sagitefolium has sharp, long, sagitted leaves, and grows from New York to Carolina. All these have similar roots, seeds, and properties.

PROP., &c.—Powerful acrid, stimulant, expectorant, carminative and diaphoretic. The fresh roots are too caustic to be used internally, unless much diluted, and when dry they are often inert, unless they have been dried very quick, or kept buried in sand or earth. It must be used in substance mixed with milk or molasses, since it does not impart its pungency to any liquor; or the dried root must be grated, or

reduced to a pulp, with three times its weight of sugar, thus forming a conserve, the dose of which is a teaspoonful twice a day. In these forms it is used for flatulence, cramp in the stomach, asthmatic and consumptive affections. It has been found beneficial in lingering atrophy, debilitated habits, great prostration in typhoid fevers, deep seated rheumatic pains, or pains in the breast, chronic catarrh, &c.

Dose of powder, ten grains in syrup or mucilage, two or three times daily.

ARTEMESIA ABSINTHIUM.

NAT. ORD.—Asteracea. SEX. SYST.—Syngenesia Superflua.

Common Name.—Wormwood.

DESCRIPTION.—Root woody and branched, with many fibres. Stems several, bushy, one to two feet high, panicle at the top. The stem and leaves covered with light silk-like appearance. Flowers yellowish brown, on racemes.

History.—The wormwood is cultivated in gardens in many sections of the country, and a native of Europe. There are several species of this plant, as

Artemisia Vulgaris, the *Mugwort*, common to this country and Europe, and, like the *A. Absinthium*, possesses valuable properties.

The *A. Columbiensis* possesses aromatic properties.

The *A. Absotanum* is found in southern gardens.

The *A. Santonica*, Southern wormwood, from which is obtained the *Santonicin*, and may be found in other species of the plant. The Santonicin is a fine white powder, having considerable reputation as a vermifuge, from one to two grain doses.

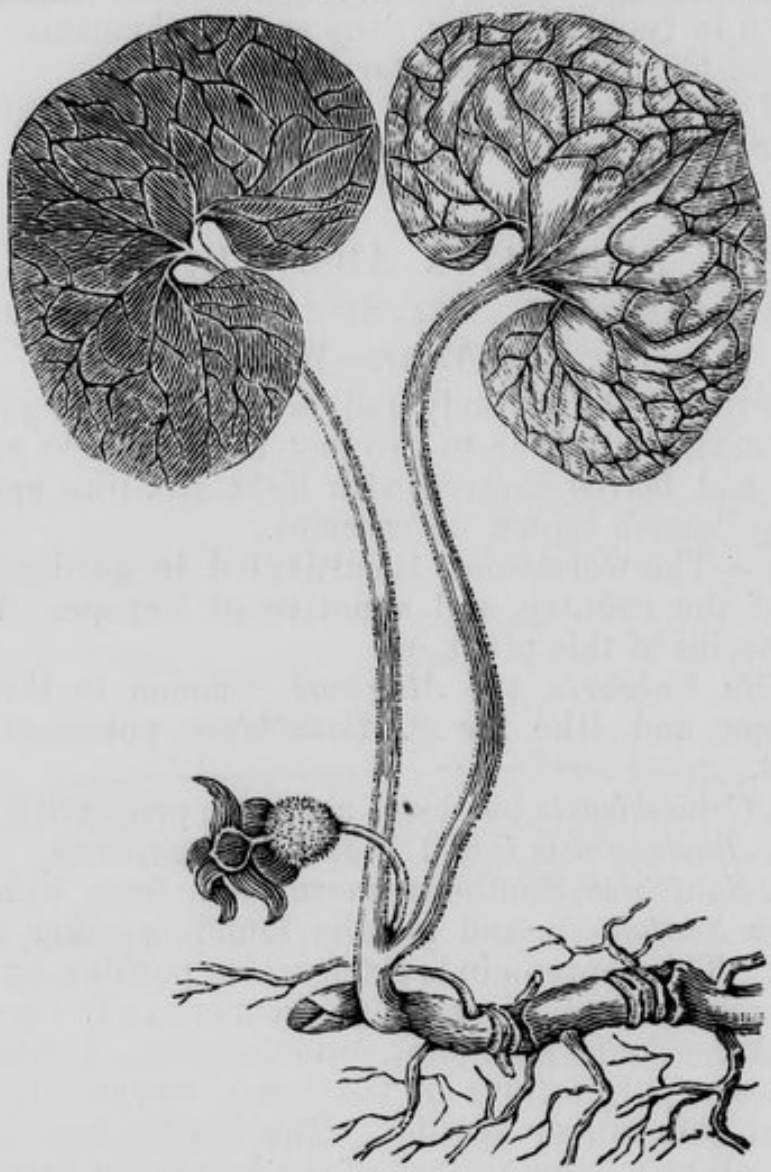
PROP., &c.—Tonic, stimulant, anthelmintic. Useful in hysterics, spasms, palpitations of the heart, worms, obstructions, &c., in tea, infusion or powder. The leaves, tops and seeds are used. Warm fomentations of the leaves are excellent discutient and antiseptic, for inflammation of the stomach, bowels and joints. In this form should be applied upon wounds to prevent mortification and gangrene. It is considered antiperiodic. The tincture has been much used in domestic practice for giving tone and appetite. This form is also recommended to prevent baldness, and restore the hair.

A chemist, by name of Braconnot, found this plant to contain volatile oil, resin, albumen, starch, azotized matter, absinthate of potash, nitrate of potash, sulphate of potash, chloride potassium. The volatile greenish *oil*, obtained from the wormwood, is an irritant, anti-spasmodic, and vermifuge.

Powder—Dose, ten to fifteen grains. *Infusion*—One ounce to a pint of boiling water; when cold, one ounce doses.

ASARUM CANADENSE.

NAT. ORD.—Aristolochacea. SEX. SYST.—Dodecandria.
Common Name.—Wild Ginger, Canadian Snakeroot, Colts-foot.



DESCRIPTION.—Roots perennial, creeping, fleshy, jointed, scattered brown fibres. Leaves two, on long radical petioles. The leaves are reniform or kidney shape, broad, tip often mucronate, but obtuse surface, puberulent, veined like a net-work, and often spotted, glaucous beneath. No stems. Flowers solitary between the two leaves, on a curved peduncle, tomentose, purple, darker inside. Perigone with three equal segments, acuminate reflexed. Stamina twelve unequal, filaments mucronate, anthers adnate laterally. Three filiform nectaries or abortive stamina, altering with the segments. Style conical grooved, or six coalescent styles, crowned by six thick revolute stigmas. Capsul round, hexagonal, crowned, and with many small seed.

History.—Found in all sections of the country, in rich soil and shady woods. It has several varieties, with large and small leaves, some spotted. The flowers vary, some greenish, some purple.

A. Virginicum may be known by its smooth cordate leaves; it is found from Maryland to Georgia and Tennessee, particularly in mountains, and still more grateful than *A. Canadense.*

A. Aurifolum has smooth, hastated, spotted leaves, and a tubular flower. It is found in Carolina and Tennessee.

PROP., &c.—Tonic, stimulant, diaphoretic, expectorant. An agreeable odor, aromatic and slightly pungent. It is valuable to disguise the bad taste of other agents, as an expectorant in pulmonary diseases, as a tonic and diaphoretic in febrile diseases, for colic and for hooping cough. The root is officinal.

Powder—In half drachm doses, in syrup.

Infusion—Half ounce to a pint of boiling water, taken hot for colds, colic, &c., when it acts as a diaphoretic and anodyne.

Tincture—One ounce bruised root to a pint of alcohol.

Useful in compound syrups, tinctures and powders.

ASPARAGUS OFFICINALIS.

NAT. ORD.—Liliacea. SEX. SYST.—Hexandria Monogynia.

Common Name.—Asparagus.

DESCRIPTION.—Stem erect, smooth, branching, two to four feet high. Leaves uneven, thread-like, one to two inches long, pale green color. Berries round, red, three cells.

History.—Said to be a native of Europe. Extensively cultivated in this country as an article of diet. The young shoots four to six inches high, cut and boiled, extensively used. It contains a principle called *Asparagin.*

PROP., &c.—Diuretic, mild in its action. The extract and syrup have been used. Some have asserted that it modifies the blood circulation, and has been used in diseases of the heart.

ASCLEPIAS TUBEROSA.

NAT. ORD.—Asclepiadacea. SEX. SYST.—Pentandria Digynia.

Common Names.—Pleurisy Root, Butterfly Weed.

DESCRIPTION.—Root perennial, large, fleshy, white, of variable form, fusiform, crooked or branched. Many stems either

erect or ascending or procumbent, round, hairy, green or red. Leaves scattered, sessile, or on short petioles, very hairy, pale beneath, entire or undulate, oblong or lanceolate, or nearly linear, obtuse or acute. Flowers erect, and of a bright orange color. Calyx small reflexed, five parted. Corolla reflexed, five parted, segments oblong; auricles erect, nearly as long, cuculate, with incurved appendages or horns. Two pistils completely concealed by the stegyne; germs ovate, with short styles, stigmas obtuse. Follicles two, often abortive, lanceolate, acute, erect, downy, dehiscent laterally; seeds many, imbricate, flat, ovate, connected to a longitudinal receptacle by long silken hairs.

History.—Pleurisy Root is found in the Middle States, but more abundant South. It grows in light, sandy soil, in open fields, along fences. The root is found one to two feet in the ground. It presents a beautiful cluster of light and dark yellow flowers, and makes every beholder say, "That is beautiful."

There are many species of the Asclepias found on this Continent. The most prominent are

A. Incarnata, the *Swamp Milkweed, White Indian Hemp, &c.* The stem is erect, smooth, two feet high, branching near the top. Leaves opposite, lanceolate, acute. Flowers purplish-red, sweet-scented. It is found in damp localities. Contains a milky juice. The root is officinal.

The Incarnata is considered anthelmintic and alterative, emetic and cathartic. Deserves more attention from our profession.

A. Syriaca, Silkweed, Milkweed. Stem two to four feet high. Leaves large, opposite, ovate, acute. Flowers axilary, nodding, large, sweet-scented. A few of the flowers produce large, oblong, pointed pods, covered with prickles, full of a silky substance, and many seeds. The silk-like fibres of the pods have been used for beds and pillows.

The root, and juice of stems and leaves are used. Anodyne, diuretic, alterative. The juice, dried, has been used as a substitute for opium, to allay nervous irritation. Claims more attention.

History says the Asclepias was named after *Esculapius*, the god of medicine, among the ancients, who restored so many to life that Pluto, the god of the infernal regions, became jealous of Esculapius, and besought Jupiter to strike him dead with a thunderbolt.

PROP., &c.—Diaphoretic, expectorant. The root is officinal. The warm infusion is a most valuable agent for pleurisy and inflammation of the lungs. Its tendency is to relax the capilary vessels, and to the mucus surface of the lungs. It is mild and rather slow in action, but a most valuable expectorant, and reliable in all inflammatory fevers, being generally acceptable to the stomach. Other properties are ascribed to this plant, as diuretic, tonic, and anti-spasmodic, &c.; but these are doubtful.

Powder—Half drachm in syrup.

Infusion—One ounce to half pint boiling water.

Concentrated, resinoid and neutral principle. *Dose*—One to five grains in syrup or mucilage. Used as indicated above.

ASPLENIUM THELYPTEROIDES.

NAT. ORD.—Filices. SEX. SYST.—Cryptogamia Filices.

Common Name.—Spleen-wort.

DESCRIPTION.—The fronds or leaf-stems are radical, deeply divided into opposite leaflets, two feet high. On some of the leaf-stems are found fruit dots, of a dark bluish color.

History.—The Spleen-wort is found in open woods, on sandy and rich soil, throughout the country. There are several species of the Asplenium.

PROP., &c.—Astringent, diuretic, alterative. It has been employed for diarrhea, nephritis, gravel, worms, and for nervous diseases. Supposed by some to be a substitute for the male fern in the expulsion of tape-worm. It is administered both in decoction and infusion.

Decoction Asplenium.—Leaves, ℥i; Water, Oi. Reduce one half by boiling, and strain while hot. *Dose*, fl℥ss, three and four times daily.

ASTER.

NAT. ORD.—Asteracea. SEX. SYST.—Syngenesia Superflua.

Common Names.—Star Flower, Cocash, Swan-weed, Red Stalked Aster.

DESCRIPTION.—Root perennial, fibrous. Stem erect, branched, two to three feet high. Leaves lanceolate, nerved. Flowers radiated, colored purple or white. Rays vary, from ten to forty.

History.—Under the Aster genus are found many species. Rafinesque says nearly one hundred, and Eaton ninety. It is found in all sections of the country, and most abundant in the Northern States and Canada, in damp situations.

PROP., &c.—One species has been used externally in decoction, for skin diseases, and for poisoning by the *Rhus* Sumac. Others have been used as a substitute for valerian, in hysteria, epilepsy and spasms.

ATRIPLEX.

Common Name.—Orach.

DESCRIPTION.—Several species. The *A. Hortensis*, Garden Orach, has an erect, herbaceous stem. Its leaves triangular, toothed. Calyx of fruit ovate, nettled. Eaten like spinage. The *A. Halamoides* of Rafinesque, Sea Orach, has been used as an anodyne, and externally as a cataplasm for gout. There are several other species of the genus Atriplex.

AVENA SATIVA.

NAT. ORD.—Graminea. SEX. SYST.—Triandia Digynia.

Common Name.—Oats.

DESCRIPTION.—Extensively cultivated. Roots branching. Stems two to three feet high. Flowers two, awned, or armed with one small beard on the calyx, which contains two smooth seeds. Grow in panicle form.

History.—Several species. The white and black Oats most cultivated, and for horses and cattle, has been used for many centuries. In Europe, it forms an important article for food, especially with the poorer classes of people. Nearly or quite equal to wheat, except that, owing to its large proportion of glutinous properties, it cannot be made into bread.

PROP., &c.—Mucilaginous, nutricious. In form of gruel, used for diarrhea, dysentery, and inflammation of the bowels. The Oats, burned and ground like coffee, will allay irritation of the stomach and check vomiting, when many other means have failed.

AZALEA NITIDA.

Common Names.—Swamp Pink, Swamp Honeysuckle.

DESCRIPTION.—Leaves few, oblanceolate, glabrous, upper side shining, dark green. Flowers rose color, varying, viscous. Calyx short.

History.—Found in many parts of the country. The flowers make a fragrant conserve. Ten or twelve species. But few authors speak of the AZALEA.

AZEDARACA AMENA.

NAT. ORD.—Meliacea. SEX. SYST.—Decandria Monogynia.

Common Names.—Bead Tree, Pride of India and China.

DESCRIPTION.—A beautiful tree, thirty to fifty feet high. Leaves large, alternate, lanceolate, acute. Flowers in panicle form, axilary, violet and pink color, odorous. Fruit drupe, large as a cherry, yellowish color.

History.—Found in most all divisions of the world. Plentiful in our Southern States. It is useful for fuel. Cattle eat the leaves, hogs and birds the fruit.

PROP., &c.—Anthelmintic, narcotic, purgative, emetic. The inside bark is used as an anthelmintic powder and decoction, followed with a purgative. As a purgative or emetic, said to be dangerous. The berries have been employed as a vermifuge. They also contain an oil that has been used in Japan for burning. The leaves have a bitterish, nauseous taste, and have been employed in the form of cataplasm, for snake bites, and as a discutient poultice. An ointment of the leaves for ring-worm and other cutaneous diseases.

Dose—Powder, grs. xx.

Decoction—Four ounces of bark in two pints of water. Reduce by boiling to one pint. Tablespoonful two and three times daily.

Water and alchohol take up its active properties.

BAPTISTA TINCTORIA.

NAT. ORD.—Fabacea. SEX. SYST.—Decandria Monogynia.

Common Names.—Wild Indigo, Horse-fly Weed, Clover Broom, Rattle Bush, &c.

DESCRIPTION.—Root perennial, large and woody, irregular; blackish outside, yellowish within, fibres lighter. Stems two or three feet high, round and smooth, yellowish green, with black dots; very much ramified, but branches thin, and with small leaves. These leaves are alternate, and with three folioles nearly sessile, obovate, smooth, of a bluish green; stipules minute, evanescent, oblong, acute. Flowers bright yellow, in small, loose spikes at the end of branches, pea-like, but smaller. Calyx campanulate bilabiate; upper lip entire or notched, lower trifid. Stamina inclosed, deciduous. Pistil single and stipulate, succeeded by a swelled oblong pod of a bluish black color, with a row of small, rattling seeds.

History.—Found in most sections of this country, on dry soil, in uncultivated fields and along fences. When cut, the plant turns from a light green to a blackish color. It imparts a blue color similar to indigo. Rafinesque mentions two other species. The *B. alba*, with white flowers, and *B. Australis*, with large blue flowers.

PROP., &c.—Alterative, antiseptic, emmenagogue, emetic, laxative, discutient. This plant has not been extensively used by the profession, although it is reputed to be of considerable importance in scrofulous, syphilitic and hepatic diseases. For malignant ulcers, mercurial sore mouth, sore throat, for sore nipples, sore eyes, for carbuncles, boils, and to arrest gangrene and mortification. It is not thought applicable as a cathartic or emetic.

Externally, it is used in form of wash or poultice, as may be indicated. Internally, in decoction, infusion or extract, producing a marked impression on the glandular system. No doubt it would prove serviceable in the treatment of cancers.

The Wild Indigo is esteemed by some as an efficient emmenagogue.

Poultice of green leaves for swelled breasts, tumors, indurated joints, &c.

Ointment for swellings, tumors, cancers, sores, ulcers, &c.

Dose powdered leaves, grs. x; the alcoholic or hydro-alcoholic extract, may be used in pills, two to five grains a dose.

Baptisin, the resin and neutral principles of the plant, is used; two grain doses every two, three, or four hours, as desired, which has been lately introduced to the profession.

BACCHARIS HALIMIFOLIO.

Common Names.—Groundsel Tree, Pencil Tree.

DESCRIPTION.—A small shrub, with many small, obovate leaves.

History.—This small tree is found on the sea-shore, from New England to Florida. The whole shrub is covered with a white powder. There are two other species, *B. angustifolio* and *B. sessitifolio*, found in the Southern States. This shrub has an aromatic odor, and possesses medical properties.

BAMBUSA ARUNDINACEA.

NAT. ORD.—Graminea. SEX. SYST.–Hexandria Monogynia.

Common Name.—Bambo Cane.

History.—This peculiar, small, slender tree is found in Florida and other Southern States; also in the West Indies. The small ones are used for fishing-rods; those of large size are converted into fences and buildings. The pith is eaten by some, and the young shoots are boiled for pickles.

BATSCHIA CANESCENS.

NAT. ORD.—Boraginea. SEX. SYST.—Pentandria Monogynia.

Common Names.—Puccoon, Red Paint, Alconet.

DESCRIPTION.—Leaves oblong. Calyx short.

History.—Several species of this plant found in the woods of this country. They are similar to the *Anchusa* (Alkanet) of Europe that is found in our drug stores. Used for coloring. The Batschia, or Alkanet of this country, has been used by our Indian tribes for painting themselves, and as a vermifuge.

BERBERIS CANADENSIS.

NAT. ORD.—Berberidacea. SEX. SYST.—Hexandria Monogynia.

Common Name.—Barberry.

DESCRIPTION.—A pretty shrub, rising from four to eight feet high, with long, bending branches, having many confluent dots and some small thorns, often three together. The leaves are crowded and unequal in each fascicle, on short petioles. They are smooth and glossy, oboval, obtuse, with small, remote teeth. The flowers are on slender and lax racemes, either nodding or pendulous. They are yellow, on long pedicles, and rather small. The petals are oblong, obtuse, and have each two glands and a stamen at the base. The berries hang in loose bunches. They are oblong and red, smaller and less juicy than in the common garden Barberry of Europe.

History.—From Canada to Virginia, in mountains, hills, among rocks, &c. Common in New England, in rocky fields. Rare in the West and in rich soils. It blossoms in April and May; its fruit ripens in June and July.

PROP., &c.—Tonic, laxative, astringent, refrigerant. The whole shrub contains acid properties, which, in the form of infusion, makes it valuable in febrile diseases. It has been used in dysentery, diarrhea, in typhus, bilious fevers, and for jaundice. The decoction of the bark may be used as a gargle for sore mouth, and per vagina for leucorrhea. Its berries make a pleasant syrup. The powdered bark, in drachm doses, will act as a gentle purge.

The *Berberina* is an alkaline principle obtained from this shrub, recommended by the Eclectic Dispensary, in two to ten grains, for the same indications as other forms.

BETA VULGARIS.

NAT. ORD.—Chenopodea. SEX. SYST.—Pentandria Digynia.

Common Name.—Garden Beet.

History.—The Beet is extensively cultivated in this country as food for the table. The young leaves are boiled for use,

as other pot herbs. They contain a large proportion of sugar. In the form of pickle they digest slowly, and should not be eaten.

There are three species: the *B. alba*, white, the *B. rubra*, red, and *B. hybrida*, red outside and white within—all nutritive, and yield sugar.

PROP., &c.—The leaves are refrigerant and anodyne. Applied to sore eyes, inflamed and excoreated surfaces, boils, ulcers, &c.

The extract of the root of the Beet has lately been used by J. H. Simms, M. D., of Wilmington, Delaware, who recommends it as an efficient emmenagogue. Professor J. Sites, M. D., of the Eclectic Medical College of Philadelphia, deems it of importance to the profession. After many trials with this article, I am sure it will prove a valuable addition to the many important discoveries of the Reform Practice of medicine. The late Dr. P. F. Sweet, of Philadelphia, prepared the Betin, which he used with marked success for emmenagogue purposes. I esteem it to be one of the safest emmenagogues in the Materia Medica.

BETULA LENTA.

NAT. ORD.—Betulacea. SEX. SYST.—Monœcia Polyandria.

Common Name.—Black Birch.

DESCRIPTION.—Large tree of the forest. Leaves ovate, acute, serrate. Flowers on erect scales.

History.—Several species of the Birch, the *Betula Lenta*, spicy birch, black birch; *B. papyrocea*, paper birch, canoe birch, from which the Indians make canoes; *B. populifolia*, white birch; *B. excelsa*, tall yellow birch; *B. rubra*, red birch. All of these are large trees.

The *B. glandulosa*, scrub birch; *B. nana*, dwarf birch, in Northern States and Canada; *B. pumila*, dwarf birch—all small bushes.

The *red* and *black* admit of fine polish, and are used for cabinet-ware. The Russians use the bark for tanning leather.

PROP., &c.—Astringent, diaphoretic, alterative—mild in action. Has been used for dysentery, diarrhea, scrofula, coughs, and affections of the lungs. The sap from the trees has been boiled into syrup. The bark of the young branches is chewed by children for its aromatic, sweetish, pleasant taste.

BIDENS.

NAT. ORD.—Asteracea. SEX. SYST.—Syngenesia Frustranea.

Common Names.—Spanish Needles, Beggar Needles.

History.—There are several species of the Bidens; some on

dry, sandy soil, in old fields, and troublesome to farmers. Some of them grow in wet ground and in water. The *B. bipinnata*, beggar ticks, beggar needles, grows in dry soil. Flowers rayed. Leaves lanceolete, pinnate. Pericarp or capsulate, containing the seeds, is covered with awns or prickles, which adheres to the clothes of those passing over them. *B. cornua*, water beggar ticks; *B. beckii*. water marygold; also several other species.

PROP., &c.—Diaphoretic, expectorant, emmenagogue properties are ascribed to this plant. Has been used for amenorrhea, colds, croup, palpitation of the heart and other affections. The Eclectic Dispensary says the warm infusion will vomit and purge. This troublesome little plant may be converted into good. It deserves attention.

BOTRYCHIUM LUNARIOIDES.

NAT. ORD.—Filices. SEX. SYST.—Cryptogamia Filices.

Common Name.—Moon-wort.

DESCRIPTION.—The scape or flower-stalk naked, bearing spikes of flowers, arranged in threes, hanging. Fronds nearly radical, bearing opposite lunate or crescent form leaflets.

History.—This species derives its name, *Lunarioides*, from a supposed resemblance of its leaves to the half moon. Though not a plentiful plant, it is found in most sections of the country, in shaded, dry woods, and eight to twelve inches high. Most authors arrange this as the *B. fumarioides*. There are five or six other species.

PROP., &c.—But little known to the profession. It possesses astringent properties, and, in the form of infusion and decoction, has been employed to check mucus discharges and diarrhea.

BRASSICA OLERACEA.

NAT. ORD.—Cruciferea. SEX. SYST.—Tetradynamia Siliquosa.

Common Name.—Cabbage.

History.—There are several varieties of the Cabbage cultivated for food. The leaves are large, ovate, glaubrous. When boiled, pickled or in sour-crout, it is slow in digestion, creating

flatulence and colic. Cut in the form of cold-slaw, it is more acceptable to the stomach. The leaves have been often used for reducing and cooling local inflammation, boils, carbuncles, &c. The plant contains sulphur.

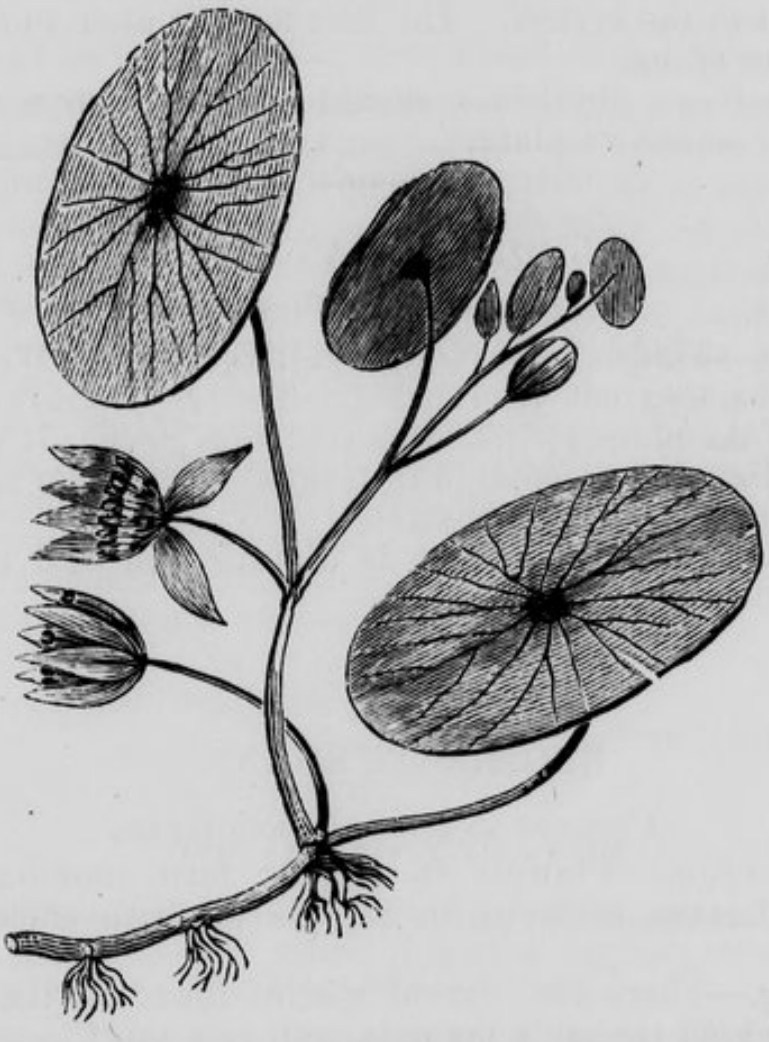
The *brassica rapa*, the turnip, of which there are several varieties. The *brassica Florida* is the Cauliflower. All of these are highly esteemed as articles of diet.

BRASENIA HYDROPELTIS.

NAT. ORD.—Ranunculides. SEX. SYST.—Polyandria.

Common Names.—Frog-leaf, Water-jelly, Deer-food, Water-shield.

DESCRIPTION.—The roots are perennial, creeping under water and mud, cylindric, jointed with bundles of fibres at the joints.



Stems many, growing till the leaves reach the surface of the water, almost similar to the roots. Leaves alternate, on very

long, slender petioles, floating on the water, of a regular, eleptic form, like an oblong shield, entire and obtuse, smooth and lucid above, with regular radiating veins, white and veinless beneath, but covered with a coat of pale jelly, sometimes purplish. The leaves are two or three inches long. Flowers on long, axilary and solitary peduncles, similar to the petioles. These flowers are of a dark purple color; the six petals are oblong and acute. Stamina from twenty to thirty, shorter than the petals, surrounding the pistils, which are from twelve to twenty. Germs oblong, styles short, stigma obtuse. Achenes or small nuts naked, maturing under water; oval, oblong.

History.—Discovered by a German botanist named Brasen. Michaux changed its name to *Hydropeltis*, meaning Watershield in Greek. Rafinesque preferred *Brasenia*. The Watershield is found in the Southern and Western States, in ponds of water. Deer feed upon it.

PROP., &c.—Mucilaginous, astringent, tonic. The leaves make a fine jelly, useful in diarrhea and inflammation of the bowels. Reputed as useful in pulmonary affections, to give tone and nutriment to the system. The root may be used in decoction, infusion or sprup.

Our Southern physicians should pay attention to this comparatively unknown plant.

BROMELIA ANANAS.

Common Name.—Pine-Apple.

History.—This delicious fruit is cultivated in the West Indies, and to some extent in Florida. The *B. pinguin*, another species of the pine-apple, affords acidulous juice. It is refrigerant, cooling and acceptable in fevers. A wine is made of it that becomes active to intoxicate.

PROP., &c.—The pine-apple is diuretic, and said to be emmenagogue and aphrodisiac.

BROMUS PURGANS.

Common Name.—Broom Grass.

DESCRIPTION.—Flowers in panicle form, nodding, small, awned. Leaves glabrous, or smooth on both sides, sheaths hairy.

History.—There are several species found in the country, some of which resemble the oats.

PROP., &c.—Sudorific, vermifuge, laxative, diuretic, emmenagogue. Purges cattle when they feed upon it.

BUNIAS AMERICANA.

Common Names.—Sea Cole, Sea Rocket.

DESCRIPTION.—Leaves wedge shape, obtuse, toothed, silicle on pods, short, one seeded, ovate.

History.—Two or three species of this plant, are found in Canada and the Northern States, and on the sea-shore.

PROP., &c.—Diuretic, anti-scorbutic. It makes a pickle that has been used in scurvy. In Canada, with flour, it has been made into bread.

BUXUS SIMPERVIRENS.

NAT. ORD.—Euphorbiacea. SEX. SYST.—Monœcia.

Common Names.—Box Wood, Box Tree.

DESCRIPTION.—The leaves are ovate, hairy at the margin. Flowers pale yellow, axilary.

History.—Native of Europe and Asia. It is very slow in growth, requiring several years for each foot. In this country it is cultivated as an ornament for the walks in gardens. It is the best wood known for engravers, and very expensive. A piece the size of this page, one inch thick, costing one dollar.

PROP., &c.—Sudorific, alterative, anthelmintic. Rafinesque says it is equivalent to stillingia in syphilis. It has been used in epilepsy and hysteria. May be used in docoction, syrup, extract and powder. Said to possess purgative powers.

CACALIA.

Common Name.—Wild Caraway.

DESCRIPTION.—Stems herbaceous. Leaves petiolate, serrate, glabrous, green on both sides. Flowers, corymb, erect. Calyx, many flowers.

History.—There are three species, *C. atriplicifolio*, *C. reniformis*, *C. Suaveolens.* All more or less emolient, like the mallow.

CACTUS OPUNTIA.

Common Name.—Cactus.

DESCRIPTION.—Leaves thick, succulent, compressed, from which it appears like one leaf starting out from the end of another, edges ciliated.

History.—There are many species extending from the Northern States to Mexico. Some of them bear fruit the size of the fig, others the size of the cherry, others are troublesome weeds in fields. Some species are cultivated in flower-pots. The insect cochineal feed upon some of the species of the cactus in Mexico, and from which they are collected for our drug market.

The *C. opontia* is called the prickly pear, that yields an acid, pleasant fruit.

CALTHA PALUSTRIS.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Polygynia.

Common Names.—Cowslip, Marsh Marygold.

DESCRIPTION.—The stem erect, herbaceous. Leaves cordate, ovate. Flowers large, yellow.

History.—Found in the Northern and Middle States, in woods of wet ground. When in blossom the whole plant, except the roots, is collected for pot herbs, and when boiled esteemed highly. There are several species of the *caltha.* The buds of the flowers are prepared as pickles for use.

CALLA PALUSTRIS.

Common Names.—Swamp Robin, Wild Arum.

DESCRIPTION.—Leaves heart shape, acute.

History.—In Canada and Northern States, in wet ground.
PROP., &c.—Stimulant, caustic and mucilaginous.

CALLICARPA AMERICANA.

Common Name.—Souer Bush.

History.—Found in Virginia and Florida. A shrub cultivated for its ornament.

PROP., &c.—The purple berries which it bears possess acid and astringent sweetish properties. The leaves have been employed for dropsy.

CALYCANTHUS FLORIDUS.

Common Names.—Carolina Allspice, Sweet Shrub.

DESCRIPTION.—Leaves broad, ovate, acute, tomentose beneath. Calyx lanceolate division.

History.—A shrub cultivated in Florida and other Southern States. The flowers possess a pleasant odor, similar to the pine-apple. The bark is stimulant and aromatic, and used as a substitute for cinnamon and spices.

CANNABIS SATIVA.

NAT. ORD.—Urticacea. SEX. SYST.—Diœcia Pentandria.

Common Name.—Hemp.

DESCRIPTION.—An annual plant. Stem two to four feet high, angular, branching. Leaves three inches long, ovate, lanceolate, serrate. Flowers axilary, male drooping, female erect. Calyx downy. Seeds oval, large, light brown color.

History.—The hemp of this country is found in the Northern and Middle States, along fences and dilapidated buildings. The stalk as large as the little finger, square and branching. The plant has some resemblance to, though much larger than the common *nettle* (*Urtica*).

The *Cannabis Indica* is the true India hemp, from which it is believed by some that ours has been naturalized. Persia and India furnish a portion that is found in our shops. The botanical characters of the two are said to be identical, but the imported is believed to be most powerful as a medical agent.

It was known to the ancients. Heroditus states that the Sythians cultivated it for making garments from the fibres of the bark. The ancient physicians, Droscorides, Galen and others mention it. They used it in the form of smoke and vapor, to produce strange and pleasant feelings of intoxication. The natives of India have used it to excite desires, cement friendship and love.

Dr. O'Shaughnessy reports some singular cases in his experiments with this article. After having given one grain of the *resin*, which excited his patient to laughter, loud talk, happy feelings, that was followed by sleep and insensibility, he happened by chance to lift up the arm of his patient, when he "found that it remained in the posture which I placed it. It required but a very brief examination of the limbs to find that the patient had, by the influence of this narcotic, been thrown into that strange and most extraordinary of all nervous conditions, into that state which so few have seen, and the existence of which so many still discredit—the genuine *catalepsy* of the nosologist. We raised him to a sitting posture, and placed his arms and limbs in every imaginable attitude. A waxen figure could not be more pliant or more stationary in each position, no matter how contrary to the natural influence of gravity on the part. To all impressions he was meanwhile almost insensible." After a few hours consciousness and voluntary motion returned. The above extract is taken from Pereira's Materia Medica, the best English authority.

An old London Dispensatory, published in the seventeenth century, says: "It is hot and dry, consumes the seed, and, being used, causes barrenness." Schroder saith, that "it cures the cough and jaundice, but fills the head with vapors."

The seeds of this plant, which are imported, are extensively sold in our drug stores for the food of the Canary and other birds. The leaves are used for medical purposes, which are found to contain phosphate of lime, gum, albumen, lignin, salt of ammonia, potash, lime and magnesia. The seeds contain fixed oil, sugar, gum and albumen.

The most active principle of the Hemp is the resinous sub-

stance that exudes from the young fresh leaves and small stems, which is collected by the natives of India.

PROP., &c. — Nervine, anodyne, sudorific, anti-spasmodic. Whilst it makes its impressions on the nervous system, it does not arrest the secretions of the body, seeming to act favorably on the mucus membranes. It is indicated in hysteria, convulsions, spasms, acute rheumatism, gout and neuralgia. The expressed juice of the green plant with equal parts of alcohol, in three drop doses, every three hours, has been used for gonorrhea; also the emulsion of the seeds for gonorrhea, leucorrhea and impotency.

The alcoholic *extract* may be prepared from our plant, following, every two or three hours, with one grain, until its effects are noticed.

The *tincture*—one ounce of leaves to a pint of alcohol, in five to ten drop doses—may also be used.

The *infusion*—half ounce of the *ground seeds* to a pint of boiling water—when cold, is a valuable wash for *tetter*, *salt rheum*, *itch*, and other cutaneous diseases. This form, in a few days, after fermentation takes place, exhibits a *rather* unpleasant smell, *precisely* like hen dung.

CAPSICUM ANNUM.

NAT. ORD.—Solanacea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Cayenne Pepper, Red Pepper.

DESCRIPTION.—Annual herbaceous plant. Stem erect, smooth, branching, one to two feet high. Leaves oblong, acuminate, an inch and a half in length. Flowers white. Calyx five-lobed. Petals five. Corolla wheel-shape. Fruit, oblong, erect pods, half inch long; first green, then red or yellow, bright color. Seeds many; kidney-shape.

History.—The Capsicum is a native of the warm climates of America and Africa. There are several species, three of which are most familiar in this country.

1. The *Capsicum Annum* has the small, oblong fruit, three-fourths of an inch long, red or yellow color. This kind is extensively imported from Africa and the East and West Indies. It is the *best* that is found in our drug stores, and called the pure *African Pepper*. It is often seen in flower-pots, and may be cultivated in the Southern States.

2. The *C. cerasiforme* has a small, round, red fruit, the size of a *pie-cherry*, called *cherry-pepper*. Cultivated in gardens, and preserved in vinegar with pickles.

3. The *C. grossum*, of Linneas, is perhaps the *bell-pepper*,

whose fruit is large, ovate, oblong, wrinkled, pendulous, two inches in width and three in length. This species is extensively cultivated in New Jersey, much of which is ground in the pepper mills of Trenton. This species is so prolific and easy of cultivation, that, when ground and packed in cans or paper, it can be sold for eight and ten cents per pound. This is the article that is sold in grocery stores throughout the country, Our druggists often mix this cheap article with the African pepper, which they sell from fifty to eighty cents per pound; and with the inexperienced, it is difficult to notice the deception.

The powder of that *imported* has generally a yellow tinge, (though *sometimes* red); and the least particle that can be put on the tongue quickly imparts a *penetrating*, *pungent* taste, whilst two or three grains of our growth will not give a greater sensation to the mouth.

The fruit was analyzed in 1816, by Bucholz, and found to contain an acid, soft resin, (Capsicine), wax, gum, albumen, woody fibre and water.

For many centuries, the Capsicum has been used as a condiment for food. Two hundred years ago, physicians made some use of it externally to discuss tumors and swellings, but considered it unsafe as a medicine, internally. At the beginning of the present century, it was not recognized as a medical agent, except, perhaps, in the form of a gargle for sore throat. In the year 1800, it was not an article of commerce.

Dr. Samuel Thompson, of New Hampshire, introduced the Capsicum to the medical world. He says, "In 1805, I was out in search of umbil, on a mountain in Walpole, N. H. I went into a house at the foot of the mountain, to inquire for some rattlesnake oil. While in the house, I saw a large string of red peppers hanging in the room, which put me in mind of what I had been a long time in search of, to retain the internal heat. I knew them to be very hot, but did not know of what nature. I obtained those peppers, carried them home, took some of the powder myself, and found it to answer the purpose better than any thing else I had made use of."

History affords us two great medical revolutionists in the healing art. Paracelsus in the 16th century, and Thomson in the 19th. The first was a bold, reckless empiric, whose teachings proved to be a blighting, withering curse to the civilized world. The second was a bold, energetic philosopher, with sufficient power to break the chains of medical despotism. In his efforts to relieve suffering humanity, he endured both imprisonment and the shafts of abuse and detraction of character. His name and memory should be cherished by every lover of medical progression.

PROP., &c.—A stimulant, diaphoretic, tonic, sialagogue and alterative. It is very diffusible, exciting a glow throughout the system by increasing the arterial circulation, causing more rapid breathing, which imparts more oxygen to the blood, thus stimulating and relaxing the capilary system, followed by perspiration. To many it seems objectionable in vascular, plethoric and febrile conditions. These objections are obviated by giving it with care and suitable precaution, so as to favor its determination to the surface, bearing in mind that it makes no narcotic impression on the brain. For febrile conditions, half a drachm to a pint of boiling water, given in half to one ounce doses, with foot, hip, or vapor bath, thus aiding its action to the surface. If its first impressions cause pain in the stomach, milk or cream should be added. In this form it is valuable in low conditions of typhus, bilious and other fevers. Its effects are more permanent than any other known stimulant, consequently it aids vitality when the natural powers are failing by the action of disease.

For indigestion, it is one of the best stimulants and tonics, increasing the secretions of the stomach, and allaying pain or sickness so often attending dyspeptic cases.

For sores, ulcers and glandular swellings of the throat, it excites secretions and excretion, separates and disengages the viscid mucus there collected, and aids a healthy, natural condition faster than most other agents. The infusion also is valuable for influenza and colds induced by a sudden check of perspiration. For internal congestion or inflammation of the lungs, liver, spleen and kidneys, it excites the absorbants and exhalants, equalizes the circulation, promoting resolution. In a gargle for malignant scarlatina and ulcerated sore throat, it is valuable.

In synochial fevers, or where there is great congestion, it is well to obviate its use.

Dose in powder, one to five grains in warm water or milk,

Infusion—One drachm to a pint of boiling water, sweetened; or milk may be added, aiding the perspiration with foot, hip or vapor bath.

Tincture—One drachm to a pint of alcohol or brandy. *Dose*—Five to twenty drops, in warm, sweetened water.

Oil—One half to one drop, triturated with sugar or syrup.

CARDAMINE PRATENSIS.

NAT. ORD.—Brassicacea. SEX. SYST.—Tetradynamia Siliquosa.

Common Names.—Cuckoo Flower, Ladies' Smock.

DESCRIPTION.—Stem erect, smooth, a foot high. Leaves ovate. Flowers rose color.

History.—The Cardamine is found in Europe and northern sections of this country. It is an herbaceous plant of several species. The *C. rhomboidea*, spring cress; *C. Pennsylvanica*, American spring cress; *C. pratensis*, field water cress. Some species are found in the Southern States. Leaves may be eaten.

PROP., &c.—Roots said to be purgative. The leaves and flowers used for epilepsy, hysteria, chorea, and spasmodic asthma.

CARICA PAPAYA.

NAT. ORD.—Artocarpea. SEX. SYST.—Polygamia Triecea.

Common Names.—Papayer, Papaw Tree.

DESCRIPTION.—Leaves palmate, lobed. Flowers in corymb shape. Fruit similar to the pear.

History.—Found wild in Florida and farther south. A small evergreen, tropical tree, with fruit good to eat. The juice of the unripe fruit is used to kill tape-worms, to be followed with a cathartic.

CARTHAMUS TINCTORIUS.

NAT. ORD.—Cynarea. SEX. SYST.—Syngenisa Polygamia.

Common Names.—Dyer's Saffron, American Saffron.

DESCRIPTION.—With stems smooth, erect, two feet high, branching. Leaves ovate, entire, serrate. Flowers compound, large, solitary heads, funnel shape; reddish color.

History.—This annual plant is cultivated in this country, but a native of Egypt and Europe. It is found in our shops,

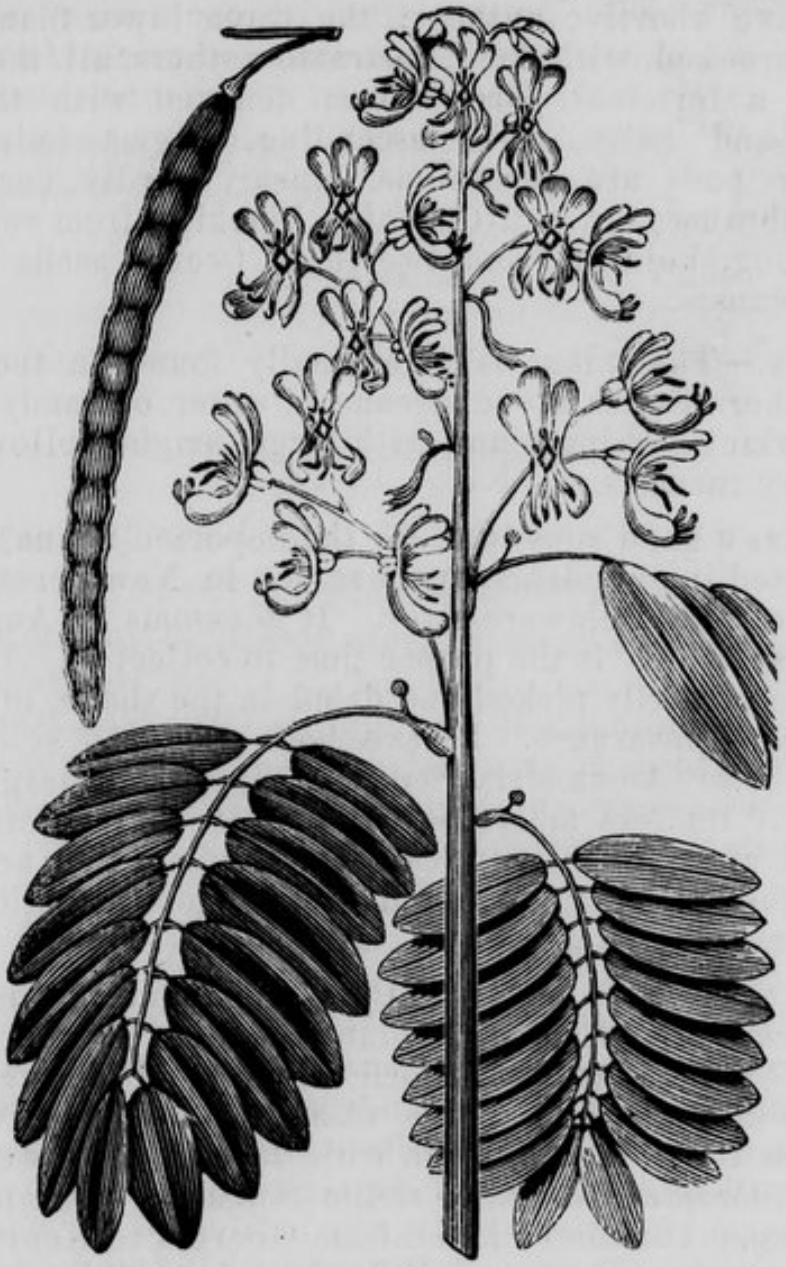
and used as a substitute for the *crocus sativa*, the true Spanish Saffron. The imported article is much higher in price, of a deeper red color, finer and more uniform in appearance, a more pleasant, aromatic odor, and possessed of more coloring matter and medical properties, and every way preferable to our own cultivated saffron.

PROP., &c.—Diaphoretic, diuretic and laxative. Has been employed for jaundice and dropsy; also for measles and other exanthematous fevers. The infusion is used by nurses to bring out the eruption of infants.

CASSIA MARILANDICA.

NAT. ORD.—Leguminose. SEX. SYST.—Decandria Monogynia.

Common Names.—American Senna, Locust Plant.



DESCRIPTION.—Root perennial, contorted, irregular, woody,

black, fibrose. Stems branched, nearly smooth, upright, from three to five feet high, cylindrical and simple. Leaves alternate, not many, large, horizontal. Petioles compressed, channeled above, with an ovate, stipitate gland at the base, bearing from eight to ten pairs of folioles or leaflets, which are smooth, green above, pale beneath, with short, uniglandular petioles. Shape ovate, oblong, or lanceolate entire; equal, mucronate at the end. Stipules subulate, ciliate, deciduous. Flowers of a bright or golden yellow, forming a panicle, although partly axilary and in short racemes, having each from five to fifteen flowers. Peduncles furrowed, pedicles long, glandular, with short bracts. Calyx colored, with five oval, obtuse and unequal segments. Petals five, spatulate, concave, obtuse, unequal; two lower larger. Stamina with yellow filaments and brown anthers. The three upper filaments have abortive anthers; the three lower filaments are longest, crooked, with long, rostrated anthers, all the anthers open by a terminal pore. Germ deflexed with the lower stamina and hairy, style ascending, stigma hairy. The fruits or pods are pendulous, linear, hardly curved, flat and membranaceous, a little hairy, blackish, from two to four inches long, holding from twelve to twenty seeds or small brown beans.

History.—This plant is occasionally found in the Middle and Southern States, along streams of water, on sandy soil. It is a luxuriant looking plant, with large, bright yellow flowers on axilary racemes.

It makes a good substitute for the imported Senna, and may be collected in abundance every season in New Jersey, on the borders of the Delaware river. It blossoms in August and September, which is the proper time to collect it. Its leaves should be carefully picked and dried in the shade, to preserve their green appearance. I have both used and sold it as a substitute for Alexandria Senna, giving it in larger doses, because of its less active power. As its therapeutical effect is, to all appearance, identical with the imported article, our own profession certainly should bestow more attention to this American production.

There are several species of the Senna found in this country. The *C. chamecristi*, a small plant found everywhere in dry soils; it has many pairs of linear folioles, and large germinate flowers with two purple spots. *C. nictitans*, or sensitive Senna, similar to the foregoing, but with very small flowers; common. *C. toroides*, N. Sp., or sickle Senna, is perhaps the *C. tora* of some botanists; found from Georgia to Kentucky. It has three pairs of ovate folioles and long, fulcated, axilary

pods. All the American Sennas have yellow flowers. Schoepf says that the *C. biflora* is anti-syphilitic.

PROP., &c.—Hydrogogue, cathartic. It contains resin, starch, albumen, mucilage, volatile oil, salts of potassa and lime. The peculiar action which this article has on the serous membrane, makes it available in dropsical effusions, in acute pains of the head and frontal sinus, induced by colds. The Senna is a useful vermifuge when given in active doses, perhaps from some principle that is obnoxious to the worms, or perhaps by suspending them in the large amount of watery substance that it induces, when, by the active, peristaltic action of the whole canal, the worms are rapidly carried out.

Powder in drachm doses, mixed in sweetened water.

Infusion—One ounce of Senna leaves, one drachm of peppermint leaves, one pint of boiling water; cover it, and let stand an hour; strain, and give in four ounce doses every hour, until it operates. The best form for use.

The *fluid extract*, prepared with some of the carminatives, is a convenient form for use.

CASTANEA AMERICANA.

NAT. ORD.—Cupuliferea. SEX. SYST.—Monœcea Polyandria.

Common Name.—Chestnut.

DESCRIPTION.—A large tree. Leaves oblong, acute serrate, sinuate, glabrous.

History.—Found in many parts of our country. Its fruit is enclosed in a capsule, covered with innumerable prickers. The Chestnuts are collected in large quantities for the markets. The wood is sometimes used for mechanical purposes, for posts and fences.

The *C. pumella* is a small tree, eight to twenty feet high. Its fruit is not half the size of the Chestnut, and is called *Chinquapin.* It is found in the Middle and Southern States.

PROP., &c.—The bark has astringent and tonic properties, and may be used for intermittent fevers. The infusion of the leaves is highly praised as a remedy for whooping-cough, and this fact is worthy the special attention of the profession. The infusion may be drank freely—one ounce of fresh dry leaves to a pint of boiling water. Try it.

CATALPIA CORDATA.

Common Name.—Catawba Tree.

DESCRIPTION.—A middle sized tree. Leaves simple, cordate, entire, by threes. Flowers beautiful white, in panicles.

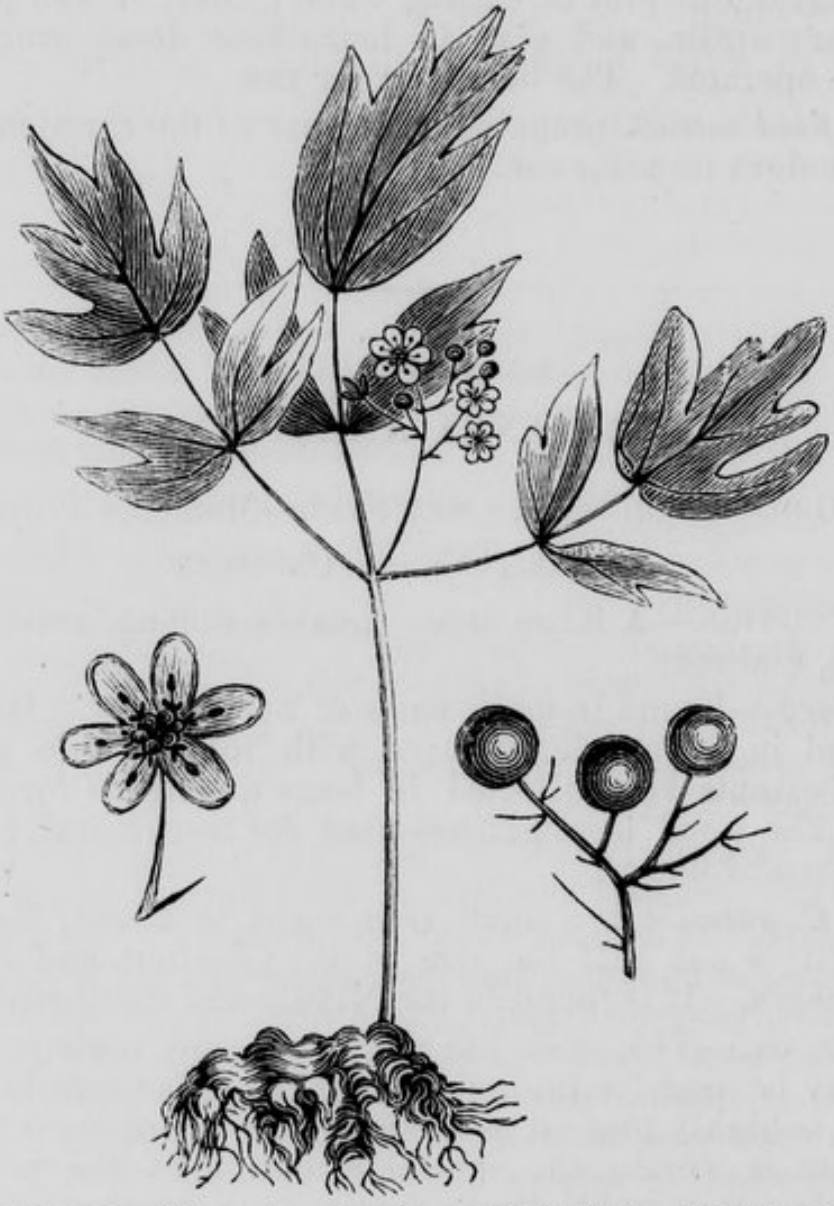
History.—Found near streams, and cultivated in gardens for its beauty. Wood soft, white, like poplar.

PROP., &c.—Leaves emolient and anodyne. Bark tonic and vermifuge—wood emetic. By some thought to be poisonous.

CAULOPHYLLUM THALICTROIDES.

NAT. ORD.—Berberidacea. SEX. SYST.—Hexandria Monogynia.

Common Name.—Blue Cohosh, Pappoose Root, Blue-berry.



DESCRIPTION.—From two to three feet high. Root perennial, yellow inside, brown outside, hard, irregular, knobby, branched,

with many fibres. Stem upright, smooth, trifurcate at the top or dividing into three leaves, in the centre of which comes out the panicle of flowers. Leaves petiolate, smooth, pinnate, lobed, with three, very soldom five folioles, the lateral ones nearly sessile, oval or oblong, inequally bifid and acute; the terminal foliole, separated, larger, subcordate, with five, seldom three unequal lobes or segments, oval and acute. Flowers in a short central loose corymb, yellowish green, rather small; peduncled, with six equal elliptic obtuse sepals. Petals, six very small, opposite and notched, with each an opposite longer stamen, filaments short, anthers elliptic bilocular, opening on each side. Germ globular, style short, stigma obtuse. Drupes resembling berries succeed the blossoms; they are smooth, of a dark blue, globular, rather large, with only one hard seed.

History.—This genus, which includes only one species, was united to leontice by Linneus; but separated by Michaux: they both belong to the natural family of Berberides, and to Hexandria *monogynia*. *Caulophyllum* implies that the stem and leaves are connected as it were, and the specific name alludes to the leaves being similar to many thalictrums. Cohosh was the indigenous name of this plant, and a better one than blue-berry, the usual one in many parts; it blossoms in May and June. The berries ripen in the latter part of summer, sweetish, similar to the huckle-berry. This handsome plant is found in heavy timbered woods in Canada, the Northern and Middle States. It was known to have been a favorite remedy with the squaws of several Indian tribes to aid them in parturition. Our early reformers highly esteemed it, and the Eclectic profession has placed it in its proper position as a favorite therapeutical agent.

Prop., &c.—It contains gum, resin, starch and neutral principle; demulcent, anti-spasmodic, emmenagogue, sudorific and stimulant. It has been used for rheumatism, dropsy, colic, sore throat, cramp, hiccup, epilepsy, hysterics, inflammation of uterus, &c. It appears to be particularly suitable for female diseases, and Smith asserts that the Indian women owe the facility of their parturition to a constant use of a tea of the root for two or three weeks before their time. As a powerful emmenagogue, it promotes delivery, menstruation, and dropsical discharges. Its chief use is for obstructed menstruation, for epilepsy, hysteria and other nervous diseases.

Infusion—Bruised root to one ounce boiling water, given in one or two ounce doses, when cold. In this form some prefer it as a substitute for ergot.

Tincture—Two ounces of coarse powered root to a pint of pure alcohol. *Dose*—One drachm.

Concentrated—The *Caulophyllin* is a convenient mode of use. *Dose*—Three grains.

CEANOTHUS AMERICANUS.

NAT. ORD.—Rhamnacæ. SEX. SYST.—Pentandria Monogynia.

Common Names.—Jersey Tea, Red Root.

DESCRIPTION.—The leaves olong ovate, acute, serrate, on short petioles. Stem woody, two to five feet high, bending, branching near the top; bark dark brown, purplish. Flowers light purple color on branching pedicles, in panicle form. Calyx divided into five sepals. Corolla of five petals. Stamens five; opposite the petals. Fruit triangle, three seeds.

History.—This small shrub is found in many parts of the United States, and plentiful in the dry soil of New Jersey, where its leaves were first used as a substitute for the imported tea, which was prohibited in our revolutionary war. No doubt our patriotic grandmothers preferred this article at that time, and probably now its stimulating properties are equal, if not superior to one-half of the table tea that comes from other countries. The leaves and roots contain tannin, resin, gum, volatile oil, and a principle called ceanothine.

PROP., &c.—Astringent, stimulant, expectorant, alterative. Said to have been a favorite remedy with our early reformers for pulmonary, scrofulous and syphilitic diseases. An infusion of the leaves has been used for dysentery, diarrhea, lucorrhea, gonorrhea. The preparations of the bark are preferable for diseases of a constitutional character, in the form of decoction, syrup or extract. It has been considered a specific for gonorrhea. The decoction is valuable for ulcerated sore mouth and throat.

CELASTRUS SCANDENS.

NAT. ORD.—Celastrinea. SEX. SYST.—Pentandria Monogynia.

Common Names.—Staff-vine, Bittersweet.

DESCRIPTION.—Root long, creeping, reddish brown. Stems woody, twining, bark yellowish red, thick. Leaves oblong, lanceolate, acute, curved, deep green above, silvery beneath. Flowers light yellow. Calyx, five lobed. Corolla spreading. Berries red, three celled, free.

History.—The staff-vine has a stem of light brown color, the size of a pipe-stem and larger. It grows along skirts of woods, running on fences, bushes and small trees. The leaves grow on its branches alternate. The flowers appear in June, and its red fruit remains late in the fall. The bark is the medicinal part, which, when taken off, rolls up in quill shape.

[The *Solanum Dulcamara* is also called bittersweet, a running plant, but it has a *green* stem, which has no wood in it. Its leaves are halbert-shaped. Its red berries set in the calyx of green. Much difficulty is experienced both by druggists and physicians in purchasing these two plants, which need not occur if the above description is kept in mind. See *Solanum Dulcamara.*]

PROP., &c.—Alterative, diaphoretic, narcotic, discutient. It has some reputation for renovating the system of syphilitic taints, pulmonary and scrofulous diseases, hepatic and cutaneous affections, and for the relief of obstructed menstruation.

Decoction—One ounce of bark to a pint of water, reduce one-half by boiling, strain, and give in half ounce doses, three to five times daily.

Extract—Either alcoholic or watery. *Dose*–Five to ten grains.

Ointment—Boil one pound of green leaves in two pounds of good lard, strain; add one ounce of beeswax, and simmer a few minutes. A good discutient for swelled breasts, joints and indurated ulcers.

CELTIS OCCIDENTALIS.

Common Names.—Nettle Tree, Sugar-berry Tree.

DESCRIPTION.—A small tree. Leaves ovate, acuminate, serrate. Fruit solitary, purple.

History.—There are several species found in the South and West. The C. *crassifolia*, the *C. pumila*, the *C. reticulata.*

PROP., &c.—Bark is nervine. Berries are mild astringent, sweetish, good to eat. But little is known of this article.

CENTAUREA BENEDICTA.

NAT. ORD.—Asteracea. SEX. SYST.—Synganesia Frustranea.

Common Name.—Blessed Thistle.

DESCRIPTION.—The roots whitish, tapering, branched. Leaves large, uneven, notched, armed with spines, decurrent, light green above, silvery beneath. Flowers yellow, solitary.

History.—There are ten species of this plant, most or all supposed to have been naturalized in this country. The *C. benedicta* is even a handsome thistle. It is found in pastures, in roads, along the fences.

PROP., &c.—Tonic, diaphoretic. The infusion of half an ounce of dry leaves in a pint of boiling water is the only way in which it has been used. Large warm draughts are used to prevent the return of the paroxysms of intermittent fever. The effect is, when thus continued, to induce free perspiration and sometimes vomiting, after which the cold infusion, in wine-glass doses, should be followed up every one or two hours. Its intense bitter taste makes it unpleasant. It is useful for debility in febrile diseases, and for indigestion.

CEPALANTHUS OCCIDENTALIS.

NAT. ORD.—Rubiaceous. SEX. SYST.—Tetandria Monogynia.

Common Names.—Buttonwood Shrub, Buttonwood.

DESCRIPTION.—A fine ornamental shrub from five to fifteen feet high, very branched; bark yellow brown spotted with

red, rough on the stems. Leaves ternate or opposite, with red petioles from two to four inches long, oval, base acute, end acuminate, margin often undulate, smooth on both sides, but glaucous beneath, nerves often red, veins yellow. Flowers

terminal peduncled, forming round balls of a cream white color, and sweet scented, fringed all over by the protuding stamina and styles, nearly as large as a walnut. Phoranthe or common receptacle globular and hairy, flowers crowded all over it. Calyx coherent with the pistil, with four small acute teeth. Corolla inserted on the pistil, tubular or nearly funnel formed, with four ovate segments. Stamina and style filiform, double the length of the corolla, anthers and stigma yellow. Capsules small, crowded, formed by two semibivalve cells, the valves opposite to each other, the two outside valves angular, each cell has only one seed.

History.—Cephalanthus means head-flower in Greek, alluding to the globular form of the blossoms. Linneus only knew this species, and gave to it the name of occidental. It is peculiar to North America—the same kind said to be found in Cochinchina is a different species—but there are several varieties in the United States not yet well noticed, some of which may be, perhaps, peculiar species; such as the *C. pubescens*, with pubescent leaves, in Georgia; *C. macrophylla*, with large leaves half a foot long, corolla hairy inside, in Louisiana, &c.

The flowers appear in July and August, producing a peculiar, fragrant smell, similar to the Jessamine.

Prop., &c.—Cathartic, diaphoretic, tonic. The bark, leaves and flowers may be used; and, possessing a volatile oil that is aromatic, its preparations are pleasant. A strong decoction, well sweetened with white sugar, is valuable both for its tonic and cathartic properties for fevers and indigestion, attended with constipation of the bowels. In the Southern States, it has been used as a diuretic for gravel, and also for coughs. But little use has been made of it by the profession.

CEREIS CANADENSIS.

Common Names.—Red Bud, Judas Tree.

Description.—The leaves heart-shape, acute, villose beneath. Minute stipules. Pods of fruit on short stalks.

History.—A small shrub found in the Northern and Middle States. But little use has been made of this article, except by the Indians, for food.

CHAMEROPS PALMETTO.

Nat. Ord.—Palmacea. Sex. Syst.—Hexandria Trygynia.

Common Names.—Palm Tree, Fan Palm.

History.—There are several species of the palm trees found in the Southern States. They have been used for food, sugar,

wine, and to make fans, darts, ropes and cloths for Indian tribes. Some afford fruit similar to plumbs and dates. The leaves have been made into hats, baskets and fans. The Palmetto palm is said to rise sixty feet high, having a spongy wood that will not decay in water, and used for wharves, and in forts to resist cannon balls. The juice of some of these palms is made into wine.

CHARA VULGARIS.

NAT. ORD.—Naiades. SEX. SYST.—Monœcia Monandria.

Common Name.—Water-feathers.

DESCRIPTION.—Leaves oblong. Stems naked at the base, with leafy joints. Flowers with stamens and pistils; no calyx or styles. Berries, one cell, many seeds.

History.—This plant is found in ditches and ponds of muddy water. Other species are found in clear water, in many parts of the country.

PROP., &c.—Anti-spasmodic and vermifuge. They contain a substance similar to animal matter, fetid green oil, salts and carbonate of lime.

CHEIRANTHUS FENESTRALIS.

NAT. ORD.—Crucifera. SEX. SYST.—Tetrandria Siliquosa.

Common Name.—Wall-flower.

DESCRIPTION.—Leaves crowded together. Calyx closed. Petals dilated. Stigma two lobed. Seed flat.

History.—A small rumning plant, cultivated in gardens. Its flowers are nervine, and impart a pleasant perfume. The plant is a tonic, and intensely bitter. One species in the West is called *bitter root.*

CHILIDONIUM MAJUS.

NAT. ORD.—Papaveracea. SEX. SYST.—Polyandria Monogynia.

Common Name.—Celandine.

DESCRIPTION.—Stems several, herbaceous. Leaves alternate, notched, opposite leaflets. Flowers yellow. Petals four. Calyx cleft. Stamens numerous.

History.—The Celandine is found in rich ground, along fences, in gardens and shaded places. It flowers in summer, and second growths appear late in the fall. The fresh roots and stems, when broken, emit a yellowish red, acrid juice.

Most of medical authors confound this with a plant that grows in wet places, having yellowish, branching, jointed, smooth stems, whose leaves are entire, lanceolate; yellowish flowers, succeeded by small pods, which, when pressed with the fingers, break and fly into many curled pieces, and called "touch-me-not."

PROP., &c. — Stimulant, astringent, diuretic, diaphoretic. Recommended for several diseases, but seldom used internally. The yellowish red juice is very acrid, and often used to destroy warts. The green leaves boiled in lard, make an excellent ointment for cutaneous diseases.

CHENOPODIUM ANTHELMINTICUM.

NAT. ORD.—Atriplices. SEX. SYST.—Pentandria Digynia.

Common Name.—Wormseed.

DESCRIPTION.—Root perennial and branched. Stem upright, grooved and branched; branches fastigate, giving a shrubby appearance to the whole plant, which rises from two to five feet in height. Leaves sessile, alternate or scattered, attenuated at both ends, oval or oblong, rather thick, dotted beneath, margin sinuate by large, unequal, obtuse teeth, nerves very conspicuous. Flowers very small, numerous and yellowish green; like the whole plant, forming large, loose, leafless, terminal panicles, composed of many slender, alternating small spikes, and these of many small, scattered, unequal glomerules, containing from five to twelve sessile flowers. Calyx or simple perigone with five short, oval segments. Stamina opposite to the segments, and protruding. Styles bifid or trifid, filiform, longer than the stamina. Seed flat, lenticular, shining, covered by the persistent calyx.

History.—The Wormseed is found on dry soil, along fences,

around old buildings. The whole plant has a dull green appearance. It contains a large proportion of volatile oil, which has an unpleasant aromatic odor, with a bitteresh, nauseous taste. The seeds yield the *Wormseed oil* of the shops.

PROP, &c.—Anthelmintic; also said to be anti-spasmodic. The expressed juice in half-teaspoonful doses, with milk, has been used in domestic practice. The powdered leaves and seeds, in half-drachm doses, may be given in milk or sugar. The oil, in ten to fifteen drop doses, on sugar, is the best form for use. After about forty-eight hours' use, and three or four times daily, it should be followed with an active purge, the senna or mandrake being preferable.

Some care should be exercised in its use, as over doses may produce bad impressions on the brain.

CHELONE GLABRA.

NAT. ORD.—Scrophularia. SEX. SYST.—Didynamia Angiospermia.

Common Names.—Balmony, Snake-head.

DESCRIPTION—Stems herbaceous, erect, twelve to eighteen inches high. Leaves opposite, oblong, lanceolate, serrate. Flowers white and purplish, in a dense short spike. Calyx, five unequal, imbricated segments, oblong obtuse. Corolla white, often tinged with pink color, short lips, contracted at the mouth. Style short, and bending downward.

History.—There are several species of the *Chelone* growing in all sections of our country. The peculiar shape of the flower of this one has given it the name Snake-head. It is found in fields, along fences, on the borders of meadows, on heavy ground. Rafinesque introduced this plant into the Materia Medica, who devoted much time both to analyze and test its therapeutical action. It contains gallic acid, resin, coloring matter and other properties.

PROP., &c.—Tonic, anthelmintic, laxative. The Balmony is one of our best tonic bitters, in the form of wine tincture, by adding one ounce of powdered leaves to a pint of port wine, sweetened. In this form it is available in low forms of bilious, typhus, and other fevers, general debility, indigestion and worms. Its stimulating power on the mucus and serous membranes is sufficient to move the bowels gently, which adds to its value. In hepatic diseases, it is said to be valuable. The powder, in drachm doses two or three times daily, in sweetened water, for the above indications.

The *Chelonin*, the resinoid and neutral principles, in three-grain doses, triturated with sugar, is a good form for administration.

CHIMAPHILLA UMBELLATA.

NAT. ORD.—Eracacea. SEX. SYST.—Decandria Monogynia.

Common Names.—Pipsissewa, Wintergreen, Prince's Pine.

DESCRIPTION.—A perennial, evergreen plant. Root yellow, creeping, giving off radical fibres. Stem six to ten inches high, bending, several from one root. Leaves grow in whorls of two or three, of four to six each, oblong, serrate. Calyx five leaved or cleft. Corolla, four or five half-joined petals. Stamens ten, erect. Anthers fixed in middle. Style short. Capsule red, five cells. Fruit capsular. Seeds many.

History.—An evergreen herb of the Middle and Northern States and canada. It grows on dry soil, in pine woods. Its beautiful pink colored flowers perfume the air.

The *C. maculata* is found with, though not so plentiful as the *Umbellata.* Its leaves are narrower, less in number, spotted, and sometimes white stripes lengthwise. In the country, many consider this species poisonous, and not suitable for medical purposes, which is a mistake, for it contains properties equal to the first.

Pyrola is the name employed by Rafinesque and some other authors, but the term *Chimaphilla* is now generally adopted.

PROP., &c.—Diuretic, sudorific, tonic, astringent, alterative. Its constituent medical properties, resin, tannin, gum, lignin, fibrin, some salts and bitter extractive. Alcohol and water will take up its properties, which may be administered in form of infusion, tincture, extract or syrup.

The Pipsissewa is indicated in hepatic, nephritis, hydrothorax ascites, anasarca, stranguary, rheumatism and fevers. Its astringent and tonic powers make it available in passive hemorrhages of the lungs, stomach, bowels and urinary passages.

The *infusion*—One ounce to a pint of boiling water, in wineglass doses, is an acceptable form to the stomach for febrile and other forms of disease.

Tincture seldom used.

Extract, by water or alcohol, in pills, is a very convenient mode of use; six grains three or four times daily.

Chimaphillin, the resin and neutral principles of the plant, in three to five grain doses, may be used for all the indications of other preparations.

The Pepsissewa is extensively used in domestic practice, for affections of the lungs, coughs, rheumatism, dropsy and some other diseases.

CHIMAPHILLA MACULATA.

NAT. ORD.—Eracacea. SEX. SYST.—Decandria Monogynia.

Common Name.—Spotted Pepsissewa.

DESCRIPTION. — Perennial plant. Root yellowish, fleshy, few fibres. Stem erect, four to eight inches high. Leaves

nearly in whorls, lanceolate, serrate, broad at the base, spotted, but oftener with white stripes lengthwise. Flowers on long peduncles, three and four on each stem at the top. Petals five, ovate, pinkish color.

History.—Found in most sections of the country, on dry and rich soil, generally in pine timbered, open woods, with the *C. umbellata.*

PROP., &c. — Many people in the country consider this species as poisonous, which is a great mistake. It has been used with the *C. umbellata*, and no doubt equally beneficial for medicinal purposes.

CHIOCOCCA RACEMOSA.

NAT. ORD.—Rubiacea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Snow-berry, David-root.

DESCRIPTION.—The leaves oblong, acute. Flowers axilary, on racemes.

History.—This small plant grows in Florida and Brazil. The root is the part used.

PROP., &c.—Diuretic, stimulant, emmenagogue, and alterative. It has been used in decoction, powder and tincture. A powerful plant, and should be used in moderate doses, though producing but little pain. Useful for amenorrhea, syphilis and dropsy, for which diseases it is considered by some as a specific. Our Southern physicians should notice this article.

CHIONANTHUS VIRGINICA.

NAT. ORD.—Scrophularia. SEX. SYST.—Diandria Monogynia.

Common Names.—Fringe Tree, Old Man's Beard.

DESCRIPTION.—A small tree. Leaves oblong, oval, smoothish, with down and veins. Flowers white, drooping in panicles. Calyx small, four cleft. Petals four, long, linear, white. Stamens two to four. Stigma notched. Fruit globular, fleshy, one celled, one seeded.

History.—The fringe tree or shrub is not plentiful in growth. It is found in the southern border of Pennsylvania, in Virginia, Maryland and other Southern States. When this tree is in blossom it is very beautiful, its white flowers being arranged similar to the fringe of a lady's dress. By some farmers of Maryland and Virginia they are specially cared for, because of their beauty.

From indefinite reports I hear that the bark of the Chionanthus has been prepared in some of the Southern States in the form of a syrup, and with great success used as a general alterative.

Dr. I. J. M. Goss, of Georgia, has given his experience in the use of this article in a communication to the Eclectic Medical Journal of Philadelphia, and from this we make the following quotations. In speaking of concentrated remedies he says:—

"For the first article, I will again call the attention of the Eclectic practitioners to the medical properties of Chionanthin,

which is, I think, the representative of Chionanthus Virginica, or, as called in the South, White Ash, Graybeard, &c. This is a resinoid that I obtained, after several experiments, from the above shrub. I digested the ground bark of the root in 76 per cent. alcohol, for fourteen days, filtered and evaporated to the consistence of syrup, added cold water, which precipitated the chionanthin, which I collected, dried and pulverized. It has the taste and smell of the crude bark in a high degree; and as far as I have tried it, it seems to possess its therapeutical properties. I find it one of our most reliable catalytics or alteratives. I use it as a general alterative in syphilis, scrofula, glandular enlargements and rheumatism, also in skin diseases. In all the above diseases it is a potent remedy. In jaundice, either idiopathic or symptomatic (from mercury), I find it a specific. I have never failed to restore the hepatic secretion to a normal condition in a short space of time with it. It removes the biliary deposits from the skin in a few days, at the same time it gives tone to the secerning organs in general. From its active alterative properties and direct catalytic effects, I think it is destined to obtain an important rank among that class of agents. I have been using it for sixteen years, more or less, as opportunity presented suitable cases for its use; and the longer I use it, the greater the confidence I have in its efficacy.

"N. B.—This shrub grows plentifully in the South."—*Mulberry P. O., Jackson Co., Ga.*

Dr. John Simms, an able Eclectic physician of Wilmington, Delaware, has employed the bark of fringe tree in the form of a hydro-alcoholic tincture, with most decided success, in syphilitic and other diseases. He speaks of this article as a most valuable acquisition to the Eclectic remedies.

CHRYSANTHEMUM LEUCANTHEMUM.

NAT. ORD.—Corymbiferea. SEX. SYST.—Syngenesia Polygamia.

Common Names.—Ox-eye Daisy, Golden Daisy.

DESCRIPTION.—The stem is erect, branching, one to two feet high. Leaves small, clasping, lanceolate, serrate, lower leaves deeply notched. Flowers large, solitary. Disk yellow, around which is a circle of white rays or petals.

History.—This large daisy is found in most parts of the country as a very troublesome thing in meadows and pastures. The flowers are about three-fourths of an inch in diameter, blooming in July and August.

PROP., &c.—Diuretic, tonic and stimulant. The decoction of leaves and flowers removes gravelly substances from the kidneys and bladder, giving tone and strength to the parts. It has been employed for asthma, phthisis, and whooping-cough. The docoction and bruised leaves are applied to ulcers, wounds and cutaneous diseases.

CICUTA MACULATA.

NAT. ORD.—Umbilliferea. SEX. SYST.—Pentandria Digynia.

Common Names.—Poison Hemlock, Water Parsley, Wild Hemlock, American Hemlock.

NOTE.—The *Conium Maculata*, called *Poison Hemlock*, is a plant in its locality, growth, appearance, and uses, similar to the *Cicuta*. Those who collect plants for the markets, the druggist and the physician, become confused and fall into errors with these two plants. For these reasons we give an engraved specimen of each article, and quote nearly entire from Rafinesque, the most accurate American author. See *Conium Maculata.*

DESCRIPTION.—Root perennial, composed of many oblong fleshy tubers, of a finger's size. Stem from three to six feet high, hollow striated, jointed, purple or green, smoothed and branched. Leaves smooth, decomposed, alternate with petioles clasping at the base, bilobe, membranaceous; decreasing in size upwards, where they are only ternate, while the lower are tripinnate or triternate, folioles sessile, opposite, lanceolate, serrate, acuminate, with veins ending at the notches, which is very unusual. Flowers white in terminal umbels, without involucres, umbels with seven to twelve umbellules, each having from twelve to twenty flowers, upright, not crowded; involucels very short, oblong, acute. Calyx connected with the pistils, crowned, crown with five minute segments. Petals five obovate, white, entire, end inflexed. Filaments longer, filiform, anthers oval. Two short recurved styles. Fruit nearly globular, divisible into two seeds, as in all the umbellate plants, each is flat inside, convex outside, with five furrows.

Locality.—In wet meadows, pastures and ditches; near streams and swamps, from New England to Georgia and Ohio; also, in the mountains of Pennsylvania and Virginia. Blossoming in summer, from July to August.

History.—The genus *Cicuta* is one of the poisonous hemlocks; the *Conium Maculatum* is, however, considered as the true hemlock and the most virulent; but the deadly poison of that name (rendered famous by the death of Socrates), was a compound beverage. In the United States, the same name is capriciously given to a beautiful and useful species of fir-tree.

Cicuta was the old Latin name; *maculata* means spotted, it is a very bad specific name, which Bigelow would have changed into *fasciculata*, if changes of old names should not be avoided.

Many umbellate plants growing near the water are poisonous, although the Sweet Sicily or myrrhis is not. The root of the last is often sought for by children, who like its sweet taste; but are apt to mistake this and many other poisonous plants for it, by which mistake several have been poisoned. It would be well to avoid all similar plants, or at least to attend to their different smell and taste, which is strong and disagreeable in all the pernicious kinds.

These deleterious plants appear to lose some of their virulence when growing in a drier soil, or cultivated in gardens. Sheep and goats eat them with impunity, and even cattle do not appear injured by them when mixed with hay.

Several persons searching for Angelica Root, Sweet Flag, Sweet Sicily (which have all a pleasant aromatic smell and taste), have eaten this root by mistake, and some have died in an hour's time. The effects of the poison were violent convulsions, a frothing mouth, a bleeding nose, diluted pupils,

fixed eyes, &c. When vomiting was produced naturally, they were saved, after being very sick for three days, with stupor, paleness, &c. Persons poisoned in this way ought therefore to evacuate the stomach, by tickling the throat or taking an emetic. Vinegar or lemon-juice may also be given to neutralize the narcotic poison, and next castor oil, mild purgatives, strong coffee, &c., after vomiting.

CIMICIFUGA RACEMOSA.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Di-Pentagynia.

Common Names.—Black Cohosh, Blacksnake-root, Rattle-weed.

DESCRIPTION.—Root, large candex, giving off many fibres, all dark brown color. Stem herbaceous, smooth, two to five

feet high, branched. The stem terminates in a long raceme of flowers, which, when fully expanded, are of a yellowish or whitish dusky appearance. Leaves opposite, on short petioles, ovate, acute, serrated. Calyx light yellow, four. Sepals four. Petals small, numerous. Pistil on oval germ. Capsule one cell, with numerous flat seeds.

History.—A great deal of confusion is found among authors when describing *cohosh* plants. This leads physicians into doubts, fears and mistakes. The common name, *cohosh*, is one cause of difficulty. The correct botanical descriptions, with accurately engraved illustrations of these four plants, will, we are confident, place the subject in a clear light.

Linneus, whose name stands at the head of the list of scientific botanists, placed the *black cohosh* under the genus *Acta*; Puesh to the *Cimicifuga*, and Rafinesque, the best American botanist, at one time put it under his genus *Macrotys*, and afterwards to *Botrophis Serpentaria*. These different botanical names have also added to the confusion.

The Cimicifuga Racemosa is found in the open woods and hill-sides of most all sections of our country.

Heretofore, but little use has been made of this plant by the Allopathic profession. It is used in many parts of the country in domestic practice, for rheumatism, consumption, liver affections, bronchitis, &c. The Botanic physicians who followed the medical revolution of Dr. Samuel Thomson, brought this valuable article into notice.

PROP., &c.—The root is the officinal part. It contains fatty matter, gum, starch, resin, tannin, wax, gallic acid, sugar, oil, black and green coloring matter, lignin, salts of lime, magnesia, potassa, alkaloid and a neutral principle. It presents one of the largest combinations of medical properties found in plants. It has a fetid smell and nauseous taste.

The black cohosh is alterative, nervine, expectorant, diaphoretic, emmenagogue, diuretic and stimulant. In large doses, it makes impressions on the brain, fulness of the head, vertigo, nausea and prostration. Its greatest known value is in rheumatism, gout, neuralgia, arresting the periodic pains of those diseases by lessening the heart's action and allaying nervous irritation.

This plant is valuable for epilepsy, spermatorrhea, phthisis, pulmonalis and whooping-cough. A strong decoction may be used internally in moderate doses, and externally as a wash for itch and other skin diseases. Care should be taken to notice any effects it may produce on the brain.

Powder—One half to drachm doses, in syrup or water.

Infusion—One ounce, bruised, to a pint of boiling water. Give in wine-glass doses when cold.

Decoction—Ounce and a half, bruised, two pints of water; reduce one half by boiling. Give in half wine-glass doses.

Tincture—Coarse powdered root, four ounces to two pints diluted alcohol. *Dose*—One half to one drachm.

Concentrated—The cimicifugin is a very convenient form for use. *Dose*—One half to two grains.

A very good formula for rheumatism, nephritis and amenorrhea, similar to one employed by D. E. Smith, M. D., of Brooklyn, N. Y., may be here introduced:

℞—Tinct. Cimicifuga R.,	Oii.
Tinct. Guiac.,	℥ii.
Express. juice Phytolacca Berries,	℥iv.
Holland Gin,	Oii.

Dose—Teaspoonful three to five times daily.

The Black Cohosh was a favorite remedy for whooping-cough and rheumatism with the late Thomas Cooke, M. D., who was the first Professor of Theory and Practice in the Eclectic Medical College, Pennsylvania.

CICHORIUM INTYBUS.

NAT. ORD.—Saxifragea. SEX. SYST.—Syngenesia Polygamia.

Common Name.—Succory.

DESCRIPTION.—Root fleshy and contains a milky juice. Stem two or three feet high. Leaves spreading at the base, three to five inches long, notched. Flowers in pairs axilary, large, round, of a blue color.

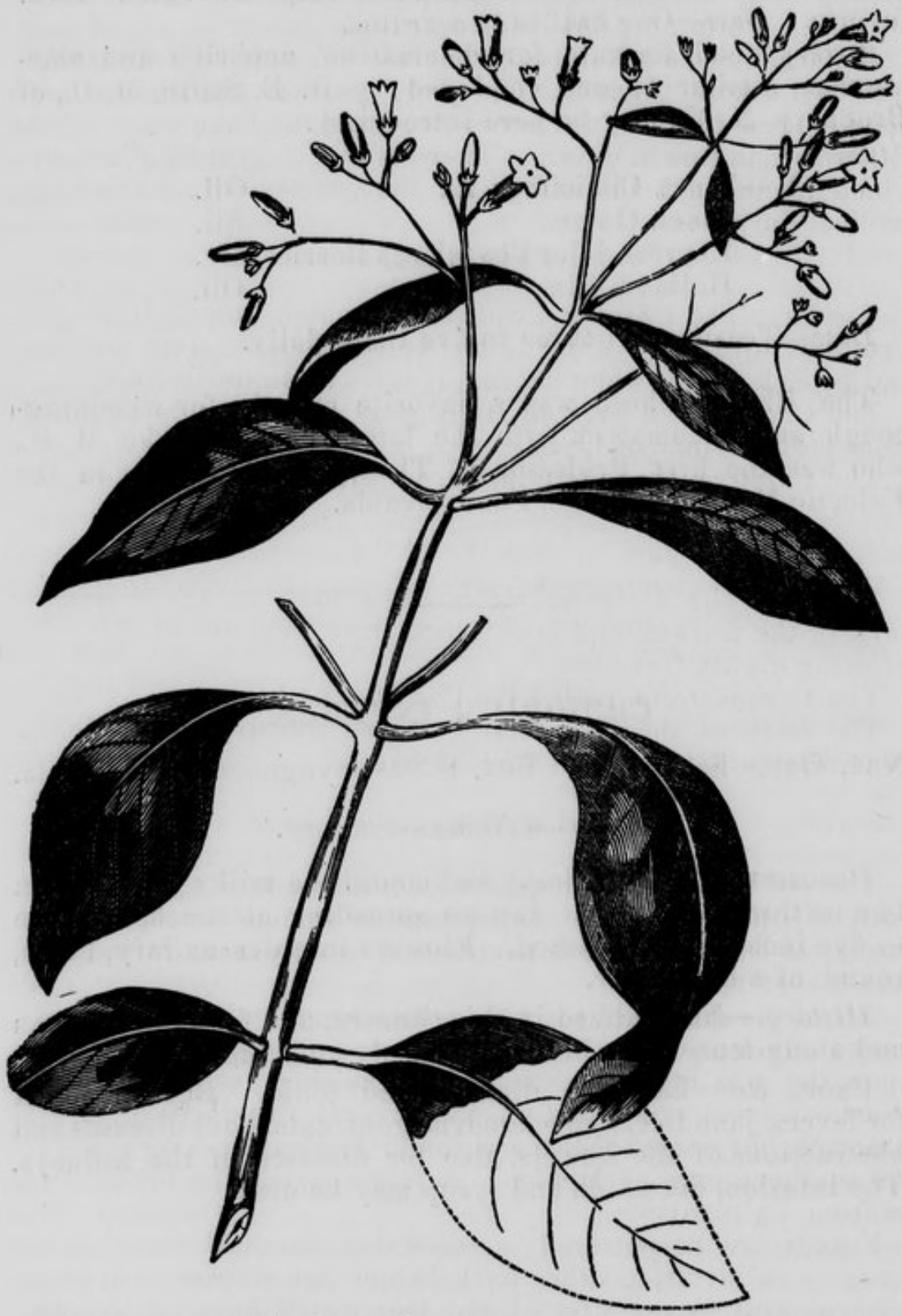
History.—Naturalized in this country, and found in gardens and along fences. It blossoms in July and August.

PROP., &c.—Laxative, diuretic and tonic. Recommended for fevers, jaundice, hypochondria, gout, cutaneous diseases and obstructions of the bowels, also for diseases of the kidneys. The infusion, decoction and syrup may be used.

CINCHONA.

NAT. ORD.—Cinchonacea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Peruvian Bark.



DESCRIPTION.—*Cinchona Condaminea* is a small tree of about eighteen feet in height. Its leaves are opposite, lanceolate.

ovate, acute, smooth, veined, of a dark green above, light green beneath, on long, smooth, reddish purple petioles. Calyx five triangular teeth. Corolla tube-shape, cleft in five short divisions. Stamens five. Ovary crowned with disk. Style simple. Capsule oblong. Seeds numerous. Flowers panicle form, of a white purplish color, fragrant.

History.—Some botanists enumerate as high as twenty-one species; others thirteen that yield medical properties. In these pages, it does not seem necessary to enumerate them either by name or in detail. There are three general divisions which are thought to include all that comes into market for medical purposes.

Pale Bark.

Species.—The *Chicona Condaminea*, which comes from the Province of Loxa. After it has been taken off from the tree and branches, and when drying, it rolls up in quill-shape.

The *C. ovata* is a bark of light gray color, that is obtained from the Province of Loxa.

The *C. micrantha* is obtained from the Province of Lima.

Yellow Bark.

Species.—The *C. lanceolata* is designated as the *Calisaya* bark in the market, and is obtained from a species of this tree growing eighty feet high.

The *C. condifolia*, called the Carthagena bark.

The bark of these two may be found sometimes rolled, but generally in flat pieces of various sizes.

Red Bark.

The *red bark* is known as the smooth *red bark* that is found both in quill-shape and flat pieces of various sizes, and the *warty red* bark, which has portions of its epidermis raised like small blisters.

All of the species of the bark which are found in drug stores vary in length, breadth and thickness, depending somewhat upon the size of the trees from which they are taken. The Cinchona trees are found in the several Provinces of South America, but some species are found in Central America and the southern part of Mexico. A large portion is brought to us from Valparaiso.

Frauds are perpetrated in collecting the bark from these trees by substituting other barks which are similar in appearance, as well as varieties of the tree which have little or no medical properties. Impositions of this kind are not so frequent as formerly, owing to the fact that but small quantities

are now sold for domestic use or for the profession, for comparatively but little is now used in the crude forms. These facts obviate the necessity of giving more minute descriptions of the several species and the appearance of the barks as found in our markets. The manufacturers of *quinine* are now consuming nearly all the Cinchona used in this country.

Medical history dates the first use of Cinchona as far back as 1632, from which time it gradually increased in importance with the profession. Connected with its progress are found traditionary accounts, some of which seem of a doubtful character, whilst others bear the impression of truth. It is related that before the discovery of this Continent by Columbus, the Indians were accustomed to drink of the water where these trees grew, to relieve them of chills and fever, a secret which they kept from the Spaniards until a governor of Loxa had bestowed them a great favor. Tradition also relates that lions drank of the waters impregnated with the properties of the trees, to gain relief from intermittent fevers. Other accounts state that the natives of the country considered it poisonous before the Spaniards discovered its virtues.

An author by the name of Condamine states that in 1639, the Countess Cinchona visited South America, and on her return to Spain introduced the barks into notice; and from this fact the trees from which it is derived received her name, and hence for a long time it was known as the *countess' powder*.

Humboldt relates that by accident the Jesuits discovered the medical properties of the barks, and made it known in Rome, after which it was called *Jesuit's bark*.

At one time Robert Talbor attained great celebrity in France by using the barks as a secret agent in the treatment of fevers, after which it was known for a time as *Talbor's powders*.

To Professor Lindley, of London, has been given the credit of the best botanical descriptions of the Cinchona trees.

Pereira's Materia Medica, published in London, gives the most lengthy and carefully prepared discription of the various species of the Cinchona, together with the analysis of its constituent properties and physiological effects, including over sixty pages of the work.

For the last century, at least, this article has occupied a prominent position in the list of medical agents. That condition of diseased action called *fever*, especially when attended with a periodical type, has produced for many years the indications of some of its preparations. In these diseases, its constant companion has been calomel, in the Old School treatment, first making the mouth sore and spongy with mercury, thus creating another disease, then foolishly desiring the barks to cure both. Gall and bitterness has indeed been the portions

of many mortals in their days of sickness and hours of death. Prostrated and helpless by consuming fevers, millions have called for water, in the anguish of body and mind, yet from the accredited physicians received those alternating draughts, only equalled by wormwood. In the last twenty-five years, however, medical reformers have materially changed the means and mode of treatment.

Whatever may be said in favor of this useful article, there are unmistaken evidences of its having produced a great deal of injury, which has resulted from excess of its use, thus inducing its bad effects on the system.

PROP., &c.—The analysis of Pelletier and other chemists have found the constituent organic properties of the Cinchona to be *cinchona, quinidine, quina, aricini, kinic, tannic and kinovic acids, red, yellow coloring matter, green fatty matter, starch, gum and lignin.* In this combination, the *acids*, by their astringent and tonic action, perform an important part as curative agents by contracting the relaxed tissue, not only of the stomach, thus aiding digestion, but also when taken by the absorbent vessels into the circulating fluids, contracting the calibre of the blood-vessels, and imparting firmness to the nervous and muscular systems.

The *alkaloids* constitute the quinine, cinchona and qunidina. The *quinine*, however, is the chief substitute for all other forms and preparations. It is an intensely bitter principle, and in proper doses aids digestion, increases the appetite, and by its impressions either on the arterial vessels or nervous system, or perhaps both, so modifies the circulating fluids as to arrest the paroxysms of chills and fevers.

Sulphate of quinine (quinia sulphas) is prepared by adding of the yellow bark, bruised, to water, with a small proportion of sulphuric acid, and when submitted for a time to a boiling heat, the quina, kinic acid, with coloring mater, becomes suspended in the solution. To this solution hydrated oxide of lead is added, which precipitates the sulphuric acid, leaving the kinate and quina still in the solution. To this solution ammonia is added, which unites with the *kinate*, while the quina falls to the bottom. The precipitated quina is then washed with water, after which it is saturated with sulphuric acid, then purified with animal charcoal or lime, and being submitted to the evaporating process, crystals are formed of a silky or snow-white feathery appearance, known as sulphate of quinine, composed of *quina* two, *sulphuric acid* one, *water* eight parts.

It has been adulterated with sulphate of *lime*, *chalk* and *magnesia*, with *starch* and several other agents. There are chemical tests for these frauds, which are seldom employed by

physicians; and the best way to avoid them is to purchase that manufactured by men who depend upon their *good* reputation, and in bottles which they themselves have sealed.

For a number of years, the Old School profession has relied upon this article, especially in the treatment of intermittent fevers, frequently alternating with arsenious acid, after having first depleted their patients with calomel, jalap and blood-letting, to *prepare* the system for its favorable effects. They have also employed it with success in other forms of disease, as in inflammations arising in asthenic conditions, producing erysipelas, acute and chronic rheumatism; also in *nervous* diseases, as hysteria, neuralgia, headache and chorea. In cases of indigestion arising from general debility, it has also been used to advantage.

Sulphate of quinine is a *tonic* and *nervine* that becomes available in those forms of disease, either febrile or nervous, which assume a periodic character. It possesses a principle or power of action to arrest a paroxysm of intermittent fever, the mode of which is unknown to the profession. Its effects are hidden and mysterious, yet its results are plain, generally for good, yet sometimes for evil, for much depends on the surrounding circumstances. If given for intermittent fever without precautionary means, such as emetics or cathartic, it often requires to be given for weeks in succession, for if stopped for a few days the chill returns, and then being continued, it produces general debility, paleness, and sometimes contraction of the capillaries, followed by edema of the surface, producing mischief in place of good results. Often in this way physicians loose their patients and reputation.

The Eclectic physician should always precede quinine with a full, free emetic; then, if his patient have derangement of the alimentary canal or liver, he will follow with a suitable cathartic (which will often alone arrest the disease), when the quinine is indicated every hour, for five or six, before the time for the chill.

Dose—One to five grains, in form of pills or suspended in water. Much larger doses are given in some sections of the country, especially the West and South. In large doses, it produces symptoms of diseased action of the *brain*, as tingling, ringing noise, giddiness, headache, stupor, dilated pupils, blindness, delirium, death. On the *arterial system*, it may increase the frequency and fulness of the pulse. In the stomach, it may induce irritation, pain and griping. As high as one hundred grains per day have been given. In large doses, a *stimulant;* in small doses, *tonic* and *sedative.*

A good combination is found in equal parts of quinine and pure powdered capsicum, two grains the dose.

Chinoidine.—This is an extract of the bark that is obtained in the process of preparing quinine in the large establishments of Philadelphia and other places. Its constituent parts are not known to the profession, but no doubt possesses nearly all of the medicinal properties of the bark except the *cinchona* and *quinine;* and probably its principal power is owing to the tannin it contains, which, by its astringent action on the arterial vessels, arrests the paroxysms of chills and fever. We know it of sufficient value to the profession to justify the insertion of the formula of Powers & Weightman, of Philadelphia, with our own qualification that it is decidedly the best form in which the Cinchona or any of its preparations can be employed for intermittent fever. Another important consideration is that it is much cheaper than quinine. Chinoidine, forty grs.; Comp. Ext. Colocynth, ten grs.; Oil Black Pepper, ten grs., divided into twenty pills.

Application.—First an emetic, then a cathartic, if necessary; following with one pill at each successive hour during four to six hours before the chill is expected, repeating the pills for three or four days. If, however, the chills *should* recur, it is advisable to repeat the emetic, thus producing a revulsive impression, exciting the secretions of the whole system. The long and continued use of the Chinoidine may produce bad effects.

Decoction—Yellow or pale bark bruised, one ounce; pure water, one pint; boil ten or fifteen minutes and strain while hot. When standing for a short time the tannic acid precipitates, or falls to the bottom; therefore, when used, the decoction should be shaken, or it may be added to simple syrup or mucilage. Of late years this form is seldom employed, though sometimes more effectual than the quinine. *Dose*—One to two ounces.

Infusion—Take of the bark one ounce, boiling water one pint; strain when cold. *Dose*—One to three ounces. This simple mode was formerly used most extensively in this country. When continued for a few weeks its injurious effects are noticed by constringing the extreme capillary vessels, allowing the cellular tissue to become extended with the watery portions of the blood, which should be transmitted to the surface in the form of *perspiration.* It is in this way so many have become "*bloated,*" pale and debilitated by its use in the Old School treatment, as well as in *domestic* practice, especially when attended with arsenic.

Tincture—Bark, bruised, four ounces; pure alcohol, two pints; digest a few days. *Dose*—One to two drachms. Smaller doses, five to fifteen drops, become available in weakened conditions of the digestive organs and nervous debility. The tincture may be diluted with water.

Extract—Barks bruised, one pound; add one gallon of pure water; boil one half hour, and strain while hot. Add another gallon of water and boil, then strain, add the first decoction, and reduce gradually to one quart; then put into a smaller vessel, which can be set into another vessel of boiling water, and in this way allow its reduction to the consistence of an extract. *Dose*—Five to ten grains.

Powdered Barks.—The dose may vary from ten to thirty grains; as high as two drachms have been given. This form is seldom used.

CISTUS CANADENSIS.

NAT. ORD.—Cisti. SEX. SYST.—Polyandria Monogynia.

Common Names.—Rock Rose, Frosted Plant.

DESCRIPTION.—The stem is twelve to eighteen inches high, slender, branching. Leaves alternate, linear, lanceolate, flat, white hairs beneath. Flowers few, yellow on racemes. Calyx ovate acuminate. Capsules shorter than the calyx.

History.—The Rock Rose is found in most sections of the United States, on dry soil, flowering from May to August. The whole plant has a covering of white silk-like down. Late in the fall it presents, near its base, the appearance of frost in crystals, giving it a beautiful glistening cover in the morning, which disappears as the day grows warm. The whole of the plant is officinal, and has been used in domestic practice for cancers and scrofula for many years.

PROP., &c.—Astringent, tonic, alterative. The medicinal powers of this plant are slow to act, requiring several successive days to observe its beneficial effects. Its chief reputation is in constitutional diseases, for scrofula, syphilis, cancerous and hepatic affections. The *infusion*, two ounces to a pint of boiling water, in wine-glass doses, may be used for diarrhea, and a gargle of the same for ulcers of the mouth and throat. It has also been used as a wash for skin diseases, with its repeated use internally, for several days.

The *fluid extract*, one pound of the plant to one gallon of water, boiling one hour; strain and reduce the decoction by gentle boiling to one pint; then, if desired, add one pound of white sugar, and simmer for a few minutes; then give in teaspoon doses several times per day. It is said that an oil has been distilled from this plant that has been employed in cure of cancers, which is worthy of consideration.

There are four other species of the *Cistus*, and said to be similar in medical virtues.

The *Cistus Carolinianum* is the chief one of Southern growth.

CITRUS AURANTIUM.

NAT. ORD.—Aurantiacea. SEX. SYST.—Polyadelphia Polyandria.

Common Name.—Orange Tree.

DESCRIPTION.—A tree fourteen to twenty-four feet in height, evergreen, spreading branches. Leaves oblong, ovate. Smooth, entire. Flowers large, white and fragrant. Petals five. Stamens twenty or more. Fruit large, round, yellow and reddish color.

History.—The orange tree is a native of India and China. Cultivated in Florida, Mexico and South America. Large quantities are brought to our markets from the West India Islands, which are sold in our shops as important articles of luxury and of great value to the sick in febrile diseases.

The *C. bigaradia* is a bitter orange, which has been known in Europe for several centuries. Its flowers contain a delightful fragrance, yielding a volatile oil. From the flowers of both species are made the *Neroli Oil*, so much praised for perfumery. The orange oil is obtained from the rind of the sweet orange.

PROP., &c.—The pulp or juice of the orange is refrigerant, most refreshing and grateful to the sick in fevers, allaying thirst, and the dry, burning sensation of the mouth, throat and stomach.

Orange peel has aromatic, tonic and stimulating properties, depending chiefly upon a volatile oil it contains. It is sometimes eaten by children, when it is liable to cause inflammation, colic and convulsions. The oil of sweet orange that is employed in perfumery, is obtained from the rind with water.

CITRUS LIMONUM.

NAT. ORD.—Aurantiacea. SEX. SYST.—Polyadelphia Polyandria.

Common Name.—Lemon Tree.

DESCRIPTION.—A small shrubby tree, ten to fifteen feet high, branching. Leaves oblong, oval, serrate. Flowers white, tinged with pink. Petals five. Stamens twenty or more. Fruit oval, of a light yellow color when ripe. Rind contains an aromatic oil. Pulp juicy and acid, from which is obtained *citric acid.*

History.—A native of Asia, cultivated in the southern parts of Europe, the West Indies, in Florida, and in the hot houses of the Middle States.

PROP., &c.—Refrigerant and tonic. It produces one of the most agreeable acids in use. In febrile diseases or inflamed conditions of the mouth, throat and stomach, in the form of *lemonade*, it is more acceptable than any other drinks. It is highly valued as a preventive and to cure scurvy, hence it is that naval and other ships should always have a supply of lemons.

The rind yields the oil of lemons, of a light straw color, that is stimulant and aromatic, which is added to ointments. Used in perfumery.

Lemon Syrup (syrupus limonum).—Lemon juice, strained, half pint; white sugar, one pound; simmer with gentle heat for a few minutes. *Dose*—One to two drachms.

CLADRASTIS TINCTORIA.

NAT. ORD.—Leguminocea. SEX. SYST.—Decandria Monogynia.

Common Names.—Yellow Ash, Fustic Tree.

DESCRIPTION.—A middle-sized tree. Leaves pinnate, leaflets alternate, ovate, acuminate.

History.—This tree is found in Kentucky, Alabama and some other Southern States. Its wood is fine, soft and yellow, and used for some mechanical purposes. The *Virgilia* of Michaux's Flora.

PROP., &c.—The bark possesses purgative powers, which may be used in decoction or extract.

CLEMATIS VIRGINIANA.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Polygynia.

Common Name.—Virgin's Bower.

DESCRIPTION.—A perennial plant. Leaves ternate, leaflets ovate, lobed, notched. Flowers panicle form, large, axilary. Sepals four, spreading and white. Stamens many. Fruit plume formed, covered with down.

History.—Its clinging vine extends twelve or fifteen feet. It is found in most sections of our country, and usually along streams and hedges. There are several species of this plant. The *C. viorna*, or lather flower, is plentiful in the Western States. The *C. cordata* and several others are peculiar to the South.

PROP., &c.—Stimulant, diuretic and sudorific. Some use has been made of this plant internally for palsy and rheumatism. It should be employed with caution, especially in a green state. The fresh bruised leaves will produce visication. Has been used externally for itch and other skin diseases, in the forms of infusion and ointment.

CNICUS ARVENSIS.

NAT. ORD.—Labiatea. SEX. SYST.—Syngenesia Polygamia.

Common Names.—Thistle, Canada Thistle.

DESCRIPTION.—Stem panicle. Leaves sessile, pinnated, spinose. Calyx ovate, swelling, covered with prickly scales. Flowers light purple, plumose, downy.

History.—To famers a very troublesome thistle in the Eastern States and Canada. There are twelve other species of the thistle, but not essential in this work.

PROP., &c.—Tonic and alterative. The decoction or infusion may be employed for hepatic diseases, and for bilious fevers, to give tone and strength to the system. The leaves are used in poultice for local inflammation.

COCHLEARIA ARMORACIA.

NAT. ORD.—Cruciferea. SEX. SYST.—Tetradynamia Siliculosa.

Common Name.—Horse-radish.

DESCRIPTION.—Root thick, long, tapering. Leaves radical, long, lanceolate, waving. Flowers small, white, numerous. Calyx four ovate sepals. Corolla four ovate petals.

History.—Supposed to be a native of Europe, cultivated in this country, and used as a condiment to excite digestion and increase the appetite. The *C. officinalis* is the Scurvy-grass (see engraving). The *C. aquatica* is the water horse-radish. All are considered valuable anti-scorbutics.

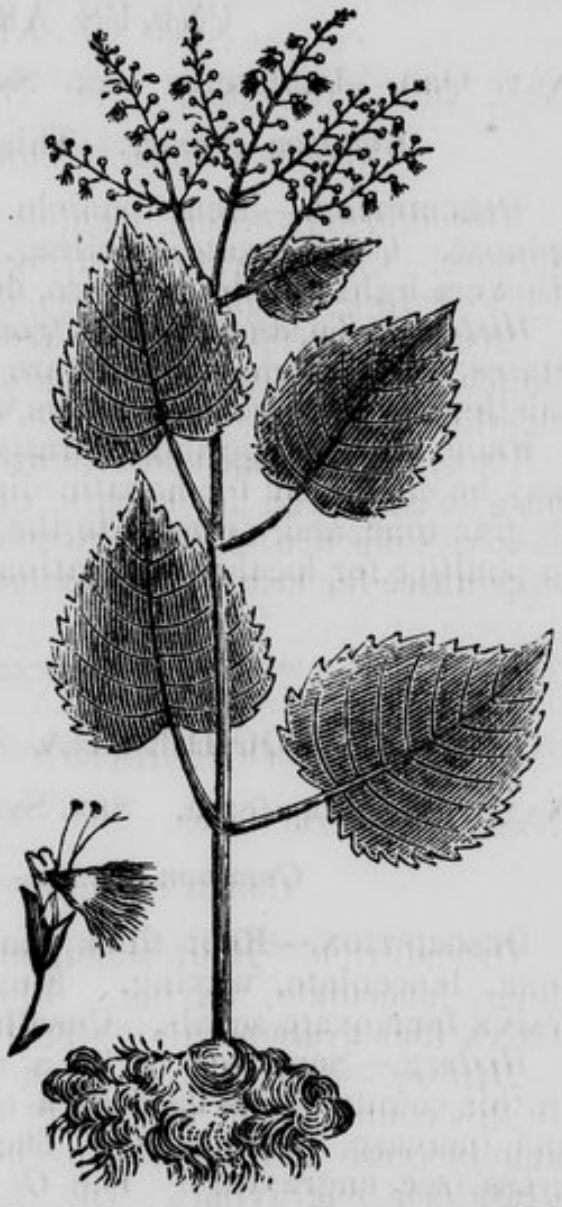
PROP., &c.—Stimulant, tonic, diuretic. Internally the root stimulates the secretions, increases the appetite, and in over-doses produces pain and strangulation, and has been employed for rheumatism, scurvy, dropsy, pleurisy, colic, hoarseness, &c. Externally the scraped root is used in the form of a cataplasm as a substitute for mustard. The leaves are bruised, and applied to reduce local inflammation.

COLLINSONIA CANADENSIS.

NAT. ORD.—Labiatea. SEX. SYST.—Diandria Monogynia.

Common Names.—Rich-weed, Stone-root, Knot-root.

DESCRIPTION.—Root perennial, knotty, hard, many slender fibres. Stem simple, round, straight, one or two feet high. Leaves broad, ovate, acuminate, serrate, on long petioles. Flowers opposite, on long peduncles. Calyx campanulate, five toothed. Corolla yellowish, tubular at the base, spreading above in two lips; the upper lip is very short and notched, the lower lip is lobed on the sides and fringed around. Two long protruding stamina, filaments filiform, anthers oval. Style protruding. Seeds often abortive, and only one ripening.



History.—Found from Canada to Carolina, in woods: rare towards the South and confined to rich valleys; very common in the mountains of Pennsylvania and New York. It disappears west of the mountains, but is replaced by other congeneric species, which are *C. anisata*, *C. longiflora*, and *C. verticillaris*, all possessing similar properties.

PROP., &c.—Stimulant, tonic and diuretic. The infusion of this plant is useful for inflammatory fevers, as colds and catarrh, inflammation of the kidneys and bladder, leucorrhea and dropsy. A poultice of the leaves is highly valued in many sections for cuts, bruises, sprains, &c.

COFFEA ARABICA.

NAT. ORD.—Cinchonacea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Coffee Tree.

DESCRIPTION.—This is a small tree or shrub. Leaves three to four inches long, oblong, ovate. Calyx five toothed. Corolla five cleft. Stamens five. Pistil one. Fruit, two seeds, flat on one side with a groove, inclosed in a penscarp or capsule.

History.—This small evergreen tree is a native of Arabia, which is cultivated in the East and West Indies, South and Central America, and has been in Florida. That which comes from Mocha and Java is esteemed the best. Our markets are chiefly supplied from South America and the West Indies.

Several chemists have analyzed coffee, finding it to contain extractive matter, gum, mucilage, oil, resin, a solid residue, and a peculiar coffee principle.

PROP., &c.—Coffee is stimulant, anodyne. It stimulates the brain, stomach and nerves. It allays nervous excitement in moderate doses, and stimulates the brain to wakefulness; in large doses it produces palpitation, anxiety and febrile action. It has been used for gout, asthma, headache, amenorrhea, and probably has emmenagogue powers. The ordinary infusion of coffee has been employed as an antidote to opium. It is often employed to allay sickness of the stomach.

COMMELINA ANGUSTIFOLIA.

NAT. ORD.—Junci. SEX. SYST.—Triandria Monogynia.

Common Name.—Day-flower.

DESCRIPTION.—Spathe cordate. Leaves lanceolate, acute, flat.

History.—There are several species of this plant found in many parts of the country, all supposed to be similar in medical properties.

PROP., &c.—The day-flower is considered expectorant, emolient and anodyne. The root has been used in febrile diseases. But little known.

COMPTONIA ASPLENIFOLIA.

NAT. ORD.—Amentacea. SEX. SYST.—Monœcia Triandria

Common Names.—Sweet-fern, Fern-bush.

DESCRIPTION.—A small shrub, from two to five feet high, with many crooked branches and long horizonal roots. Leaves alternate, crowded, sessile, with two small oval acute stipules at the base, from three to five inches long, half an inch broad, acute at both ends, with a strong middle nerve; each side regularly sinnate by large equal obtuse lobules. Flowers appearing before the leaves; the male in many superior lateral and cylindrical catkins, the female inferior in a few globular or oval lateral catkins—scales of both catkins imbricated concave, reniform, acuminate, caducous and one-flowered. Male flowers with a two-leaved perigone, shorter than the scales, each part equal and keeled. Six stamina or anthers on three short forked filaments. Female flowers with a bristly perigone of six filiform persistent segments, longer than the scales. Pistil oval, two capillary styles. Seeds evalve oval; nuts or achenes compressed, yellow, forming a round bur.

History.—The sweet fern is a handsome little shrub, found from New England to Carolina, on hills and alluvial plains, in poor, rocky and sandy soils, forming vast glades in thin woods. Common both on the Allegheny Mountains and the plains of New Jersey, &c., but nearly disappearimg west of the mountains, and unknown to the western plains. It possesses a pleasant aromatic odor, owing to its balsamic proper-

ties. This article is frequently confounded with the *Felix Mass* or *Knotty Brake*, which is a celebrated agent for tape-worm.

PROP., &c.—Astringent, tonic, diaphoretic and expectorant. It contains tannin, resin and benzoic acid. A valuable remedy for diarrhea, dysentery, hemorrhage of lungs and stomach. It is sedative to the heart's action, and allays nervous irritation. The infusion, one ounce of leaves to a pint of boiling water, when cold, forms a most grateful drink in fevers, allaying thirst, sickness of stomach, giving tone to the digestive organs. A valuable agent.

CONIUM MACULATUM.

NAT. ORD.—Umbellifera. SEX. SYST.—Pentandria Digynia.

Common Names.—Poison Hemlock, Spotted Parsley.

DESCRIPTION.—Root biennial, elongated, branched or fusiform. Stem from two to four feet high, branched, smooth,

round, striated, hollow, jointed, and with oblong purplish dots. Leaves smooth, decomposed, two or three times pinnate,

with short sheathing petioles, leaflets or folioles pinnatifid, oval, nearly obtuse, often confluent. Flowers in terminal peduncled umbels, with an involucre of ten to twelve lanceolate, reflected, acute leaflets. Umbellules from six to nine on long peduncles, involucels with three or four similar leaflets situated on one side. Flowers very small and white. Calyx without apparent teeth. Petals five, oval, inflexed, obtuse and entire at the end. Stamina five, as long as the petals. Pistil coherent with the calyx, round, bearing the petals and stamina. Styles two, reflexed outside. Fruit nearly oval, compressed, with crenate ribs, separating into two elliptical seeds, flat inside, convex outside. The *Conium* of the Greeks and the *Cicuta* of the Romans was a poisonous plant, the juice of which was used to produce death in Ceos and Athens. Socrates and Phocion, two virtuous, eminent and innocent Athenians, were condemned to drink it, and their death has rendered famous that poisonous potion. Either this plant or the *Cicuta Virosa* of Europe afforded it, or a compound beverage was made from several poisonous umbelliferous plants, which produced a speedy but tranquil dissolution.

It has been found that these plants, like many other poisons, have valuable medical properties, nearly similar in all the deleterious species of this family. The *Conium Maculatum* is the most employed, and must be distinguished from others, either more or less active, by its botanical characters; besides its strong smell, spotted stems, parsley leaves, &c. The powers of this plant vary exceedingly, according to the place and climate where it grows, the time when collected, and the preparations of it.

It is most powerful in warm climates, in the summer, and when full grown. Some persons are hardly affected by it, while others are more susceptible. On these it produces dizziness, nausea, disturbed sight, faintness, &c., which symptoms appear in half an hour, and last half a day or more. A large dose produces worse symptoms, vertigo, paralysis, convulsions and death. There is little danger of being poisoned by this plant through mistake, owing to its bad smell, yet there are instances on record that children have taken it for parsley, and the root for carrot, whereby sickness and death have been produced. In the United States, the *Cicuta Maculata* is more dangerous on that score.

History.—The whole plant has a disagreeable, virose smell, (someweat like the urine of a cat), which becomes stronger when the leaves are bruised. The root contains in the spring a milky juice, highly virulent. The essential active acrid principle of this plant appears to reside in a green resinous substance, called *Coneine*, dissipating by exposure to air and

light, but not by fire. It contains gum, extractive, a green fecula, resin, albumen and alkalies. The taste is bitter and nauseous.

The Conium is a native of Europe, and naturalized in this country; found in the Northern and Middle States, on light soil of old fields, along fences, roadsides and streams, but not so abundant as many other plants. Blooms from June to August.

This plant may easily be mistaken for the *Cicuta Maculata*, because both are called *Poison Hemlock*, and to the casual observer, resemble each other. See *Cicuta*.

PROP., &c.—Narcotic, anti-spasmodic. It has been employed for many diseases. For fevers, to allay the heart's action, and in acute diseases to subdue pain by its action on the spinal column, brain, and the motor and sensor nerves. In chronic diseases, such as syphilis, epilepsy, mania, abcesses, tumors, ulcers, caries, itch, abdominal swellings, opthalmia and cataracts. It has been used for obstructions of the liver, exciting secretions of this organ for the relief of jaundice, to arrest secretions of milk, to subdue swellings of the mammary glands and the testicles.

Evidently there is much uncertainty attending the action of this article; so much so, that comparatively it is but little used. In over-doses it has produced delirium, convulsions and death. In its external use those difficulties do not arise, and in this way it is most used. A poultice applied to the scrotum may have the effect to arrest spermatorrhea, and applied to the female organs to allay nymphomania. For these difficulties, the Conium has been used internally.

Much depends on the time of collecting this plant, which should be when its blossoms put forth, for it is very liable to lose its active properties. It is reputed to possess the power of allaying pain and sensibility of tumors, and if so, it becomes important, combined with caustics, in eradicating cancers. It may be, too, that empirics who are now treating cancers, employ it in this way.

Powdered Conium (Pulvis Conii).—The best green leaves should be carefully dried and reduced to a powder. This should be done every year. *Dose*—Two to five grains, two or three times daily, noting its effects on the system.

Tincture (Tinctura Conii).—The fresh green leaves, bruised, two ounces and a half to one pint of alcohol; macerate from seven to ten days, and filter. *Dose*—Five to fifteen drops in a spoonful of cold water every two or three hours, observing if it makes unfavorable impressions on the brain.

Extract (Extractum Conii).—Take of the fresh leaves one, two or more pounds; in a mortar bruise them to pulp, then

strain through a coarse piece of muslin, and by gentle heat evaporate to a thick extract. *Dose*—One to five grains, beginning with one.

Ointment (Unguentum Conii).—Fresh leaves one pound, lard one pound and a half; boil gently for twenty or thirty minutes, and strain. A valuable discutient and sedative for tumors, piles, cancers, glandular and scirrhous swellings.

Poultice (Cataplasma Conii.)—Take the extract of Conium softened with water, and spread upon the ordinary poultice of ground flaxseed. The fresh leaves of the plant, bruised, may be added to hot water to form a proper consistence, and in this form applied to allay pain and inflammation.

CONVALLARIA BIFOLIA.

NAT. ORD.—Asparagi. SEX. SYST.—Hexandria Monogynia.

Common Name.—Lily of the Valley.

DESCRIPTION.—Stem simple, erect, four to eight inches high. Leaves, two, heart-shape, acute at apex, cordate, smooth. Flowers small, white, on simple terminal racemes. Berries small, spotted with red.

History.—This beautiful little plant is found in the Middle States, in shaded woods, flowering from May to July. It is sometimes cultivated in gardens for its ornamental and fragrant flowers.

PROP., &c.—Stimulant. Powdered roots used as snuff, for colds and obstructions of the nose and head, to excite sneezing. Seldom used by the profession.

CONYZA MARILANDICA.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Polygamia.

Common Name.—Ploughman's Wort.

DESCRIPTION.—The leaves are sessile, broad, lanceolate, acute, serrate. Flowers corymb form, condensed. Florets short. Calyx mucronate.

History.—This is an herbaceous plant, found in the Middle States. There are two or three other species of the Conyza.

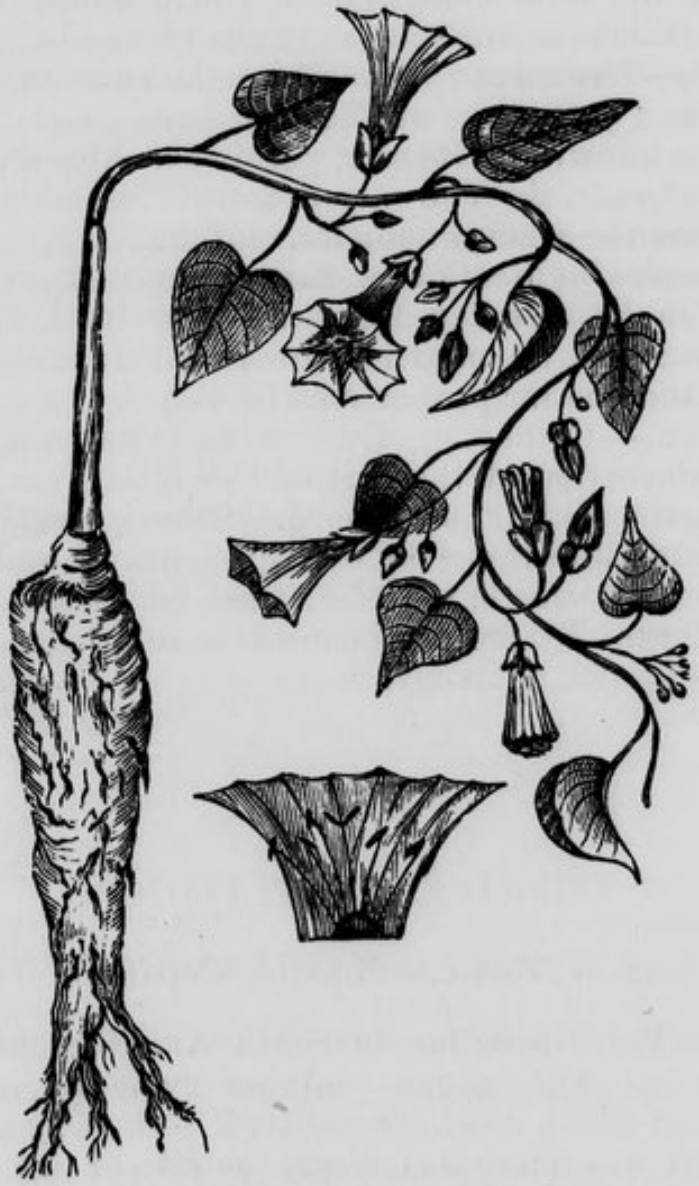
Prop., &c.—Stimulant, nervine, anti-spasmodic. It possesses a balsam that imparts an aromatic odor. It is indicated in inflammatory fevers, coughs, hysteria, &c.

Infusion—One ounce to a pint of boiling water, drank in divided doses while warm.

CONVOLVULUS PANDURATUS.

Nat. Ord.—Convolvuli. Sex. Syst.—Pentandria Monogynia.

Common Name.—Wild Potato, Man in the Ground.



Description.—Root perennial, very large, cylindric or fusiform, from two to four feet long, as thick as the arm; yel-

lowish outside, whitish and milky inside, with many fissures. Stem procumbent or climbing, round, purplish, from three to twelve feet long, sometimes branched. Leaves cordate at the base, broad, alternate, petiolate or lobed on the sides like a fiddle, very sharp, smooth; deep green above, pale green below. Flowers in fasicles of two to six, on long peduncles, axilary; pedicels unequal. Calyx with five unequal segments, ovate, obtuse. Corolla large, funnel-shaped, about two or three inches long, and as broad above; base tubulose, color white, or incarnate or purplish. Stamina white, filaments filiform, unequal, inclosed, anthers long. Styles white, filiform, stigma bipartite, segments linear. Capsule oblong, with two cells and four seeds.

History.—Common all over the United States, from Canada and New England to Florida and Missouri, in poor and loose soils, sandy and slaty fields, gravelly hills and alluvious, open glades and thickets, but seldom in shady woods.

Qualities.—The taste and smell of the root approximate to scammony and jalap, but are less nauseous and acrid. This root may be known by its size, yellowish color and crevisses. It is milky when fresh. The extract from it resembles scammony, and possesses the same properties.

The *Convolvulus Batatas* is the sweet potato so extensively cultivated in New Jersey, Delaware, Maryland, Virginia and some other States, as an article of food. It contains starch, sugar, and some other properties.

PROP., &c.—Cathartic, diuretic and expectorant. The powder or decoction of the root of the Wild Potatoe acts as a mild cathartic, similar to rhubard. Other powers have been ascribed to it, as for the relief of dropsy, gravel and pulmonary affections. In domestic practice, it has been used for diarrhea and dysentery. By the profession it is seldom employed, and but little is known of its virtues.

COPAIFERA MULTIJUGA.

Common Names.—Copaiba, Copaiva Balm.

History.—Trees peculiar to South America and the West India Islands. The genus contains numerous species, the description of which has been omitted. The *C. multijuga* and the *C. martii* are natives of Peru, the former one the largest, and yields the most balsam. According to some writers, the *C. officinalis* yields the poorest kind.

The Copaiva Balm, or Balsam of Copaiva, is an oleo-resin obtained from the various species by making incisions in the bark of the trees at proper seasons of the year If, on the incision, the liquid ceases to flow, the cut is closed with wax.

The pure and fresh balsam, when kept in large quantity and excluded from the light, is of a bright yellow color, a strong, unpleasant odor, a bitter and somewhat acrid taste. It is lighter than water, having a specific gravity of 95.

According to Stolze, one hundred parts of the balsam contains forty-six of volatile oil, fifty-two of brittle resin, with a little extractive matter. When long kept, its volatile oil escapes, leaving a large proportion of resin, and giving it a darker and thicker appearance. It is soluble in strong alcohol, in ether and the volatile and fixed oils; insoluble in water, in which, however, it may be suspended by incorporating the yolk of egg.

This balsam is often adulterated with turpentine and castor oil, the former of which may be detected from the terebinthic odor when heated—the latter by mixing three parts of the suspected Copaiva with one part of sulphuric acid; if the Copaiva be pure, it forms a plastic, reddish mass.

The *resin*, separated from the *volatile oil*, consists of a soft, viscid and peculiar acid, which has been named *copaivic*, which is crystalizable, soluble in alcohol and ether, and in both the fixed and volatile oils. Its spiritous solution reddens litmus, and it forms copaivates with the oxides and with ammonia. It is a compound of C^{40}, H^{32}, O^{4}.

PROP., &c.—Stimulant, cathartic, expectorant, diuretic and astringent. The stimulating effect of the Copaiva is noticed by the warmth it imparts to the stomach and bowels, which undoubtedly increases the peristaltic movement, causing it to act as a mild cathartic after two or three full doses.

The *expectorant* powers are observed in its special affinity for the mucus surfaces, as the lungs, kidneys and urethra, by stimulating this membrane to disengage the mucus collected, and by its *astringent* action contracts the mucous membrane, allowing it to resume its healthy condition. Its *diuretic* effects are noticed by stimulating the kidneys to throw off an increased amount of urine, which, if long continued, is liable to excite inflammation and ulceration of these organs.

As a remedy for gonorrhea, Copaiva is one of the principal agents relied upon by the profession. A difference of opinion exists as to the proper time for its exhibition, whether in the first or second stage of the disease. It is evident that if used in the first or inflammatory state, it should be in moderate doses, to avoid its stimulating effects. Its therapeutical action seems to be three-fold—first, to impart its balsamic properties to the urine, thus allaying pain and irritation; second, to

stimulate the mucus membrane to disengage and free itself from unhealthy matter; third, to constringe or close up the relaxed surface. We believe the powdered cubebs has a similar therapeutical action.

Copaiva is more specially indicated in chronic affections of the mucus membrane of the lungs, intestines, throat, kidneys, bladder, urethra and vagina. For gonorrhea of females, it has been applied directly within the external organs.

It occasionally happens that the continued use of Copaiva produces eruptions on the body similar to that of measles, and rheumatic symptoms are said to have been noticed. The mode of administration becomes a matter of interest both to the patient and physician, because of its unpleasant taste and the peculiar and generally known odor it imparts to the breath, liable to involve patients in the suspicion of having some secret disease. To obviate these difficulties in some measure, the tincture of cubebs, spirits of nitric ether, and some of the aromatic tinctures have been employed. The *dose* of Copaiva varies from twenty drops to one drachm.

Pilula Copaiva (Copaiva Pills).—Copaiva Balsam, ℥ii; Calcined Magnesia, ℥iss; Mix and let stand twenty-four hours for a more thorough incorporation. Make it into three-grain pills. A few drops of the oil of cinnamon may be triturated with a little of the magnesia and mixed in the mass. *Dose*—Two to four pills, repeated three or four times daily.

Oleum Copaiba (Oil of Copaiva).—Procured by distilling ℥i of Copaiva with water, Oiss, returning the water into the still, and re-distilling as long as any oil passes over. The oil is colorless and transparent, has an acrid taste, and the odor of Copaiva. *Dose*—Gts.x to fl℥i. Not so good as the balsam.

Copaiva Capsules—Prepare a thick solution of gelatine; a short iron rod, having a suitable bulb at one end, is then used by dipping the bulb into the warm gelatine; carefully withdraw, and when cold, remove it from the bulb. The clear warm balsam is then dropped into the capsule; then, by closing the opening with gelatine, it is completed.

Mistura Copaiba Compositum (Compound Mixture of Balsam Copaiva).—Bal. Copaiva, fl℥i; Spirits of Nitric Ether (Sweet Spirits of Nitre), fl℥i; Tincture of Cubebs, fl℥i; Mucilage of Acacia (Gum Arabic), fl℥iii; Mix. *Dose*—One teaspoonful four or five times daily, for gonorrhea and gleet.

Balsam Copaiva is combined in various ways, to suit the views of the physician.

Solidified Copaiva Boluses—Introduced by the French, and found in our markets. They are oblong, about six grains each, sugar-coated.

Sugar-coated Copaiva pills are now much in use, and one of the best forms for use in gonorrhea, &c.

COPTIS TRIFOLIA.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Polygamia.

Common Names.—Gold Thread, Mouth Root.

DESCRIPTION.—Roots perennial, creeping, filiform, of a bright yellow, with many small fibres. Caudex, or base of the scapes

and radical leaves, covered with imbricate scales, ovate, acuminate and yellowish. Leaves evergreen, on long, slender petioles proceeding from the caudex, with ternate folioles, sessile, rounded or obovate; base acute. Scapes as long as the leaves.

Flowers about half an inch wide, with a white corolliform, calyx of five, six or seven sepals or folioles, oblong, obtuse, concave. Petals as many, shorter, nectariform, obovate, hollow, yellow at the top. Stamina many, filaments slender and white, anthers rounded, adnate and yellow. Pistils from five to eight, oblong, acute, compressed. Styles short and curved, stigmas acute. Capsules like the pistils, naked.

History.—A boreal plant found from Canada to Greenland, and Iceland on the east, and to Siberia on the west. The most southern limits are New England, New York, and the shores of Lake Erie. It is commonly found in mossy swamps and bogs of evergreen woods, sometimes along fences and about the ruins of old buildings; but also on the rocks of the White Mountains, Labrador, Newfoundland, &c.

The Shakers of New Lebanon and other parts of New York, put the Gold Thread in neat little packages for the markets. Every physician should have it.

PROP., &c.—Tonic, slightly astringent and stomachic, promoting digestion, strengthening the viscera, useful in dyspepsia, debility, convalescence from fevers, and whenever a pure bitter is required—being a good substitute for Quassia, Colomba, Gentian, &c. A tincture made with an ounce of the roots in a pound of diluted alcohol, is recommended in doses of a teaspoonful thrice a day, or ten to twenty grains of the powder; both agree with the stomach.

This valuable plant has not yet been thoroughly analyzed. It possesses a tonic and mild astringent principles, with extractive matter.

Infusion—One drachm to half pint of hot water, sweeten with loaf sugar and strain. The extract and tincture have also been employed, but the infusion is preferable. This form is superior to any other known article for apthea, or sore mouth of infants, and as a gargle for ulceration of the mouth, throat, enlargement of the glands—for bronchitis it is valuable.

It is acceptable to the stomach when other agents are rejected. It is specially indicated in general debility which has been induced by any cause whatever, to excite the stomach to action, relieving of the sinking, aching, depressed feeling in the epigastric region, strengthening the digestive organs, increasing the appetite.

CORYLUS AMERICANA.

NAT. ORD.—Amentacea. SEX. SYST.—Monœcia Polyandria.

Common Names.—Hazlenuts, Filberts.

DESCRIPTION.—Stem six to ten feet high. Leaves cordate, acuminate, rounded. Calyx deeply serrate, flattened.

History.—An indigenous shrub, found in hilly and mountainous regions. The fruit, or small nuts, are often collected in the country and eaten. There are two other species.

PROP., &c.—Diuretic and anodyne. The fruit relieves inflammation of the kidneys. On the capsules which contain the seeds, are found prickers or spicula, which has been used the same as *Cowhage*, as an anthelmintic, for the destruction of worms.

CORNUS FLORIDA.

NAT. ORD.—Cornoracea. SEX. SYST.—Tetandria Monogynia.

Common Name.—Dogwood.

DESCRIPTION.—Stem rising from fifteen to thirty feet, with a rough blackish bark full of fissures; branches opposite, spreading, with reddish bark and rings where the old leaves grew.

Leaves opposite, petiolate, oval, entire, base acute, end acuminate, pale beneath, with strong parallel veins. Flowers terminal, appearing when the leaves are young, with a large four-leaved involucre three inches broad, commonly mistaken for the blossom, white, obcordate, veined. The true flowers are in the centre, small, crowded, sessile, yellowish. Calyx campanulate, with four obtuse teeth. Corolla with four oblong, obtuse petals. Stamina four, erect, anthers oblong, style short, erect, stigma obtuse. Fruit, several oval scarlet drupes, with a nut inside having two cells and two seeds.

History.—All over the United States, and almost in every soil, from Massachusetts to Louisiana, and from Florida to Missouri. Most abundant in swampy and moist woods.

The *C. Florida* is a handsome tree, enlivening the woods in the spring by a profusion of large white blossoms, and bearing in the fall clusters of beautiful scarlet berries. In Louisiana, where it is called *Bois bouton* or *Bois de fleche* (Budwood an Arrow-wood), it blossoms in February; in the Middle States in April and May, and more northwardly in June. It lasts a fortnight in full bloom, and everywhere indicates, according to the Indians, when Indian corn is to be planted.

This tree grows very slow, and the wood is hard, compact, heavy and durable. It is white outside and chocolate color in the centre, taking a very fine polish. It may be used like boxwood, and when stained of a light yellow color, resembles it altogether. All kinds of tools and instruments are made with it, also cogs of wheels, teeth of harrows, spoons, &c.

Cornus sericea or Blue-berry cornel, called *swamp dogwood* or rose willow, is a shrub from six to twelve feet high, growing from Canada to Virginia, near swamps and streams. The leaves are like those of *C. florida*, and silky beneath, but the flowers are very different, in large terminal cymes, without involucrum, yellowish white, and succeeded by large clusters of small round blue berries. The bark is less bitter, more astringent and pleasant to the taste than in *C. florida*.

C. circinnati, or round-leaved cornel, called *alder dogwood*, is a shrub with warty twigs, large rounded leaves, wholly beneath. The flowers are in cymes, without involucrum. It grows from Canada to Pennsylvania. In use it is found preferable to colomba and *cinchona cordifolia*. It is much employed in the Northern States, in substance and otherwise, for diarrhea and dyspepsia, but is too heating in fevers.

C. alba, or wax-berry cornel, is also a shrub, growing from New England to Siberia in Asia, with broad, ovate leaves, white beneath. Flowers in cymes. Berries round, white, like wax. All these blossom from May to June. Many birds are fond of their berries, and the beavers eat their bark.

PROP., &c. — Tonic, astringent, antiseptic and stimulant. It is one of the best native substitutes for *cinchona*, although evidently different in some respects. The powdered bark quickens the pulse, and sometimes produces pain in the bowels; but the sulphate of cornine and the extract are not so stimulant. They are used in intermittent and remittent fevers, also typhus and all febrile disorders. The doses of the powder are from twenty-five to thirty-five grains, often repeated.

Infusion—One ounce of dried bark in a pint of boiling water. *Dose*—One half to two ounces. In this form it is a valuable tonic, and a substitute for colomba, gentian, chamomile and other similar articles. Its anti-periodic powers

makes it serviceable during the intermission of fevers. Some authors have conceived it to be a substitute for Cinchona, yet the profession do not feel that confidence in it. Great reliance can be placed on it for indigestion and debilitated conditions of the system.

Extract—Two pounds of the dry bark in two gallons of pure water; reduce one half by boiling, strain while hot, then evaporate slowly. This is an excellent form for tonic and antiperiodic purposes. *Dose*—Three to six grains, repeated.

name of *cornin*, containing the *resinoid* and *neutral* principles

Concentrated—The *Cornine* has been known to the profession for some twenty-five or thirty years, and offered as a substitute for *quinine*. Its use has lately been revived under the of the Cornus Florida. There is no evidence that it produces those marked impressions on the brain, such as the ringing noise and delirium, which follows large doses of *quinine*. If it avoids all the unpleasant symptoms, and will act effectual, or as much so as the quinine, to arrest the paroxysms of intermittent fever, then, indeed, it is of great service to the profession. Our own experience does not prove it. *Dose*—Three grains every two hours, for half a day before the expected chill. The *Cornin* may be used for all indications of other preparations.

CRATEGUS COCCINEA.

NAT. ORD.—Rosasea. SEX. SYST.—Icosandria Digynia.

Common Names.—Hawthorn, Thorn Tree.

DESCRIPTION.—Leaves ovate, acutely lobed, serrate, on long petioles. Calyx five cleft. Petals five. Styles one to five. Berry mealy. Seeds two to five, bony.

History.—This branching bush is found along the borders of woods and fences; sometimes cultivated for hedges. Its many thorns prevents cattle from passing through it. There are several other species of the thorn bush.

PROP., &c.—Tonic and expectorant. The bark and leaves are used in infusion for whooping-cough and affections of the lungs. The apples or fruit, which are red or yellow, are used for preserves, and to increase the appetite.

CRINUM AMERICANUM.

NAT. ORD.—Narcissi. SEX. SYST..—Hexandria Mongynia.

Common Names.—Louisiana Squill, Jonquill.

DESCRIPTION.—Leaves oblong; lanceolate, glabrous. Corolla five cleft, funnel-shape, border spreading, recurved.

History.—A beautiful plant of Louisiana, whose flower resembles the lilies.

PROP., &c.—Expectorant and slightly stimulant. Used as a substitute for the *scilla maritama*, for coughs and pulmonary complaints.

CUCUBALUS BEHEN.

NAT. ORD.—Caryophyllea. SEX. SYST.—Decandria Trigynia.

Common Names.—Sea Pink, Bladder Campion.

DESCRIPTION.—Leaves oblong, oval, acute. Calyx one-leafed, bell-form, inflated. Petals five. Capsule, three cells.

History.—A small plant of the Middle and Southern States. Three other species.

PROP., &c.—Emetic and anthelmintic. The root employed by infusion, followed with cathartics.

CUCUMIS SATIVUS.

NAT. ORD.—Cucurbitacea. SEX. SYST.—Monœcia Monadelphia.

Common Name.—Cucumber.

DESCRIPTION.—Leaves broad, lobed. Calyx five cleft. Corolla five, parted. Stigma three. Fruit oblong. Seeds many, sharp, flat.

History.—Asia its native place, and extensively cultivated in this country for table use, though indigestible and unhealthy. The *C. anguria* is the prickly cucumber; *C. anguinis*, snake cucumber; *C. colocynthis*, the bitter apple; the *C. melo* is the musk-melon, an article of luxury, possessed of diruetic properties. The seeds are cooling, and useful for gravel and stranguary.

PROP., &c.—The Cucumber is refrigerant, sedative and laxative when stewed or fried. Externally, sliced, allays local inflammation and ring-worms.

CUCURBITA CITRULLUS.

NAT. ORD.—Cucurbitacea. SEX. SYST.—Monœcia Monadelphia.

Common Name.—Watermelon.

DESCRIPTION.—Leaves five lobed, obtuse. Calyx five toothed. Corolla five, parted. Pistils three. Fruit large, oval. Seeds oval, flat, thick at the margin.

History.—Generally supposed to be a native of Africa; but Rafinesque believes them to have been known to the Indians before the discovery of this Continent. The *egg-squash, flat-squash, club-squash, gourd calabash*, and the *pumpkin*, are all species of the *Cucurbita.*

The *C. pepa*, or pumpkin, is an important article of food, whose seeds are mucilaginous, diuretic and anthelmintic. An oil is obtained from them by distillation.

Infusion—Pumpkin seed, bruised, one ounce in a pint of boiling water, in wine-glass doses, repeated every one or two hours for two days, to relieve inflammation of the kidneys or bladder. This form, as well as the *mucilage* and *oil* of the seeds, has been highly praised by some for the relief of tape-worm, when followed by a brisk purge.

PROP., &c.—The watermelon is refrigerant and diuretic. When acceptable to the stomach, it is valuable in fevers to allay thirst, increases the urine, and lessens inflammation of the kidneys and urinary passages. The seeds, though not so active as the fruit, possess diuretic properties, and used in the form of infusion.

CUPRESSUS THYOIDES.

SEX. SYST.—Salicaria. NAT. ORD.—Monœcia Monadelphia.

Common Name.—White Cedar.

DESCRIPTION.—This tree has imbricated leaves, ovate. Strobile or cone in globular form. Calyx a peltate scale. Flowers pistilate. Corolla none. Germs four to eight under each scale of the calyx. Fruit or nuts compressed and angular.

History.—The white cedar is a middling sized tree, not plentiful; found in the Eastern and Middle States.

PROP., &c.—Stimulant, aromatic and tonic. The infusion of the leaves, hot, is employed to induce perspiration in coughs and colds. The fruit or nut yields a pleasant aromatic oil, that has been used to keep off worms and insects.

CURILA MARIANA.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Names.—Mountain Dittany, American Dittany, Sweet Basil.

DESCRIPTION.—Root perennial, fibrous, yellow. Stem about a foot high, smooth, yellowish or purplish, slender, hard, brittle,

with many brachiate, remote branches. Leaves remote, sessile, smooth, dotted, pale green, glaucous beneath; base subserdate, end acuminate or sharp, margin with small, remote, acute teeth; nerves regular, texture dry. Flowers small, but handsome, of a pink or white color, forming terminal clusters or

corymbs. Calyx green, and five small, sharp teeth, nearly equal. Corolla twice as long as the calyx, nearly cylindric, with two short lips; lower lip larger, with three rounded lobes, upper lip smaller, flat and notched. Four stamina, two of which are long, slender and protruding with the style; two small, very short, without anthers. Fruit formed by four small, obovate seeds at the bottom of the persistent calyx, mouth of it closed by hairs.

History.—All over the mountains and dry hills from New England to Kentucky and Carolina; common among rocks and hills; unknown in the plains and alluvions.

The *C. mariana* is a pretty plant, with a very fragrant smell, similar to marjoram and dittany. It is commonly called by this last name throughout the United States, but is very different from the dittany of the gardens, which is the *dictamnus fraxinella.* Dittany is peculiur to America, and distinguished by its corymbose flowers, which blossom in summer, from July to September.

Prop., &c.—Stimulant, nervine, sudorific, subtonic, vulnerary, cephalic, &c. The whole plant is used, and usually taken in warm infusion. Dittany tea is a popular remedy throughout the country for colds, headaches, and whenever it is requiste to excite a gentle perspiration.

Its fragrant tea is preferable to that of Sage and *Monarda*; it has neither the pungency of Mint, nor the nauseous smell of Pennyroyal. It relieves nervous headaches and hysterical disorders. It is used in Carolina, Kentucky, &c., in fevers to excite perspiration and suppressed menstruations, &c. It is a useful drink in nervous diseases, colics and indigestion. The essential oil possesses all the properties of the plant, and a few drops of it are sufficient to impart them to mixtures. It is said the Indians have used it to expell the dead fetus from the uteras, and also to kill rattlesnakes, by bruising the leaves, and on the end of a stick holding it to the nose of the snake.

CUSCUTA AMERICANA.

Nat. Ord.—Convolvuli. Sex. Syst.—Pentandria Digynia.

Common Names.—Dodder, Devil's Gut.

Description.—Flowers on peduncles. Calyx four cleft. Corolla four cleft. Capsule of two cells.

History.—This plant sends off a vine without leaves, and yellow color. It twines on objects near it. It is found from Canada to Mexico and Brazil, on damp ground.

Prop., &c.—Tonic, astringent and alterative. The cold infusion is used for chills and fevers and for scrofulous diseases, for indigestion and general debility.

CYNARA SCOLYMUS.

NAT. ORD.—Cinarocephala. SEX. SYST.—Syngenesia Polygamia.

Common Name.—Artichoke.

DESCRIPTION.—The leaves pinnate, ovate, acute. Calyx dilated with scales.

History.—A native of Europe and naturalized in this country. Found in gardens, along fences, and sometimes cultivated for pickles.

PROP., &c.—Diuretic. Used for affections of the kidneys and dropsy, rheumatism and neuralgia. Unhealthy in form of pickles. The young petioles and leaves have been bleached like celery and used on the table. Children are fond of them. Seldom used as medicine.

CYNOGLOSSUM OFFICINALE.

NAT. ORD.—Boraginacea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Hound's Tongue.

DESCRIPTION.—The stem erect, silky, one or two feet high. Leaves broad and lanceolate, acute. Flowers in clusters. Calyx five cleft. Corolla purplish, funnel shape.

History.—A plant found in most parts of the country in old fields and along fences. It flowers from June to August. The fresh plant contains an unpleasant odor. *C. amplexicaule* is another species.

PROP., &c.—Astringent and anodyne. Indicated for hemorrhages, dysentery, coughs. For abrasions and wounds, used in the simple infusion of the leaves. The dried leaves are used for smoking, like tobacco, having narcotic properties.

CYPRIPEDIUM PRUBESCENS.

NAT. ORD.—Orchidacea. SEX. SYST.—Gynandria Diandria.

Common Names.—American Valerian, Yellow Lady's Slipper, Umbil.

DESCRIPTION.—Root perennial, with many long, thick, fleshy, cylindrical and flexuose fibres, of a pale yellowish cast. Stems one to five from the same caudex, simple, erect, often pubescent and angular, rising one or two feet, three to seven leaves,

and one to three flowers. Leaves alternate, sessile, sheathing, ovate or oblong, acute pubescent or smooth. Flowers sessile; when more than one, each has a bracteal leaf. Germen concrete or inferior, green, cylindrical, often curved. Perigone with five unequal and different sepals. Style and stamina concrete in the centre, above the germen, forming a central pillar, flattened above into an oblong deltoid lobe. The fruit is an oblong capsul, with one cell, three valves, and a multitude of minute seeds, as in all the Orchideous tribe.

History.—Found all over the United States, from New England to Louisiana; but very rare in some places, while it is common in the hills and swamps of New York, the Highlands, Green and Catskill Mountains, and also in the glades and prairies of the Western States.

This plant blossoms in May and June; it is much valued in gardens for its beauty and singularity, but it is difficult to cultivate; it will seldom grow from seeds; the root must be taken up with earth round them, and transplanted in a congenial rich light soil. For medical use they must be collected in the fall, or early in the spring, carefully dried, and kept from the air to prevent its loss of properties. The generic name of *Cypripedium* means Venus' Shoe; it is a splendid genus containing several beautiful American and Asiatic species. All the species of this fine genus being equally nervine, it will be well to notice them, so as to be easily known.

C. acaule or Red Lady's Slipper, Dwarf Umbil, &c. Two radical leaves, one large red flower on a naked stem. Common in New Jersey and on the alluvial plains of the Atlantic States. Best substitute. Root smaller and brownish.

C. spectabile, or Red and White Lady's Slipper, Female Nervine, &c. Stem leafy, one or two flowers, white and rose colored, sepals oval and short. Rare from New York to Lousiana.

C. candidum, or White Lady's Slipper, White Umbil, &c. Stem leafy, flower white, sepals longer than the labellum. Rare in deep woods, Pennsylvania to Ohio.

The *C. luteum* is but a variety of the *Prubescens.* This plant attracts considerable notice when in blossom, from the peculiar shape of its flower. The *C. prubescens* with *yellow* flower, and the *C. acaule* with *purple* flowers, are most common, and often found near together. They constitute the *nerve root* of Dr. Samuel Thomson, upon which he placed a good deal of reliance in nervous diseases. The *cypripedium* is a full substitute for the *English Valerian*, which is imported and extensively used in this country.

Prop., &c.—Sedative, stimulant, anti-spasmodic and tonic. It is one of the best nervines known in the Materia Medica,

and often a substitute for opium, without making any bad impressions on the brain. It is serviceable in all conditions where the nerves have become affected, fevers, rheumatism, gout, neuralgia, palpitation, all nervous diseases peculiar to females, such as hysteria and general nervous irritability.

The active principles of the plant are resin, gum, valerianic acid, volatile oil, with extractive matter and a neutral principle. The best form for its use is the fluid extract.

Powder of clean dried roots. *Dose*—Fifteen to twenty-five grains in a wine-glass of sweetened water.

Tincture—Take one ounce of the root bruised to a pint of alcohol; digest eight or ten days and filter. *Dose*—One to two teaspoonfuls repeated for nervous debility.

Fluid Extract—Coarse powdered roots, one pound; alcohol, three pints; water, one pint; digest ten days and filter. By water-bath reduce the tincture to one pint; add half pound of white sugar, and simmer gently for ten or fifteen minutes. *Dose*—One half to one teaspoonful every hour for two or three times, if needed. This is the most convenient and effectual of all forms of the American Valerian, for low nervous fevers, restlessness, wakefulness, spasmodic hysteria, to induce quiet and repose. Three to five drops of spirits of ammonia may be added to each dose when sudden debility requires it.

Infusion—Valerian roots, half an ounce; boiling water, half pint. *Dose*—When cold, one tablespoonful to one ounce, for general debility, indigestion, hysteria, &c.

Concentrated—Cypripedin. The resinous and neutral principles. *Dose*—Two to four grains in one grain to five of white sugar. Used for the diseases as the other preparations. Convenient as anodyne for little children.

DATURA STRAMONIUM.

NAT. ORD.—Solanacea. SEX. SYST.—Petandria Monogynia.

Common Names.—Thorn Apple, Jimston Weed.

DESCRIPTION.—Root annual, whitish, crooked. Stem erect, from one to eight feet high, branched, often hollow, smooth or pubescent. Leaves alternate at the forks, petiolate, oval or oval-oblong, base decurrent, end acute, margin almost angular by large unequal acute teeth, sinuses rounded and irregular. Flowers axilary on short peduncles, erect, or sometimes nodding, large, white or bluish. Calyx tubular, with five angles and teeth, deciduous, but leaving a rim at the base. Corolla

twice as long, base tubular, subangular, limb with five angles, plaits and teeth, these last are acuminate. Stamina five, anthers oblong, erect. Germen central, free. Fruit a large fleshy capsule, ovate, thorny, with four valves opening at the top inside, with four cells. Many black seeds filling each cell, and attached to a central receptacle in each cell, shape reniform.

History.—It is probably a native of Persia and India, but has spread to Europe, Africa and America. It was once thought to be a native of North America, but it has spread in it only since its colonization. The Indians call it the white people's plant. It is commonly met with near houses, along the roads, in commons, old fields, &c.; never in woods nor mountains, and is found in all the States; also in Canada, and beyond Louisiana to Mexico, and even to Peru in South America.

The whole plant is a narcotic poison, producing many strange effects on the human system, according to the doses and constitutions. The leaves, eaten boiled, have occasioned delirium and intoxication for many days, without producing death, or else madness or tetanus and death. The antidotes of this poison are emetics, vegetable acids and strong coffee.

PROP., &c.—Stramonium is narcotic, stimulant, sedative and discutient. It is recommended for many diseases—mania, epilepsy, convulsions, paralysis, rheumatism, uterine diseases, syphilis, scrofula, dysmenorrhea. For cancers, piles, tumors, ulcers and gout. The whole plant is considered poisonous, and, unless used with caution, it produces unpleasant and sometimes fatal effects, as vertigo, a wild, strange sensation, loud talk and laughter, dilitation of the pupils, tremors, loss of motion, delirium, convulsions, death.

It is better to avoid the use of this agent internally; externally, it may be used to advantage.

Powder—Leaves carefully dried, one half to one grain to the dose. The leaves are also used like tobacco for smoking, for asthma, neuralgia and toothache.

Tincture—Take the seeds, bruised, three ounces, alcohol two pints. *Dose*—Five to twenty-five drops, in a wine-glass of water.

Extract—Take of dried leaves or seeds one pound and a half, water one gallon; reduce one half by boiling, strain and evaporate slowly to one half pint, then set it by a stove or fire for several days until it becomes reduced to an extract. *Dose*—One half to two grains. Used internally in the form of pills; externally, for dilating the uterus, on cancers, ulcers, &c.

Ointment—The fresh leaves one pound and a half, lard two pounds; boil gently for half an hour; strain while hot through coarse linen; add two ounces of melted beeswax, and stir until cool. A valuable discutient for indurated edges of cancers, tumors, for thickening of the ligaments of joints, for cutaneous diseases, for swelled breasts, testicles and scrofulous swellings.

DAUCUS CAROTA.

NAT. ORD.—Umbellifera. SEX. SYST.—Pentandria Digynia.

Common Name.—Carrot.

DESCRIPTION.—The root grows perpendicular, spindle-shape, six to twelve inches long, yellowish color, with a few fibres. Stem branching, furrowed, one to three feet high. Leaves broad, acute, and acute linear leaflets. Flowers of a light dusky color, radiating.

History.—The Carrot has been known for many centuries in the East; now found in all parts of the world. There are two varieties, one of which grows wild in many parts of the country, along fences and roads; a garden and field vegetable, cul-

tivated for food. Its root contains sugar, starch, gluten, and other principles. Pickles and jelly are made of the Carrot.

PROP., &c.—Diuretic and demulcent, with an oil that gives an aromatic odor. The infusion has a gentle action on the kidneys, relieving inflammation and stranguary. When about half boiled, and bruised into a poultice, it reduces local inflammation, with a tendency to avert mortification.

The Carrot seeds contain volatile aromatic oil, with other elements, which makes them carminative, diuretic and emmenagogue, and in the infusion has been used for colic, gravel, and suppression of the menses.

DELPHINIUM STAPHISAGRIA.

NAT. ORD.—Ranuncalacea. SEX. SYST.—Polyandria Trigynia.

Common Names.—Stavesacre, Larkspur.

DESCRIPTION.—This beautiful annual plant has an erect, downy stem, twelve to eighteen inches high. Leaves, palmated lobes, obtuse. Flowers light blue, in terminal racemes. Capsules three, large. Seeds many, black.

History.—The Stavesacre is found in the Middle and Southern States, on the borders of woods and fields, flowering from May to July. There are several species, but this one, with the *D. consolida*, are the principal known in medicine. The *D. consolida* is also found in fields. Its flowers are bitter, and have been used for gravel and opthalmia. They are both natives of Europe.

PROP, &c.—Acrid, stimulant, cathartic, emetic, emmenagogue and narcotic. Its active irritating properties are said to become poisonous, unless used with caution. The roots and leaves are used in the powdered form and infusion. Said to have been used for rheumatism, neuralgia, nephritic affections, for worms, and externally for cutaneous diseases. Seldom employed.

DIANTHUS CARYOPHYLLUS.

NAT. ORD.—Caryophyllea. SEX. SYST.—Decandria Digynia.

Common Names.—Clove Pink, Carnation.

DESCRIPTION.—Stems twelve to eighteen inches high. Leaves linear, subulate, channeled. Calyx composed of four sepals. Corolla four petals. Stamens eight. Capsules one cell. Seeds numerous.

History.—A perennial, herbaceous plant, supposed to be a native of Italy and Southern Alps of Europe. Cultivated in gardens for its great beauty and delightful aromatic odor.

PROP., &c.—Stimulant, sudorific and anodyne. The chief medicinal use made of the Pink is for giving flavor to other articles, yet it has been employed in convulsions, tremors, palpitation of the heart, headache and fainting. The fruit yields a valatile oil, in which is found its stimulating and aromatic properties. It may be used in infusion.

Syrup—Flowers four ounces, boiling water one pint; digest twenty four hours; strain through a coarse linen cloth, and to this liquor add two pounds of white sugar, submitting it to a gentle heat for a few minutes. A valuable syrup to flavor other medicines.

DIERVILLA CANADENSIS.

NAT. ORD.—Caprifolia, SEX. SYST.—Pentandria Monogynia.

Common Names.—Bush Honeysuckle, Woodbine.

DESCRIPTION.—Stem one or two feet high. Leaves ovate, acute, serrate. Flowers axilary, yellowish, tinged with green. Calyx five cleft. Corolla funnel-shape, five cleft, spreading. Stamens five. Capsule oblong. Seeds many.

This little bush is found in most parts of the country, along skirts of woods, fields and fences.

PROP., &c.—Diuretic and alterative. The Bush Honeysuckle has been emplowed for gravel, disury, scrofula and syphilis. The infusion has been considered available as a wash for cutaneous inflammation. Thought to have some astringent properties. Needs further investigation.

DIGITALIS PURPUREA.

NAT. ORD.—Scrophularia. SEX. SYST.—Didynamia Angiospermia.

Common Name.—Foxglove.

DESCRIPTION.—The root is knotty, fibrous. Stem one to three feet high. Leaves vary in shape. Those at the base of the plant are large, ovate, acute; those above are lanceolate, alternate, with upper surface deep green, the under side light green color, downy. Flowers large, pendulous, variegated,

purple, pink, yellow, red. Calyx cleft into four or five sepals. Corolla in five sub-lobes, bell-shape. Stamens four. Style simple. Stigmas two, lobed. Filaments white, curved, bearing long yellow anthers. Capsules two, celled. Seeds numerous.

History.—The Foxglove is a native of Europe, naturalized in America. In some of the Middle and Western States, it grows along fences, around gardens, on hill sides, and cultivated as an ornament. It flowers from May to July. The root has been used by some physicians, but the leaves are preferable. With care they should be collected when the plant is in bloom, and dried in a dark room by a stove with gentle heat. The leaves are liable to lose their strength in one or two years, also they become mouldy frequently. These facts should be remembered by the physician.

This plant possesses a volatile oil, fatty matter, salts of potassa, digitalic acid, resinoid, and a neutral principle called *digitalin.* The seeds are seldom used, though said to yield more *digitalin* than the leaves. The action of this plant is often attended with uncertainty, consequently should be used with caution.

PROP., &c.—Narcotic, irritant, sedative and diuretic. Its most frequent use is in febrile diseases, palpitation and dropsy. In fevers for allaying the heart's action, moderating the pulse from its rapid movements down to and below its natural standard. So soon as it begins to affect the brain or lower the pulse, the doses must be diminished or stopped; nor should it be long continued even when no action is observed, for fear its accumulated force will become uncontrollable. As an evidence against its safety, may be noticed the conflicting opinions and experience of physicians. Some employ one drop of the tincture every two or three hours; others three to five; others ten, fifteen, and even to one half and one ounce, without causing death.

In this place we quote from Pareira, the best English authority. He says; "In one instance, I saw twenty drops of the tincture given to an infant laboring under hydrocephalus, three times daily for a fortnight, at the end of which time the little patient was completely recovered, without one untoward symptom. I have frequently given a drachm of the tincture (of the best quality) three times daily to an adult, without observing any marked effect. I know that some practitioners employ it in much larger doses, as an ounce or ounce and a half of the tincture, with much less effect than might be imagined." Again: "It has not unfrequently happened that, in consequence of the continued use of small doses of this medicine, very dangerous symptoms, in some cases terminating in death, have occurred." Further: "We employ Foxglove,

first, to reduce the frequency and force of the heart's action; second, to promote the action of the absorbents; third, as a diuretic; fourth, sometimes on account of its specific influence over the cerebral spinal system."

The physiological symptoms produced by digitalis are found to be faintness, vertigo, dimness of sight, vomiting, purging, slow, feeble pulse, dilated pupils, cold sweats, convulsions, followed by death.

At times it acts upon the secretions, and induces a flow of urine that gives relief in fevers, and aids to divert dropsical accumulations.

Powder—Should be made of healthy green leaves. *Dose*—One to three grains in water. Seldom used.

Tincture—Take of well cured leaves, coarse powdered, two and a half ounces, alcohol one pint; digest seven to ten days, and filter through paper. This is the usual and most convenient form of its use. *Dose*—From one to twenty drops in water, beginning with one or two drops, and increase one every two hours. If within twenty-four hours it makes no impression on the brain or pulse, it is advisable to stop its use.

Extract—Leaves bruised, half pound, alcohol two quarts; digest ten days and filter. Reduce this tincture by water-bath to the consistence of cream. This may be used in the form of pills for any diseases where the other preparations are indicated. *Dose*—One fourth to one grain.

Concentrated (Digitalin). *Dose*—One eighth to one half grain, as prepared by some manufacturers, combining the alkaloid, resinous, and neutral principles.

DIOSCOREA VILLOSA.

NAT. ORD.—Asparagi. SEX. SYST.—Diœcia Hexandria.

Common Names.—Yam Root, Colic Root.

DESCRIPTION.—Root woody, long, rough, fibrous, of a light yellowish color. Stem small, purplish vine, many feet in length, twining on objects near it. Leaves ovate, acuminate, cordate, veined, waving edges. Flowers small, greenish yellow, on axilary racemes. Calyx six, parted. Corolla, none. Styles three. Capsule triangular, compressed, three-celled. Seeds three, membranous.

History.—This plant is found in most all sections of our country. It is a small, delicate vine that runs upon fences, bushes and trees. The root is the medicinal part. Although

this article is not extensively used, it has been highly praised by some physicians, and in some parts of the country used in domestic practice.

PROP., &c.—Anti-spasmodic, sedative, diaphoretic. By some it is considered an unfailing remedy for bilious colic, hence one of its common names, *Colic Root*. It has been used for several diseases, as spasms, cramps, flatulence, colds, coughs, affection of the liver and after-pains. The decoction and infusion have been the general forms of its use.

Infusion–One ounce of dry root, coarsely powdered, to a pint of boiling water. *Dose*—A wine-glassful every half hour.

Decoction—One ounce in pint of water, reduced one half by boiling; strain while hot. *Dose*—One or two ounces repeated.

Concentrated—Dioscorin. This preparation is used as indicated in other forms. *Dose*—One to two grains.

DIOSPYROS VIRGINIANA.

NAT. ORD.—Ebenacea. SEX. SYST.—Diœcia Octandria.

Common Name.—Persimmon Tree.

DESCRIPTION.—The Persimmon is a common tree, rising fifteen to sixty feet, with a smooth bark and spreading branches. The leaves are from three to five inches long, shining above, whitish or pale beneath, oblong, base acute, end or tip acuminate, margin entire, on short alternate and pubescent petioles. Buds smooth. Flowers lateral, extra axilary, solitary, nearly sessile or on a short pedicel. Calyx spreading, persistent, commonly four cleft, segments oval acute, shorter than the corolla, which is yellowish, with as many segments as the calyx, broad ovate, acute. Fruit a globular yellow berry, similar to a plum, with a thin skin, fleshy pulp and many compressed hard seeds.

History.—From New York to Louisiana, rare beyond the 42d degree of latitude, common in the South in woods and groves; more common in the plains than the mountains.

The blossoms are of a pale yellow or orange color; they appear in May and June, when the leaves are yet small and not quite unfolded. The berries are only ripe late in the fall and after frost; they resemble a yellow plum, but are globular; before their maturity they are exceedingly astringent; but when fully ripe and soft become sweet, and have a fine flavor. These berries were one of the spontaneous fruits used by the native tribes. The large variety has fruit as big as an egg,

and deserves to be cultivated on a large scale as a fruit tree. The wood is hard and fine, suitable for tools and many other domestic articles.

PROP., &c.—Astringent, tonic, anti-periodic. The bark contains tannin, extractive matter, &c. The fruit, mucilage, tannic and mallic acid, sugar and coloring matter. When ripened by the frost its powerful astringency disappears, and the pulp becomes sweetish and insipid. The bark of the tree becomes available for intermittent fevers, diarrhea, dysentery, uterine hemorrhage, sore throat and mouth. The green fruit is preferred in those diseases where astringents are needed. As an anti-periodic and tonic the bark is best, and thought a good substitute for Cinchona.

Infusion of the bark—Two ounces dried and broken in a pint of boiling water. *Dose*—One to two ounces, repeated.

Infusion of the fruit. One ounce of the green fruit, bruised, in a pint of boiling water. *Dose*—One to two drachms, for dysentery and hemorrhages, and a wash for piles.

Ointment—Green fruit, bruised, four ounces, in one pound of lard; gently boiled fifteen minutes. Employed for piles and cutaneous diseases.

DIPSACUS SYLVESTRIS.

NAT. ORD.—Dipsacea. SEX. SYST.—Tetandria Monogynia.

Common Name.—Teasel.

DESCRIPTION.—Leaves cornate, opposite, sinuate. Flowers in dense oval heads. Calyx many leaves. Corolla tubular, four cleft. Seed, one, crowned.

History.—A plant growing in many parts of the country; one to three feet high. May be cultivated in gardens as in Europe.

PROP., &c.—The roots possess tonic and diuretic properties. Its leaves are aromatic, pleasant. The infusion has been used for sore eyes.

DIRCA PALUSTRIS.

NAT. ORD.—Thymelacea. SEX. SYST.—Octandria Monogynia.

Common Names.—Moose Wood, Leather Wood.

DESCRIPTION.—Shrub, from three to seven feet high, with branches spreading, cylindric, flexuose articulate, green,

smooth. Leaves alternate or scattered; petioles very short, oval, entire, acute at both ends. Flowers blossoming early and before the leaves come out. Peduncle bearing a fascicle of three flowers, formed by three cohering pedicels. Each flower yellow, half an inch long, with a simple perigone, called corolla by Linneus, because it is colored. Stamina eight, inserted on the perigone, with slender filaments, longer than the

perigone, and alternately longer and shorter, anthers rounded. Germen oval, central, free, with a long filiform curved style inserted on one side of the base. Stigma acute. Fruit a small orange berry, oval, acute, with a single seed.

History.—From Maine and Canada to Georgia, near streams and in shady swamps, rare west of the Allegheny Mountains, yet occuring in Ohio and Kentucky. The blossoms are scentless and appear very early in the spring, as soon as the maples blossom, long before the leaves are unfolded. The bark is very tough, can hardly be broken, and tearing in long strips, is used as yet in many parts for ropes, a practice borrowed from the Indian tribes; the wood is also flexible. The berries are said

to be poisonous. The bark and root have a peculiar nauseous smell, and unpleasant acrimonious taste; they contain an acrid resin, bitterish extractive, mucilage, &c.; the resin or active principle is only soluble in boiling alcohol. The decoction and extract are bitter, but not acrimonious.

PROP., &c.—Emetic, cathartic, rubefacient, sialagogue. But little use has been made of this article as a medicine. A few grains of the bark produces vomiting, sometimes purging, a flow of saliva, pain in epigastric regions, and dangerous symptoms. A poultice of the green bark will produce vessication. The berries are narcotic, causing vertigo, dilitation of the pupil and insensibility. Its properties and therapeutical action has not been fully investigated.

DOLICHOS PRURIENS.

NAT. ORD.—Leguminocea. SEX. SYST.—Diadelphia Decandria.

Common Names.—Cowitch, Cowhage.

DESCRIPTION.—Roots perennial, fibrous. Stem climbing, twining, branching. Leaves scattered, entire, ovate, acute, on long petioles. Flowers large, purplish, pendulous, resembling the pea, on axilary racemes. Calyx pink color, bilabiate, the lower lip trifid, the upper one entire. Corolla rounded, concave, twice the length of calyx. Stamens ten. Ovary oblong, villous. Legume on pod, three inches long, curved like the letter S, and covered with stiff hairs or prickers, that penetrate the skin when touching them, causing a stinging, itching sensation.

History.—This plant is found in the West Indies, South America, Mexico, and our Southern States. Some of our authors notice this article under the name of *Mucuna Pruriens*, with the common name of *cowhage*. When the pods are ripe, those who collect them cover their hands with gloves, handling them with care.

PROP., &c.—Anthelmintic. The *seta* or hairs from the pods of the *Dolichos Pruriens* become mechanical agents to remove worms from the alimentary canal. By the peristallic action of the canal their sharp ends are brought in contact with the worms, piercing them, they are either killed or so tortured as to loose their power to resist the force of a brisk purge, and they are carried out in the alvine discharges.

Preparation—Half a drachm well mixed in four ounces of syrup or molasses. *Dose*—One half to a tablespoonful every three or four hours, for twenty-four hours, followed by a brisk hydragogue cathartic, the senna or mandrake being preparable. The root and leaves of the plant are said to be diuretic.

DORSTENIA CONTRAYERVA.

NAT. ORD.—Urticacea. SEX. SYST.—Tetandria Monogynia.

Common Name.—Contrayerva.

DESCRIPTION. — The root is perennial, rough, branching. Leaves large, palmate, deeply serrated, on long petioles.

History.—This esculent plant is found in Mexico and South America. The root is employed in medicine. It is a few inches long, rough, hard when dry, of a reddish or purple color, giving off many fibres. It contains aromatic properties, volatile oil, starch, &c. There are several species.

PROP., &c.—Stimulant, diaphoretic, tonic. Has been administered for diarrhea, dysentery, and as a tonic in low forms of fevers. Used in powder, tincture and infusion.

DRYMIS WINTERI.

NAT. ORD.—Magnoliacea. SEX. SYST.—Polyandria Tetragynia.

Common Name.—Winter's Bark.

DESCRIPTION.—Leaves oblong, obtuse. Flowers small, in clusters, on short peduncles. Sepals two. Corolla in seven white, obtuse petals. Filaments numerous, short. Anthers large, oval. Berries oval, fleshy. Seeds many.

History.—A large evergreen tree of South America, discovered by Captain Winter in 1578. The bark is officinal; found in market, in rolls a few inches in length, of a yellow or gray color.

By analyzation of Henry, it contains resin, tannin, volatile oil, acetate of potash, chloride of patassium, oxide of iron and coloring matter. It yields its properties to alcohol and water.

PROP., &c.—Tonic, stimulant, aromatic. It is intensely bitter, and, in small doses, indicated in weakened digestion, low fevers, and has anti-periodic powers. Said to be anti-scorbutic.

Infusion—Bark two drachms, in a pint of boiling water; when cold, the *dose* is half a wine-glass every half hour for chills and fever, and every three hours for indigestion.

Tincture—Bark two ounces, alcohol one pint. *Dose*—Five to thirty drops, repeated.

EPIGEA REPENS.

NAT. ORD.—Esicacea. SEX. SYST.—Decandria Monogynia.

Common Names.—Trailing Arbutus, Winter Pink.

DESCRIPTION.—Stems woody, one to two feet high. Leaves alternate, ovate, entire, evergreen. Flowers fragrant, purplish white, on axilary clusters. Corolla five cleft. Calyx green, five parted. Stamens ten. Anthers oblong. Capsule globular, five celled. Seeds many.

History.—This little trailing plant is found in Canada and most of the States, on dry soil. Its flowers appear in April and May, perfuming the air with their delightful odor.

PROP., &c.—Diuretic and astringent. This plant has, within a few years, been introduced into the Eclectic profession for the relief of gravelly affections, and for diarrhea. With some it is highly esteemed. It may be employed in form of extract, decoction or infusion.

EQUIESTUM HYEMALE.

NAT. ORD.—Filices. SEX. SYST.—Cryptogamia Filices.

Common Names.—Scouring Bush, Horsetail.

DESCRIPTION.—Stem erect, jointed, longitudinal furrows, three to five feet high, terminating in spikes. Leaves in sheath form, surrounding the stems; two colored, toothed.

History.—This plant grows plentifully in the Northern and Middle States, along streams, and in damp grounds. It is classed among the *cryptogamia* or flowerless plants. There are seven or eight other species under this genus.

PROP., &c.—Astringent and diuretic. The infusion is the usual mode of its use, for voiding bloody urine, for inflammation of the kidneys, suppression of urine, dropsy, phthisis, gonorrhea and diarrhea, for dysmenorrhea and syphilis. Its roots are stimulating.

ERIGERON PHILADELPHICUM.

NAT. ORD.—Asteracea. SEX. SYST.—Syngenesia Superflua.

Common Names.—Flea-bane, Scabious.

DESCRIPTION.—Roots perennial, yellowish, formed by many branching, thick fibres. The whole plant is pubescent, and rises two or four feet. Stems one to five, straight, simple, branched and corymbose at the top, a little angular. Radical and lower leaves oblong, base cuneate, decurrent, on long petiole, nearly obtuse; margin ciliate, entire or seldom serrate; upper leaves sessile, cuneate, narrow, oblong, obtuse, entire, alternate, remote; floral leaves small, lanceolate. Flowers numerous, forming a panicled corymb, peduncles scattered, slender, bearing one to three flowers. Buds globular. Perianth or common calyx hemispherical, formed by many subulate, adpressed folioles. Flowers radiate, half an inch in diameter, with yellow disk, and rays white, bluish or purplish. Rays or radial florets ligular, numerous, spreading, crowding, narrow, entire, pistilate. Florets of the disk convex, crowded, the central ones sometimes staminate and abortive. Each floret produces a single seed.

History.—Found all over the United States, although bearing the name of Philadelphian. It grows in New England, New York, Ohio, Kentucky, Missouri, and as far south as Louisiana and Georgia. It is a field plant, seldom seen in woods and mountains, but covering sometimes whole fields,

dry meadows, commons and glades. In old fields it is deemed a pernicious weed, like the other kinds which commonly accompany it.

The *Erigeron Canadense* is a species of this genus that inhabits the same localities as the *E. Philadelphicum.* It has linear, crowded, entire leaves. Flowers paniculate, very small, with oblong perianth, and rays very short. This one is perhaps the most numerous, and equally beneficial as a medical agent. Some botanists mention several varieties of the *E. Canadensis*, but they are not of importance in this place.

The *E. hetrophyllum* is the third species mentioned as possessing medical properties, not so plentiful as the two first, but found in meadows and fields.

There are twenty *species* of the *Erigeron*, yet the *E. Philadelphicum* and the *E. Canadense* are chiefly referred to. They are similar in appearance, and probably no difference is known in their medicinal virtues. We shall therefore speak of them as but one plant.

Our Eclectic profession may justly claim the merit of placing the Flea-bane in the high position which it now occupies. About the year 1851, a small quantity of oil was distilled from it, either in New York or one of the Eastern States, and a few ounces sent to Philadelphia, and used by the Eclectic physicians, Drs. Sweet, Cooke and others. The following year, I distilled several pounds, a part of which I sent to New York, since which time the demand for it has steadily increased, so that now it is a necessary article of the drug stores. The oil alone is used for medical purposes, and as such it had no reputation or existence until within the few years referred to.

But there are previous investigations of this plant that we feel obligated to notice, and to the memory of Rafinesque, who published in two volumes his "*Medical Flora of North America*," in the year 1828. In this work, he devoted six pages to the elucidation of the *Erigeron*. He had no superior as an author, at least on this Continent, and it gives us pleasure to acknowledge his abilities. He says of these plants: "They are even useful externally in wounds, also in hard tumors and buboes, which a cataplasm of the fresh plants dissolve as it were. But the most valuable property is the astringent and styptic power of the oil, which has saved many lives in parturition and uterine hemorrhage. A saturated solution of the oil in alcohol is applied, and a little given in a spoonful of water, and an instantaneous stop takes place in the bloody flow."

He also refers to Dr. Hale, of New York, as having used a few drops of the oil for uterine hemorrhage. I remember having used the leaves of this plant in the infusion, and also

boiled in milk for diarrhea and piles, but its taste was so nauseating that I laid it aside. In some parts of the country it has been used in domestic practice, for dropsy, nephritis, diarrhea, piles, gonorrhea, and other diseases.

The taste is nauseous, acrid, and slightly astringent. Its smell is aromatic and unpleasant. It contains essential oil, tannin, gallic acid, and bitter extractive matter. The oil is the only part now used, and may be obtained by the common apparatus for distilling. Among those who have been most active to place this oil before the medical profession, we may mention Joseph Sites, M. D., Professor of Obstetrics, and his colleagues in the Eclectic Medical College of Pennsylvania, and the Eclectic Journals of Philadelphia and Cincinnati.

PROP., &c.—Astringent, tonic, diuretic. The Flea-bane is reputed to be available in dropsy, nephritis, diarrhea, gravel, gout, amenorrhea, dydrothorax, hemorrhages, cutaneous eruptions, and suppression of urine.

Powder—The dried leaves, powdered, one half to one drachm, in syrup or water. This form is unpleasant, and seldom employed.

Infusion—One ounce of the dried leaves in a pint of boiling water. *Dose*—Two to three ounces. If the stomach is weak and irritable, it is very likely to be rejected. Milk will partially cover its nauseating taste.

Tincture—One ounce of leaves, bruised, in a pint of alcohol; digest a few days. *Dose*—Thirty to sixty drops every two or three hours, in a tablespoonful of sweetened water or syrup.

Oil—The *dose* is five to ten drops on sugar every one or two hours, until its effects are noticed, when the dose should be lessened and farther apart, until the cure is effected.

The oil is the most pleasant and reliable mode of administration. It is a most remarkable agent for the suppression of uterine hemorrhage, yet no prudent physician will rely upon it under all circumstances, because cases do occur when the extremities and surface become cold, the blood being diverted from its proper channels, and through the ruptured vessels of the uterus the most vital fluid is passing out in torrents. In these extreme cases, it would be weakness to rely upon one article to repair the damages, when, for the equalizing of the blood, stimulants and other adjuvants become of the greatest importance.

For hemorrhage of the stomach and lungs, the same doses are indicated, and similar precaution may be used. The physician soon places great confidence in its powers to heal.

The oil has decided action on the mucous membrane, which makes it available for gonorrhea, leucorrhea and chlorosis.

For females, it may also be used externally, incorporated with equal parts of sweet oil.

This oil, when fresh, should be of a dark yellow color; by age it becomes darker, viscid and sticky, with little or no precipitate at the bottom.

The oil of *fire-weed* (Senecio Gracilis) is frequently sold in shops under the name of Flea-bane. It is a light straw color, rank odor, thin, and more volatile appearance. It has similar properties, though it is best to avoid the deception.

ERYNGIUM AQUATICUM.

NAT. ORD.—Umbelliferea. SEX. SYST.—Pentandria Digynia.

Common Name.—Water Eryngo.

DESCRIPTION.—Its roots are knotty, perennial, tuberous. Stem simple, branching, two to five feet high, lanceolate. Flowers white, arranged on globose heads of an inch in diameter. Calyx five cleft. Fruit scaly.

History.—Indigenous, and found in the low, wet and prairie lands of Virginia and the South-western States. It flowers from July to September. Its root is used for medicine. Water and alcohol extract its virtues. Three other species.

PROP., &c.—Stimulant, diuretic, expectorant and nauseant. This plant is not generally used by the profession, yet known to be efficient for gonorrhea, leucorrhea, syphilis, scrofula and dropsy. The warm infusion is an active diaphoretic, and useful for febrile diseases. The pulverized root and the infusion have been employed for piles. Southern physicians should look to this plant.

Infusion—One ounce in a pint of boiling water. When warm, divide in three or four portions, given fifteen minutes apart, as a diaphoretic in fevers. When cold, give in two or three-ounce doses when desired for other diseases.

ERYSIMUM NASTURTIUM.

NAT. ORD.—Crucifera. SEX. SYST.—Tetradynamia Siliquosa.

Common Names.—Water Cress, Water Radish.

DESCRIPTION.—Calyx and corolla spreading. Pericarp short, declined. Leaves pinnate. Leaflets roundish, toothed.

History.—There are seven or eight species of *Erysimum*. The *E. officinale* of Linneus, the *hedge mustard*, is the best

known for its medical virtues. It grows in damp situations in many sections of the country. Most of the other species are called Water Cress, Radish, &c.

PROP., &c.—The *E. officinale* is stimulant, diuretic and astringent. It is used for dysentery, for affections of the chest, throat, and hysteria.

ERYTHRINA HERBACEA.

NAT. ORD.—Leguminosea. SEX. SYST.—Diadelphia Decandria.

Common Name.—Coral Bloom.

DESCRIPTION.—Stems small, herbaceous, prickly. Leaves ternate. Leaflets rhomboidal, glabrous.

History.—A small ornamental plant found in the Southern States.

PROP., &c.—The roots are expectorant and sudorific, and used for pulmonary and febrile diseases.

ERYTHRONIUM FLAVUM.

NAT. ORD.—Liliacea. SEX. SYST.—Hexandria Monogynia.

Common Name.—Yellow Adder's Tongue.

DESCRIPTION.—Root perennial, a solid periform bulb, deep in the ground, white inside, with a brown loose tunic, sheathing the base of the stem, fibres of the root inferior, thick and short. Stem partly under ground with two leaves appearing radical, because near the ground, the whole plant smooth and shining. Stem white below, greenish purple above, slender, cylindrical, from five to twelve inches long, two sessile leaves. Leaves a little unequal, one being commonly narrower or smaller, they are from three to seven inches long, lanceolate or oval-lanceolate, shining and glabrous, veinless and with a single nerve, often spotted by large irregular spots of a dull brown above, pale and unspotted below, and with an obtuse callous point. A single flower at the end of the stem, one inch long, nodding, of a yellow color. Style, fistulose. Stigma clavate prismatic trilobe above. The capsule is naked, turbinate, triangular, with three cells and many large oval seeds.

History.—It grows from New England to Ohio and south to Carolina; in the Western States it is often superceded by the *C. albidum*, which extends from New York to Missouri and Tennessee. They both grow in woods and under the

shade of trees, shrubs or plants; remarkable for beauty. There are several species of this plant. This one has *yellow flowers*, whilst the *E. Americanum*, with the others, have white flowers. Several common names are applied to these plants, as *Rattlesnake*, *Violet*, *Yellow Snow-drop*, &c. Thus far no distinction is made of their properties and uses, and none of them much used in medicine.

PROP., &c.—Alterative, emolient, emetic. The bulbous root, boiled, forms a valuable poultice for scrofulous sores, cleansing and healing. The infusion or syrup becomes valuable for scrofula and other taints of the system. Both the fresh and dried bulb will produce vomiting, but seldom used for this purpose.

EUONYMUS ATROPURPUREUS.

NAT. ORD.—Celestracea. SEX. SYST.—Pentandria Monogynia.

Common Names.—Wahoo, Burning Bush, Spindle Tree.

DESCRIPTION.—A small tree, ten to fifteen feet high, branching. Leaves lanceolate, acute, serrate. Flowers red. Calyx five cleft. Corolla flat, red. Petals four. Capsule five celled, dark red, angled. Seed arilled, red.

History.—This small tree is found sometimes in the Middle, though profusely in the Western States, and in heavy timbered land. The body and large limbs are of a light grayish color; the small limbs purplish. Its bark is the part used for medicine. It peels off easily, and when dry rolls up; sometimes found a foot in length.

The *E. Americanus* is of similar appearance, with small branches four angled. This is also called the *Burning Bush*—sometimes found in gardens and fields of the Middle States—for its spreading top, broader leaves, and red fruit late in the year. The bark of this is darker, and that cultivated, not so easily taken off from the stems. Like the first, it is very bitter, and supposed of equal importance.

PROP., &c.—Tonic, diuretic and laxative. It is esteemed by our profession as an important agent in the cure of several diseases, for nephritis, dropsy, gravel, constipation, dyspepsia, dysmenorrhea, and pulmonary affections. A valuable tonic, mild cathartic, and diuretic. Specially indicated in low fevers of any type, and all weak and debilitated conditions of the system. All in our markets comes from the Western States.

Powder—Dried bark, ten to thirty grains, seldom used.

Infusion—Dried bark, half ounce to one pint of boiling water. One or two ounces, five or six times daily. It requires three or four days to observe its good effects.

Fluid Extract—Bark, coarsely powdered, one pound; alcohol, two quarts, digesting seven or eight days and filter. By water-bath reduce this tincture to six ounces. Next add to the bark three quarts of water, and boil one half hour, and strain while hot; then gently boil to half a pint, to which add the six ounces, and raise to a boiling heat. If prepared in hot weather, one pound of white sugar may be added. *Dose*—One teaspoonful three to five times daily.

Euonymin.—The resinoid, alkaloid and neutral principles. *Dose*—One half to four grains.

EUPATORIUM PERFOLIATUM.

NAT. ORD.—Corymbiferea. SEX. SYST.—Syngenesia Equalis.

Common Names.—Boneset, Thoroughwort.

DESCRIPTION—Root perennial, horizontal, crooked, with scanty fibres, and sending up many stems, which are upright,

simple at the base, branched above, forming a depressed corymb; from two to five feet high, round, covered with flexuose hairs; the whole plant has a grayish green color, and even the flowers are of a dull white. Leaves opposite, decus-

sate, connate at the base, or united to each other there, where broadest, and gradually tapering to a sharp point, from three to eight inches long, narrow, oblong, rough above, woolly beneath, margin serrulate, upper leaves often sessile, not united.

Inflorescence in a dense depressed terminal corymb formed by smaller fastigate corymbs, peduncles hairy, as well as the perianth or common calyx, each inclosing from twelve to fifteen floscules or florets. Scales lanceolate, acute; florets tubulose, white, five black anthers united into a tube. Seeds black, prismatic, oblong, base acute, pappus, with scabrous hairs.

History.—Common in swamps, marshes, and near streams, from Maine to Florida, and from Ohio to Louisiana, where it appears to have been stationed by the benevolence of nature, wherever men are liable to local fevers. It is found also in Nova Scotia, Canada, Missouri, Arkansas, &c. A very striking plant, easily recognized among all others, even when not in bloom, by its connate leaves, perforated by the stem, as in the Teazel or *dipsacus fullonum.* It belongs to a genus containing nearly one hundred species. It is known to contain resin, gum, lime, tannin, extractive matter, and a principle called *eupatorin.* The whole plant is intensely bitter, and yields its properties to water and alcohol. The Boneset is largely employed in domestic practice, in form of warm infusion, to produce vomiting and sweating in bilious, intermitting, and other fevers.

Prop., &c.—Emetic, tonic, diaphoretic, anti-periodic, and gently cathartic; also, slightly diuretic, astringent and stimulant. It has been resorted to for the relief of numerous diseases—petechial or spotted fever, called also malignant or typhoid pleurisy; diseases of general debility, ascites, anasarca, anorexia, and debility arising from intemperance; acute and chronic rheumatism, violent catarrhs, bilious and typhus fever, particularly low typhus, incident to marshy places, and attended with a hot dry skin; also influenza, the lake fever, similar to the yellow fever, and the yellow fever itself; ringworms, and tinea capitis, dropsy, gout and syphilitic pains; dyspepsia and complaints of the stomach, and bites of snakes.

This plant may be so managed as to act as a tonic, a sudorific, a laxative or an emetic, as required. No other tonic of equal activity can be exhibited in fevers, with less danger of increasing excitement or producing congestion; the only objection to its general use is its nauseous and disagreeable taste. In substance or cold decoction, and combined with aromatics, it becomes very efficient in intermittents and dyspeptic disorders; it strengthens the viscera and restores tone to the system.

In cases of bilious colic, when the stomach will receive the strong infusion given cold, repeated every half hour, it is pretty sure to give relief by stimulating the liver and secretions of the alimentary canal, inducing a cathartic effect. For anorexia or want of appetite that follows from drunkenness and other cases, debility and indigestion, it is highly serviceable.

Pulvis E. perfoliatum—Powdered leaves x to xxx grains.

Infusum E. perfoliatum—Dried leaves ℥i, Boiling Water Oi. Emetic and diaphoretic, fl℥i to vi. Tonic, ℥i to iij.

Extractum E. perfoliatum—Leaves lb. i, Water Cong. i. Boil one hour and strain; again boil to one quart—now add Alcohol Oii, and by water-bath boil fifteen minutes and press through linen, then filter through paper. Add this tincture to the decoction, and by water-bath reduce to consistence of cream. *Dose*—Grs. i to viii.

Eupatorin.—Resinoid, neutral and alkaloid principles. *Dose*—Grs. iii to v.

EUPATORIUM PURPUREUM.

NAT. ORD.—Corymbiferea. SEX. SYST.—Syngenesia Equalis.

Common Names.—Queen of the Meadow, Gravel Root.

DESCRIPTION.—Root perennial, knotty, many dark brown fibres. Stems several, from same caudex, upright, hollow, smooth, purple, branching near the top. Leaves three to five inches long, rough, lanceolate, serrate, acute, in whorls a few inches apart. Flowers reddish purple, in corymb clusters. Calyx imbricated, oblong. Style long, cleft. Seed smooth, glandular.

History.—This plant grows three to five feet high, attracting attention by its showy appearance of reddish purple flowers. Found in most sections of this country, in wet land of meadows and pastures. This one, with the *E. perfoliatum*, boneset, and *E. aromaticum*, white snake-root, are all of this genus of much medical notoriety.

The *E. aromaticum*, white snake-root, has an erect stem about two feet high, with long, ovate, lanceolate leaves, and white aromatic flowers in corymb form. Found in most all of the States. It is diaphoretic, nervine, anti-spasmodic and expectorant. Employed for fevers, pleurisy and nervous diseases.

Among the many species of Eupatorium, we deem it important, for the consideration and investigation of the profession, to notice the following:

E. teucrifolium or rough boneset (wild hoarhound, &c.) has rough, sessile, ovate leaves, with some teeth at the base, the

flowers white, with five florets. Common from New England to Georgia. Milder, less bitter and disagreeable than the former; a larger dose may be given. Chiefly used in the South, in billious remittent fevers, when barks are inadmissable. *Dose*—Two or four ounces of the infusion made by one ounce of leaves in a quart of water.

E. verticillatum or tall boneset. (Joepye, &c.) Stem solid, smooth, five to eight feet high. Leaves whorled, three to five, sessile, ovate, lanceolate. Base attenuate, unequally serrate, smooth. Flowers purplish, with many florets. With *E. purpureum*, same properties often blended together.

E. maculatum or spotted boneset. Stem solid, sulcate, spotted. Leaves petiolate, ovate, lanceolate, pubescent beneath, four to five in a whorl. Stem four to five feet high.

PROP., &c.—The *E. purpureum* is a most valuable and effectual medical agent. It is diuretic, dissolvent, tonic, and slightly astringent. No article is better adapted to the relief of painful suppression of urine, either from inflammation or calcareous accumulations, and in other cases where the kidneys fail to secrete a due amount of urine, allowing the uric acid and other component parts to be retained in the circulation, producing erysipelas and other diseases of the skin. In those other diseases, where success of treatment so greatly depends upon the proper secretions of the kidneys, as dropsy, rheumatism, gout and fevers, it becomes of great service to the physician.

Decoctum E. purpureum—Root, coarsely powdered, ℥iv; Water, Oii; reduce by boiling to one pint, and then strain while hot. *Dose*—℥i to iii, often repeated.

Tinctura Hydro-Alcoholic—Root, coarsely powdered, ℥iv; Water, Oii; boil fifteen to twenty minutes; when cold, add Holland Gin, Oii, and digest a few days. *Dose*—℥ii. This is preferable to the first formula in most cases, especially in urgent attacks, and where there is no objection to the stimulant. On several occasions, I have noticed gravelly or brick-dust precipitate in the urine of patients using these formulæ.

Eupatorin (*Perpu.*)—The resinoid, neutral and alkaloid principles. *Dose*—Grs. ii to x.

EUPHORBIA COROLLATTA.

NAT. ORD.—Euphorbiacea. SEX. SYST.—Monœcia Monadelphia.

Common Names.—Flowering Spurge, Milkweed.

DESCRIPTION.—Root perennial, large, one inch thick, two feet long, yellowish. Several stems from two to five feet high, simple, round, erect, often smooth. Leaves sessile, entire,

scattered, often crowded, oblong, obovate, cuneate or linear, flat or revolute, smooth or hairy. A large terminal umbel, with five rays, and as many leaves in a whorl, similar to the stem leaves. Stamina evolving gradually; each is a true flower on a pedicel, with an articulate filament and a bilobe anther. Many perianths, without pistil; when existing, it is

central, stipitate, nodding, rounded, with three bifid styles. Capsule three cocca, or formed by three valves rolled in and making three cells, each with a seed, convex outside; angular inside, where it is inserted.

History.—From Canada to Florida and Louisiana, in dry soils, barren fields, among stones and rocks, also in glades; seldom in woods, and never near waters, nor in rich alluvial soils.

The genus *Euphorbia* has been named after Euphorbus, physician of Juba, King of Mauritania, who brought the Euphorbium or juice of the *E. officinalis* into practice. It is a very extensive and anomalous genus, divided into many sections.

PROP., &c.—Emetic, cathartic, stimulant, diaphoretic, rubefacient, expectorant. It is a prompt emetic in twenty-grain doses. As a cathartic, some highly praise it for the relief of dropsical diseases. The powdered root, in three to five-grain doses, is an available relaxant, diaphoretic and expectorant, for pleurisy and pneumonia. The fresh root, bruised, contains an acrid principle in its milky juice that will produce vessication, and may be used as a counter-irritant, and to destroy the cuticle over tumors, where sloughing is desired. It contains a large proportion of resin. There is some liability of its producing griping and inflammation. Not much used yet by the profession.

EUPHRASIA OFFICINALIS.

NAT. ORD.—Pediculares. SEX. SYST.—Didynamia Angiospermia.

Common Name.—Eye-bright.

DESCRIPTION.—Annual plant. Stem square, smooth, one to three feet high, branched. Leaves nearly opposite, ovate, toothed. Flowers light purple, varying bright colors. Calyx cylindrical. Corolla two cleft or lipped, upper lip two cleft, lower lip three, lobed. Capsules oblong. Seeds numerous.

History.—This beautiful plant is found in the Middle and Western States, in fields and open woods. Its stems, leaves and blossoms are all officinal. The late Professor Thomas Cooke, of the Eclectic Medical College of Pennsylvania, highly praised the Euphrasia in the cure of Epilepsy.

PROP., &c.—Nervine, tonic and astringent. It yields its properties to alcohol and water. It becomes available in nervous fevers, and debilitated conditions of the system. In the form of poultices it is applied for abdominal inflammation and local swellings.

Infusion. — Euphrasia Officinalis.— Leaves dried, ℥is; Water, boiling, Oi. *Dose*—℥i to iis.

Tinctura E. Officinalis.—Leaves powdered, ℥ii; Alcohol, Oi. *Dose*—℥i to iv.

EUPHORBIA IPECACUANHA.

NAT. ORD.—Euphorbiacea. SEX. SYST.—Monœcia Monadelphia.

Common Names.—American Ipecac, Spurge.

DESCRIPTION.—Root perennial, long, irregular, yellowish, from the size of the finger or larger, becoming small as they extend deep into the ground. When fresh and broken they emit a milky juice. Stems several, from one caudex or head of the root; they present a bushy appearance, some procumbent, some erect, twelve to eighteen inches in length, purplish, and vary in color. Leaves opposite at joints, oblong, ovate, an inch long, half an inch wide, green, purplish red color; they vary in size as well as in color. Flowers solitary, on axilary peduncles.

History.—This plant prefers the dry sandy soil of the Middle and Southern States. Adapted to the dry soil of New Jersey. Found in uncultivated and sometimes in cultivated fields, its stems partly covered by rubbish and sand, in bunches, bushy. Those unacquainted with it have had tricks played upon them by being induced to take a small piece of the fresh root, which soon astonishes them by the powerful vomiting and sometimes purging it produces. The fresh root is milky, similar to the *E. corollatta.*

These plants have been analyzed by Barton, Bigelow and Zollickoffer. They contain mucilage, sugar, starch, caoutchoue, resin, an essential oil, tannin, and a peculiar principle similar to *emeta*, which is soluble in alcohol, and colors it yellow, but insoluble in water, forming oxalic acid with nitric acid; it might be called *oxalemis.* The analysis of the true Ipecacuanha differs from this, and gives starch forty, gum twenty, wax six, fibrine twenty, oil two, emetine or acidified emeta sixteen parts. The roots and leaves of these *Euphorbia* have a sweetish taste, sub-astringent and not unpleasant, with a peculiar smell when rubbed, but no nauseous taste nor smell. The milk is acrid.

E. hypericifolia Lin. (also *E. maculata* of Lin.), Black Spurge (or Spotted Pursely, Black Pursely, &c.), annual, smooth, dichotome, erect or procumbent, divaricated; leaves opposite, petiolate, oblique, subfalcate, oblong, serrate, acute; flowers terminal fasciculate, perianth four lobed and white, capsules smooth. Common all over the United States, in fields, &c.

The *E. hypericifolia*, though but little used, is said to possess astringent, tonic and anodyne properties, and employed for dysentery, diarrhea, leucorrhea, fevers, and some other

diseases. The *E. maculata* has received some attention. The last two especially, as well as all the genus Euphorbia, need further investigation.

PROP., &c.—The *E. ipecacuanha* is emetic, diaphoretic and expectorant. When not acting promptly as emetic, it becomes cathartic. This plant should with us, become a substitute for the imported, or Brazillian Ipecac of South America. Its action is sometimes too energetic, which can be moderated in all cases with proper care. As an emetic, it may be employed on the approach of all dangerous diseases, and at intermediate times. For pneumonia, pleuritus or exanthematous diseases—pulmonary affections as an expectorant, fevers as a diaphoretic. The fresh juice may remove warts and freckles.

Pulvis E. Ipecacuanha—Bark of root dried, grs. iij to xx.

Vinum E. Ipecacuanha—Dried roots, coarsely powdered, ℥vi; Water boiling, Oi; when cold add Sherry wine, Oiii. Digest ten days and filter. *Dose*—℥ss to ℥i for emetic, and gts. x to xx for expectorant purposes.

FAGUS FERRUGINEA.

NAT. ORD.—Amtacea. SEX. SYST.—Monœcia Polyandria.

Common Name.—Beech Tree.

DESCRIPTION.—Bark smooth, grayish color. Leaves ovate, oblong, acuminate, veined, serrate. Calyx five cleft, bell form. Stamens five to twelve. Flowers pistilate. Germs two. Nuts two, enclosed in the calyx.

History.—A large forest tree, found in Canada, the Northern and Western States. In some seasons its triangular or three-sided nuts grow in great profusion, upon which thousands of hogs fatten until prevented by the deep snows. Bushels are often gathered by farmers as a luxury in the winter season. The Indians lay in stores of them. The *F. sylvatica* is another species, called white Beach tree.

Epiphagus—Beech drops. About the roots of the Beech tree may frequently be found this peculiar leafless plant, from eight to fifteen inches high, with simple erect stem branching at its top. On it are scattered scales, and above each one are found its small flowers. The whole plant varies in color—pink, purple, shaded. Both the powder and extract may be useful in dysentery and diarrhea. In this way it has a vague reputation for *ulcers* and *cancers*, used externally and internally. Its prominent principle appears to be astringent, also bitter and nauseating. Not sufficiently known to the profession.

PROP., &c.—The bark and leaves of the Beech tree are astringent, tonic and antiseptic. The powder, infusion or watery extract may be employed for dysentery, diarrhea, indigestion, low fevers, foul ulcers, frost bites, and burns

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FILIX MASS.

NAT. ORD.—Filices. SEX. SYST.—Cryptogamia Filices.

Common Names.—Male Fern, Sweet Brake.

DESCRIPTION.—Root perennial, horizontal, large, knotty, covered with a loose, scaly appearance. Stems on fronds several from one root, erect, reddish brown, giving off opposite leaves, two to four feet high. Fruit in small round dot-like appearances, attached to the fronds and vary in color.

History.—The male fern is found in most sections of this country, and common in Europe. Its root is officinal, which is composed of the origin of the stems packed or braided close together and covered with scaly coverings, and from which start off innumerable fibres. In the spring it makes its appearance by the curved and curled heads of the fronds pushing up through the rubbish and leaves, extending up, uncurling and unfolding, until it presents an erect, brown reddish stem giving off leaves to the top, which presents a curl or knot. Analysis has found in it a volatile and fixed oil, tannin, gallic, acid, starch, and from its ashes, carbonate and sulphate of potassa and lime, alumina silica and oxide of iron. The fern was known to Theophrastus, Pliny and Galen, and used by them to destroy worms.

In modern times, its use was revived by a Swiss surgeon, whose widow, Madame Nouffer, sold the secret to the French king, Louis XVI, for eighteen thousand francs. Pareira states that spirits of turpentine was added to this secret agent, and its use was followed by drastic purges, and that it was more effectual in removing the tape-worm in Switzerlend than in Europe. Sometimes it removes the worm entire, and sometimes in pieces. Sometimes it has been confounded with the comptonia asplenifolia, or *sweet-fern*, both in domestic practice and by careless physicians.

Most authors arrange the Male-fern under the genus *aspidium*, under which head are found many other species.

PROP., &c.—Astringent and anthelmintic. For dysentery and hemorrhages, used internally in infusion; externally, in strong decoction, for ulcers and sores, also in poultices. For tape-worm, the oil is preferred, or the extract and decoction when the oil cannot be had.

Decoctum F. Mass.—The bruised root, ℥ii; Water, Oii; boil to one pint and strain. *Dose*—℥i to iij every three hours for two days, and followed by a brisk purge. Tape-worm.

Oleum F. Mass. Dose—Gtts. x to xv, morning, noon and night for two days—then the purge. If no worms appear, repeat. Equal parts of spirits of turpentine may be added.

FICUS CARICA.

NAT. ORD.—Urticea. SEX. SYST.—Diœcia Triandria.

Common Name.—Fig Tree.

DESCRIPTION.—A small tree, ten to fifteen feet high. Stem or trunk three to six inches in diameter. Leaves cordate or heart-shape, palmate. Flowers numerous, greenish, enclosed in a fleshy receptacle. Calyx five lobed. Stamens three to five. Ovary free. Style one. Stigmas two. Receptacle contains the pulp, the fruit.

History.—The Fig Tree is found spontaneous and cultivated in Florida. A native of Asia and Europe. The Old Testament mentions that Hezekiah, six hundred years before Christ, tried to cure a boil by applying a Fig to it. Most of our good Figs come from Smyrna. When ripe, they are partially dried and pressed in drums, boxes or baskets. The wood is soft when green, and produces a milky substance, which, on being dried, somewhat resembles gum-elastic. The leaves are mucilaginous.

PROP., &c.—Nutritive, demulcent, laxative and suppurative. They have been used in pulmonary and nephritic affections, for habitual costiveness and as a nutriment. When partially roasted, cut open and applied to carbuncles, boils and buboes. A luxury, and sometimes produces griping pains.

FRAGARIA VESCA.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Polygynia.

Common Name.—Strawberry.

DESCRIPTION.—Root perennial, creeping, knotty, bunches of fibres at the knots. Stems of two kinds, some procumbent, stoloniferous, creeping, rooting, slender, with few small leaves, and commonly sterile; true stems upright or reclined, short, with few leaves; both stems and leaves are more or less hairy. Leaves either radical or caulinal, the former on long petioles, the others nearly similar when at the base of the stem, but much smaller and with short petioles when higher up. Flowers

one or many on each stem, with pedicels erect or drooping. Calyx spreading or reflexed, divided into ten acute segments, the alternate somewhat shorter. Five white petals, oboval or obcordate, inserted on the calyx. Many small stamina inserted there also, with short filiform filaments and small round anthers.

History.—This valuable little plant grows spontaneous in the meadows and fields of this country. We have two varieties of the wild plant, *F. Virginiana*, Wild Strawberry, with its receptacle or fruit conical oblong shape, and *F. Canadensis*, Mountain Strawberry, with fruit globular form. Some of the European species are the *F. vesca*, English Strawberry; *F. elatior*, Haut-boy Strawberry, and *F. glandiflora*, Pine-apple Strawberry. Growing wild in Northern New York, I have seen the fruit of the *F. Canadensis* full one inch in diameter. The horticulturists and gardeners have brought out several varieties that are of great interest to the fruit-growers, which are in great demand as a luxury.

The whole plant has a sub-astringent taste, the flowers have a honey smell, the fruits have a peculiar, fragrant odor and ambrosial acid flavor. The plant contains tannin, and Strawberries contain the malice and tartaric acid, some sugar and much water, mucilage, besides an essential oil giving the aroma.

PROP., &c.—The Strawberries are diuretic, refrigerant, antiscrofulous. Useful for gravel, nephritis, gout, scrofula, stricture of the bladder. When eating large quantities, the seeds are liable to produce irritation of the intestines. A delightful wine may be made from them by fermenting the juice with equal parts of sugar, decanting off the clean juice, and adding a small proportion of good brandy.

The stems, leaves and roots are tonic, astringent and slightly diuretic. The infusion has been used for dysentery, diarrhea, swelled gums, sore mouth and throat, for jaundice and febrile diseases. Linneus used it for gout and phthisis. Rafinesque used it for stricture of the bladder and fevers. Let the profession investigate.

FRASERA VERTICILLATA.

NAT. ORD.—Gentianea. SEX. SYST.—Tetrandria Monogynia.

Common Names.—American Columbo, Meadow Pride.

DESCRIPTION.—Root triennial, large, yellow, rugose, suberose, hard, horizontal, spindle-shaped, two feet long sometimes, with few fibres. Leaves all verticillate, sessile and entire, with a single nerve; the radical leaves form a star

spread upon the ground; they are elliptical and obtuse, from five to twelve in number, from ten to eighteen inches long and from three to five broad. The stem-leaves are in whorls of four to eight, seldom more or less, smaller and narrower than

the radical leaves; the lowest are narrow, oblong, the upper lanceolate, acute, and sometimes undulate. Flowers yellowish white, numerous, large, forming an elegant pyramid panicle, the branches of which are axilary to leaves or bracts, unequally verticillate or trichotome. Pedicels lax, longer than the

flowers, cylindric. Calyx deeply four parted, spreading. Segments lanceolate, acute, persistent, nearly as long as the Corolla. Capsule yellowish, borne on the persistent calyx, oval, acuminate, very compressed; margin thin, sides sub-convex, with a suture opening in two flat valves, one celled. Seeds flat, elliptic, imbricated, winged around, inserted on the sutures of the valves.

History.—It grows west, north and south of the Alleghany Mountains. It is spread from the western part of New York to Missouri, and thence to Alabama and Carolina. It is found in rich woody lands, open glades and meadows. Rare in some places; in others extremely abundant.

One of the handsomest native plants in America. It is found in the western glades of Kentucky ten feet high, with a pyramid of crowded blossoms four or five feet long. They are scentless, and in full bloom from May to July. It is a true triennial, the root sending only on the third year a stem and flowers. It bears also many vulgar names, but Columbo root is the most common, since it has been found medical, and very similar to Calumba, once called Columbo also, the *Cocculus palmatus*. It has become a kind of substitute for it, and an article of trade on that account, it being largely collected in the Western States.

The root is the officinal part; it has a sweetish bitter taste like Gentian, and resembles Columba in appearance, having a thick yellow bark, and a yellowish spongy wood; but their chemical characters are very different; the *Frasera* contains extractive and resin, while the *Cocculus palmatus* contains Cinchonin, a bitter resin, oil, starch, sulphate of lime and *columbine.*

PROP., &c.—Tonic and febrifuge. The infusion of the green root is emetic and cathartic. It has been considerably used in domestic practice. By some it is considered about equal to Gentian and Rhubarb, in diseases of the stomach and debility. It has cured a wide-spread gangrene of the lower limbs by internal use and external application. It avails in intermittents, like other pure bitters, and is extensively used in the Western States in fevers, colics, griping nausea, relaxed stomach and bowels, indigestion, &c. As a purgative, it is substituted to Rhubarb in many cases, particularly for children and pregnant women, being found serviceable in the constipation of pregnancy.

Preparations—Extract and decoction.

Fraserin—Resin, neutral and muci-resin principles. Employed for indigestion, diarrhea, night-sweats, hysteria, &c.

FRAXINUS SAMBUCIFOLIA.

NAT. ORD.—Jasminea. SEX. SYST.—Diœcia Diandria.

Common Name.—Black Ash.

DESCRIPTION.—A large tree. Stem or trunk, one to two feet in diameter. Bark furrowed, rough, dark gray color. Leaves

arranged in seven to nine leaflets, lance, ovate, serrate, smooth above, reddish veins beneath, five to seven inches long. Flowers perfect. Calyx none. Corolla none. Petals four. Pistil one.

History.—This tall erect tree is found in Canada, the Eastern, Middle and Western States, in heavy timbered woods. It is used for fences and some mechanical purposes.

Fraximus Acuminata—White Ash.—It is a large forest tree and important in the lumber trade. Valuable for carriages and agricultural implements. There are several other species. The *F. prubescens*, red ash; *F. juglandifolia*, walnut-leaf ash. The *F. quadrangulata*, blue ash, is found in the Southern States.

PROP., &c.—So far as known, these trees possess similar properties, tonic and astringent. Have been employed for general debility, intermittent fever, dropsy, and their leaves for bites of rattlesnakes. The seeds are aromatic, and have been used for obeisity. Not much used by the profession

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FUCUS VESICULOSUS.

NAT. ORD.—Algacea. SEX. SYST.—Cryptogamia Algea.

Common Names.—Sea Wrack, Sea-weeds. .

DESCRIPTION.—A family of marine plants, all more or less equivalent. They contain gelatine, fibrine, muriate and phosphate of soda, iodine, sulphate and carbonate of lime, iron, manganese and silica. Some species have a sweet principle, similar to Minnite, and are edible, such are *F. edulis*, *dulcis*, *saccarhinus*, *esculentas*, *palmatus*. Being burnt, they furnish the kelp used for glass; iodine was first discovered in it, and they chiefly owe to it their medical properties, rendered bland by mixture. Burnt in close vessels, they furnish the vegetable Ethiops, composed of carbone, carbonate of soda and iodine. So abundant on some shores as to afford much manure; cattle like to feed on them, and it keeps them healthy.

PROP., &c.—They are vermifuge, diuretic, deobstruent, resolvent, &c. Useful in gout, bronchocele, scrofulous swellings, goitres, tumors, buboes, swelled testicles, chronic leucorrhea, &c., and in all disorders where iodine avails.

FULIGI LIGNI.

Common Name.—Wood Soot.

History.—A salt containing empyreumatic oil and alkali. It is obtained in chimneys and stove-pipes where hard wood has been burned. It is a dark brown or black color, sometimes in flakes or crusts.

PROP., &c.—Soot is stimulant, anti-emetic and anti-spasmodic. Sufficiently alkaline to neutralize acidity of the stomach. Ten grains each of soot and rhubarb may well be employed in some cases of indigestion attended with costiveness. A weak infusion is used for flatulency and colic of children. A strong infusion is beneficial for indolent ulcers.

FUMARIA OFFICINALIS.

NAT. ORD.—Leguminocea. SEX. SYST.—Diadelphia Pentandria.

Common Name.—Fumitory.

DESCRIPTION.—Annual plant. Stem about one foot high, branched. Leaves bi-pinnate, with leaflets lance-wedge form, notched or gashed. Calyx two leaved, colored. Corolla irregular. Petals four. Anthers three. Capsule drupe-like.

History.—This little plant is a native of Europe, and naturalized in this country. Found in cultivated fields; flowering from May to July. Wild in Canada and our Eastern States.

PROP., &c.—Tonic, alterative and laxative. The infusion has been used for cutaneous diseases, scurvy, itch, &c. The flowers and leaves are officinal. Diuretic properties are ascribed to this plant.

GALIUM APERINE.

NAT. ORD.—Rubiacea. SEX. SYST.—Tetrandria Monogynia.

Common Names.—Cleavers, Goose-grass.

DESCRIPTION.—Annual plant. Stem angular, three to five feet long, branching, jointed, armed with prickers turned backward. Leaves about one half to one inch long, verticilate or whorted, tapering at the base and apex. Flowers small, scattered, white. Calyx four toothed. Petals four. Stamens four. Styles two. Fruit covered with hooked prickers or awns.

History.—Found in most sections of this country, in wet places along fences. It spreads upon other plants and rubbish, and catches to the clothes when passing through it. There are some seventeen different species of this genus, three of which are peculiar to the Southern States. It is believed they all possess similar medical properties. Their constituent properties are not yet known to the profession.

PROP., &c.—Diuretic, refrigerant. This plant is known to the Eclectic profession as a valuable agent for suppression of urine, for inflammation of the kidneys and bladder.

Infusum Galium—Stems and leaves, ℥is; cold water, Oi. After a few hours, drink freely.

GAULTHERIA REPENS.

NAT. ORD.—Ericea. SEX. SYST.—Decandria Monogynia.

Common Names.—Tea-berry, Mountain Tea, Partridge-berry, Checker-berry, Wintergreen, &c.

DESCRIPTION.—Root horizontal, creeping, slender, yellowish, with few fibres. Stems several, upright, few inches high, slender, base naked with a few scales. Leaves terminal, nearly fasciculate, unequal, few, three to five on short petioles, scattered, coriaceous, oval or oblong, pale beneath, acute, with some short mucronate teeth. Flowers few, terminal, subaxilary, on drooping, downy peduncles. The fruit is a small five celled five valved and many seeded capsule, inclosed within the fleshy calyx, which assumes the appearance of a round scarlet perforated berry of the size of a pea.

History.—On hills and mountains, in shady woods, pine woods, rocky and sandy soils, from Maine to Carolina and Indiana; unknown in rich alluvial or limestone plains. Rafinesque states that this plant was named in honor of Dr. Gautier, of Canada, and therefore it should be called *Gautiera.* He also says this plant should not be called *G. procumbens*, as it is by most authors, because it is not procumbent, but that it is a creeping plant, hence it should be called *G. repens.* Two other species. The whole plant has a peculiar taste and smell, aromatic and sweet. It contains sugar, tannin, mucilage and an essential oil, in which reside the taste, smell and properties. This oil is very singular and peculiar, being very heavy, sinking in water, yet volatile, perfectly transparent, of a greenish white, aromatic, sweet and highly pungent taste, containing a peculiar principle, *Gautherine.*

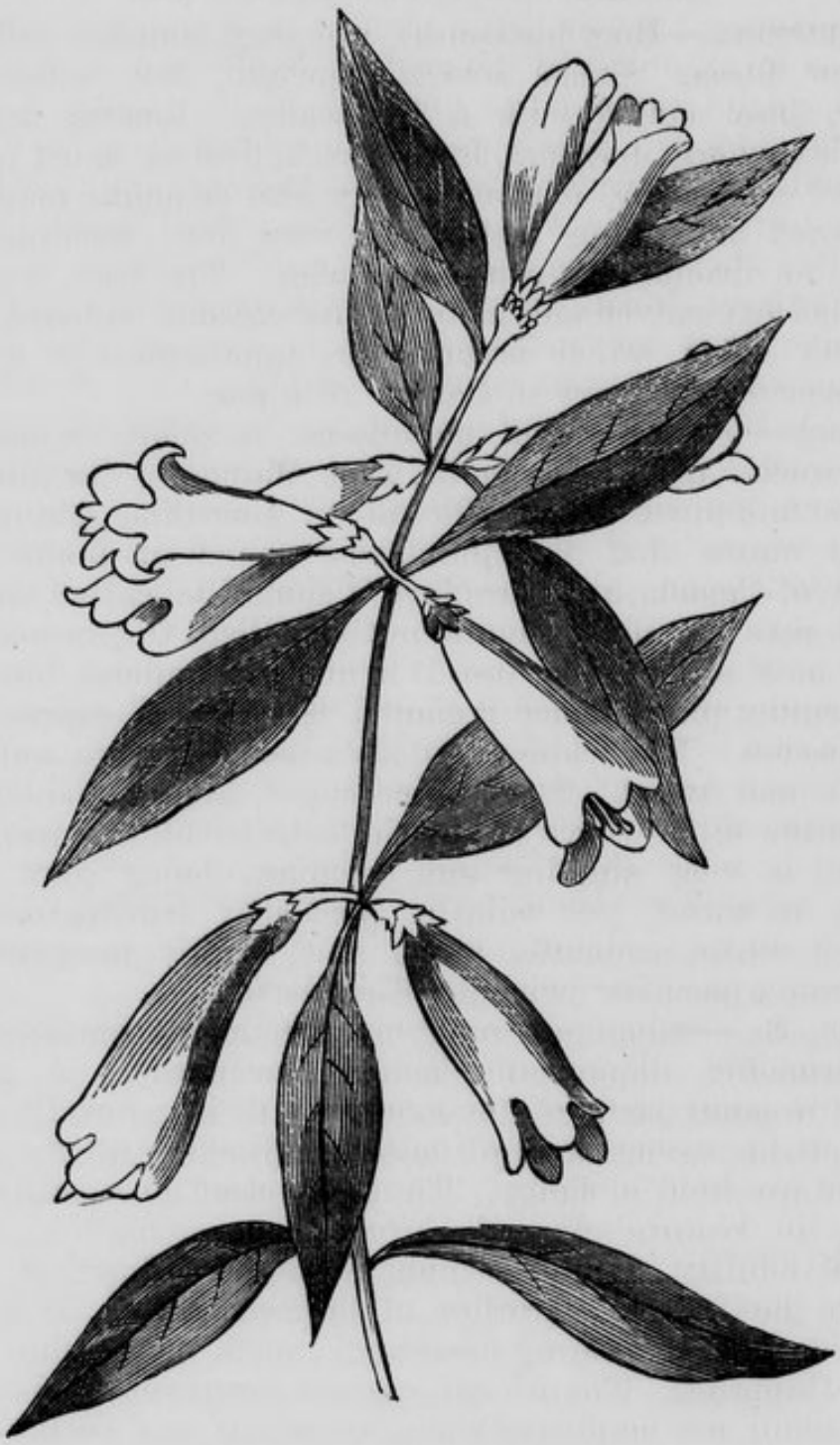
PROP., &c.—Stimulant, anodyne, astringent, emmenagogue, anti-spasmodic, diaphoretic, lacteal, aromatic. A popular remedy in many parts of the country. It is generally used as a tea, but the essence and oil possess eminently all the properties, and are kept in shops. The tea is used as a palliative in asthma, to restore strength, promote menstruation; also in cases of debility, in the secondary stage of diarrhea, and to promote the lacteal secretion of the breast, &c. It is a very agreeable and refreshing beverage, much preferable to imported China tea. The oil and essence, prepared by dissolving it in alcohol, are employed whenever warm and cordial stimulants are required. The oil cures the toothache or allays the pain of carious teeth, like other strong essential oils. The oil of tea-berry is one of the best agents to disguise the taste of unpleasant medicines.

Infusum Repens.—Leaves and Stems, ℥ii; Boiling Water, Oi. Drink freely. *Oleum G. Repens.*—Oil, iij to v or x drops on sugar. Essence of Wintergreen—Oil, ℥i; Alcohol Oi.

GELSEMINUM SEMPERVIRENS.

NAT. ORD.—Apocynea. SEX. SYST.—Pentandria Digynia.

Common Names.—Yellow Jessamine, Woodbine.



DESCRIPTION.—A plant with a twining, running vine, many feet in length. Root long, horizontal, near the surface of the ground. Leaves perennial, lanceolate, dark green above, pale beneath. Petioles short. Flowers large, funnel shape. Calyx small. Sepals five. Stamens five. Pistils two. Capsule two cells. Seeds flat.

History.—The Yellow Jessamine is found in the Southern and Western States. It spreads itself upon fences, bushes and small trees. It was brought into notice by the Western Eclectic physicians.

King's Eclectic Dispensatory gives the most lengthy history of this plant. It seems that a planter in Mississippi, when sick of bilious fever, obtained the root of the Jessamine in mistake, and after drinking a large quantity of the infusion, became prostrate and entirely helpless, yet his brain was not affected, as he could hear perfectly well. Its effects were such that his life was despaired of. After several hours he began to recover gradually, when his fever had disappeared.

By the above valuable Dispensatory, we also learn that several physicians prepared and used this article as the "Eclectic febrifuge," disguising its taste with the essence of wintergreen.

There is some uncertainty in the action of the yellow Jessamine, as death is believed to have followed its use, whilst some physicians have employed large doses of the infusion and tincture without any serious effects. Evidently it should be used with caution until it is well understood by the physician. With it, my own experience has been satisfactory.

I am indebted to Professor Loomis, of Macon, Georgia, for a section of the stem with its leaves and flowers, from which I have taken a drawing.

PROP, &c.—Anti-spasmodic and nervine. It exerts a powerful impression and control over the arterial circulation and nervous system. It lessens the hearts action, causing prostration, and induces dimness of vision, which symptoms should be remembered in its use. Being a powerful febrifuge, it is employed in bilious, typhus, nervous and intermittent fevers. Employed for spasms, tetanus, neuralgia, nervous headache, pneumonia and leucorrhea. Whilst producing its relaxing effects upon the system, it is said to exert contractions of the uterus. If this be so, it becomes valuable as a parturient agent.

Tinctura Gelseminum—Fresh root, bruised, ℥iv; Alcohol, Oi. Macerate ten to twelve days and filter. *Dose*—Gtts. x to xxx. Even one teaspoonful has been given; but this dose becomes dangerous. *Gelsemin*—Resinoid, neutral and alkaloid principles. *Dose*—Gr. ¼ to 2.

GENISTA TINCTORIA.

NAT. ORD.—Leguminosea. SEX. SYST.—Diadelphia Decandria.

Common Name.—Dyer's Broom.

DESCRIPTION.—Leaves lanceolate, glabrous. Calyx two leaved, five toothed—two upper teeth very short, its upper one

oblong, turned back from pistils and stamens. Flowers yellowish. Legumes glabrous.

History.—A native of Europe, cultivated in this country, and sometimes grows spontaneous in the Middle States. This small shrub is cultivated in gardens. *G. scoparia* used for brooms.

PROP., &c.—Diuretic, purgative, emetic. The flowers and seeds have been used in dropsical affections. In Russia, it has been employed for relief of hydrophobia, though considered of doubtful utility. It contains a yellow fat, straw colored matter, albumen, wax, mucilage, tannin. Seldom employed.

GENTIANA CATESBEL.

NAT. ORD.—Gentianacea. SEX. SYST.—Pentandria Digynia.

Common Names.—Blue Gentian, Southern Gentian, Blue Bells, Bitter Root.

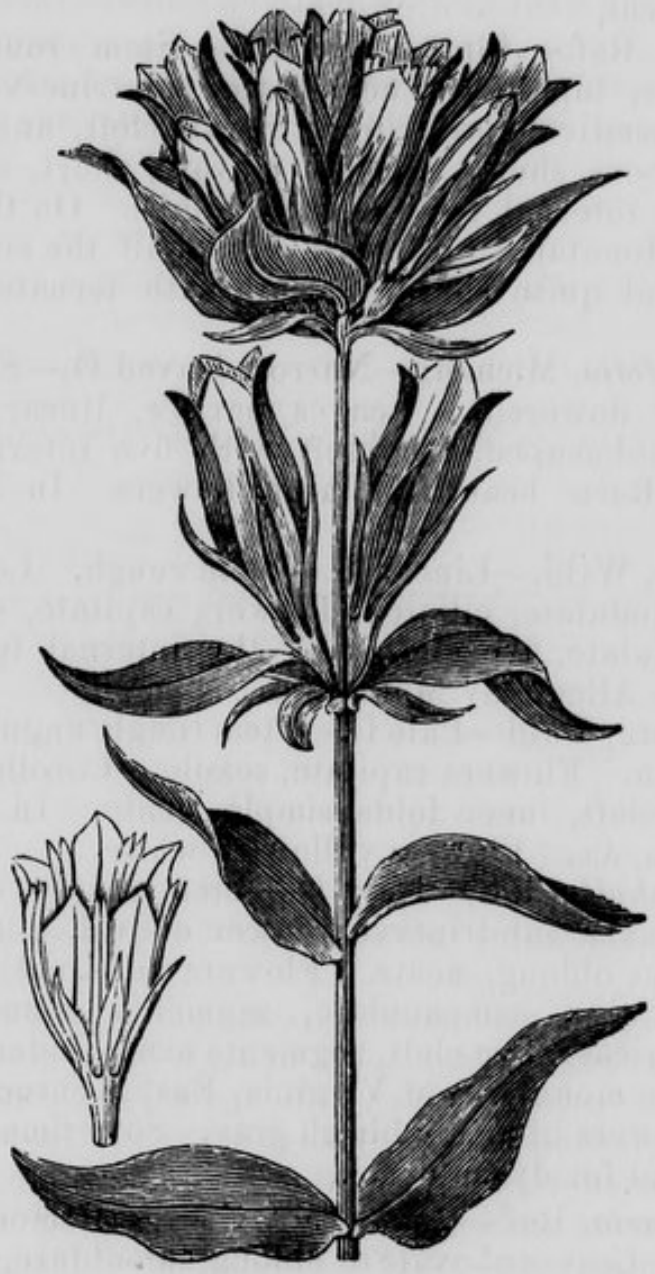
DESCRIPTION.—Root perennial, yellowish, branching, fleshy. Stem simple, erect, cylindric, rough, one or two feet high. Leaves remote, opposite, decustate, ovate or lanceolate, entire, slightly trinerve, acute, rough in the margin. Flowers subsessile, in a crowded terminal head of six to twelve, surrounded by an involucrum of four leaves and some lanceolate bracts, often some axilary flowers below the head. Calyx with segments longer than the base, linear, lanceolate, unequal, acute. Corolla large, two inches long, of a fine azure blue. Base short, tubular; limb large, plaited, swelled, tubular, opening the top. Five stamina, shorter than the corolla, with subulate filaments and sagittate anthers. Germen oblong, lanceolate, compressed, stipitate. Style very short—two oblong, reflexed stigmas. Capsule oblong, acute at both ends.

History.—It grows from Carolina to Alabama and West Kentucky, in glades and open plains.

The genus Gentiana received its name in honor of Gentius, King of Illyaia, who, according to Pliny, first used it for its tonic properties. The *Gentiana lutea* is a native of Europe, the root of which is imported into and frequently used in this country.

All of our Gentians are beautiful plants, more or less bitter in the roots or leaves. There are many species in the United States, some of which have only lately been noticed, and many are as yet undescribed. The importance of these plants seems to merit a short notice of several species known to botanists, for which we are indebted to Rafinesque.

G. quinqueflora, Lin. or five flowered Gentian. Easily known by its branched, winged stem; small, oval, clasping leaves. Flowers five cleft, small, axilary, by bunches of three, four or five, and blue. Common from New England to Kentucky, and the best substitute. The whole plant may be used, being intensely bitter, like *Sabbatia angularis*.



G. amarelloides, Michaux or yellow bunch Gentian. Differs from the former by oval, lanceolate leaves. Stem round, with four small angles. Flowers axilary and terminal, yellowish. Calyx longer, foliaceous. In Kentucky, Illinois, &c. Equal to the former.

G. Crinita, Wild.—Fringed Gentian—Easily known by its lanceolate leaves, large solitary flowers on long peduncles,

with a fringed four cleft corolla, &c. An elegant species found from New York to Carolina. Perennial, like all the following.

G. saponaria, Lin—Soap Gentian—Leaves oval, lanceolate, acute, trinerve. Flowers verticillate, sessile. Calyx with short, oval segments. Corolla oblong, with ten teeth, the interior unequally trifid. Common from New England to Virginia. Medical.

G. clausa, Raf.—Closed Gentian—Stem round, smooth. Leaves ovate, lanceolate, acuminate, sub-trinerve. Flowers verticillate, sessile. Calyx four to six cleft, angular. Segments foliaceous, short. Corolla clavate, short, closed, eight to ten teeth; internal teeth equally bilobe. On the Taconick and Green Mountains. Flowers blue, half the size of the *G. saponaria*, and quite shut. Variety with ternate, lanceolate leaves.

G. angustifolio, Michaux—Narrow leaved G.—Stem simple, slender, one flowered. Leaves narrow, linear, spreading. Corolla funnel-shaped, ten cleft, with five internal, lacerate segments. Rare, beautiful, large flowers. In New Jersey, Carolina, &c.

G. linearis, Wild.—Linear G.—Stem rough. Leaves linear, lanceolate, undulate, ciliate. Flowers capitate, sessile. Corolla campanulate, five cleft, with the internal folds denticulate. In the Alleghany Mountains.

G. ochroleuca, Wild—Pale G.—Stem rough, angular. Leaves elliptic, rough. Flowers capitate, sessile. Corolla ventricose, closed, five cleft, inner folds simple, acute. In New York, Pennsylvania, &c. Flowers yellowish white.

G. Heterophylla, Raf.—Grey G.—Stem simple, erect, round, smooth. Leaves sub-trinerve; lower oboval, obtuse, medial, elliptic, upper oblong, acute. Flowers terminal, sessile, two to four. Calyx campanulate, segments cuneate, obtuse. Corolla ventricose, five cleft, segments acute, bidentate on one side. On the mountains of Virginia, East Kentucky and Tennessee. Flowers of a pale bluish gray. Sometimes called flux-root, and used for dysentery.

G. serpentaria, Raf.—Snake-root G—Stem smooth, flexuose, sub-angular. Leaves obovate or oblong, sub-obtuse, sub-trinerve, undulated. Flowers fascicled, sessile, bracteoles petiolate. Calyx campanulate, angular, segments linear aud carinate. Corolla tubular, five cleft, segments obtuse. notched, inner folds lacerated. In Indiana, Illinois, &c. Root considered a specific for men and cattle bitten by rattlesnakes and copperheads. It is also said to stupify snakes.

G. shortiana, Raf.—Shortian Gentian—Several assurgent stems, rough, ancipital, one flowered. Leaves oblong or cunei-

form, as long as the intervals; glaucous beneath, edges rough, uninerve, the lower obtuse. Flower sessile, bracteate, calicinal segments short, oblong. Corolla nearly campanulate, five cleft, internal folds lacerated. Common in the glades of Kentucky, Tennessee, Illinois, &c. Stem sometimes only four inches, and flower above one inch, blue. Var. *biflora*, stem upright, two flowered. Dedicated to Dr. Short, of Kentucky, who has communicated to me several of the following fine new species.

G. Torreyana, or Torreyan.—Stem erect, rough, quadrangular. Leaves linear, lanceolate, obtuse, glaucous, short, twice as long as the intervals, uninerve, clasping, often revolute. Flowers three to five, terminal, sessile, calicinal segments linear, as long as the tube. Corolla nearly campanulate, five cleft, segments acute, inner folds entire. In the glades with the foregoing. Flowers blue, one inch long. Dedicated to Dr. Torry.

G. rigida, Raf.—Stiff G.—Stem stiff, round, rough. Leaves lanceolate, acute, stiff, small, sub-trinerve, clasping, longer than the intervals. Flowers one to five, terminal, calicinal segments linear, as long as the tube. Corolla campanulate, five cleft, segments acute, inner folds entire. In West Kentucky, Tennessee, &c. Stem red. Flower blue, one inch long. Leaves glaucous beneath, small.

G. Elliottea, Raf. or Elliottean G.—Stem round, smooth. Leaves oblong, narrow, sub-acute at both ends, as long as the intervals, sub-trinerve, glaucous beneath. Flowers three to five, terminal, sessile. Calyx elongated, segments oblong, acute, as long as the tube. Corolla campanulate, segments acute, inner folds lacerated. In West Kentucky. Leaves few, three inches long. Flowers one and a half inches, blue. Dedicated to Elliot.

G. gracilis, Raf.—Slender G.—Stem slender, rough, round, ancipital. Leaves twice as long as the intervals, not spreading, linear, uninerve, clasping, the lower obtuse, upper acute. Flowers two to five, sessile, long and slender; calicine segments linear, as long as the tube. Corolla slender, tubular, sub-campanulate, five cleft; segments deep, acuminate, inner folds simple. In West Kentucky. It has neither the leaves ciliate and undulate, as in *G. linearis*, nor the glaucous, short leaves of *G. Torreyana*. A variety of this with broader leaves, more spreading, may be the *G. pneumonanthe* of Michaux, but not of Linneus. Leaves in both one inch long, and flowers two inches long.

G. axilaris, Raf.—Axilary G.—Stem round, rough. Leaves oblong, lanceolate, acute at both ends, trinerve, twice as long as the intervals. Flowers axilary, pedicellate, shorter than

the leaves; segments of the calyx linear, as long as the tube. Corolla tubular, five cleft, segments acute, with a lateral tooth. Glades of West Kentucky. Leaves three inches long. Flowers one inch, with two lanceolate bracts.

G. Collinsiana, Raf.—Collinsian G.—Stem round, smooth. Leaves lanceolate, acuminate, trinerve, longer than the intervals. Flowers capitate, involucrate; segments of the calyx lanceolate, acute, as long as the tube. Corolla campanulate, five cleft, segments mucronate, inner folds rounded, notched. A fine species. Leaves three inches long. Flowers two inches, blue. In the glades of Indiana, Illinois, Missouri and Western Kentucky. Dedicated to Z. Collins.

PROP., &c.—The blue Gentian is tonic, sudorific, antiseptic, cathartic, &c. It is a good substitute for the *G. lutea* of Europe. Employed to invigorate the stomach and digestive organs, in cases of indigestion and general debility. It is often resorted to in the Southern States for pneumonia, hectic and nervous fevers, for hysteria, gout and rheumatism. In febrile diseases, when admissable, the warm infusion promotes diaphoresis. When cold, in large doses it becomes cathartic.

The root has a mucilaginous and sweetish taste, followed by intense bitterness. It contains extractive matter, mucilage, resin, sugar, oil, and a principal called *gentia*, soluble in water and alcohol.

Pulvis Gentianæ—Root, powdered, Grs. v to xxx.

Infusum Gentiana—Bruised root, ℥i; Boiling water, Oi. *Dose*—℥i to iij.

Tinctura Gentiana—Bruised root, ℥i; Alcohol, Oi. *Dose*—℥i to iv.

GERANIUM MACULATUM.

NAT. ORD.—Gerania. SEX. SYST.—Monadelphia Decandria.

Common Names.—Crane's Bill, Crow Foot, Alum Root.

DESCRIPTION.—Root perennial, horizontal, oblong, thick, rough, knobby, brownish, spotted with green, whitish inside, very brittle when dry, with few, short fibres. Stem erect, round, with few dichotome branches and leaves, covered as well as the petioles with retrose hairs, and from one to three feet high. Several radical leaves on long petioles, the stem-leaves opposite, at the distant forks, on shorter petioles. Flowers germinate, on biflore peduncles arising from the forks, erect, round, swelled at the base, with linear bracts, similar to the stipules. Calyx formed by five deep segments, oval, lanceolate, cuspidate, five nerved, hairy outside, margin

membranaceous or ciliated. Five equal petals, obovate, entire, red, with purple veins, twice as long as the calyx. Stamina ten, filaments erect, shorter than the petals. Germ ovate, with five glands at the base. Style erect, grooved, persistent, five oblong, obtuse stigmas. Fruit, a capsule divided into five coccas or one-seeded capsules, attached inside to the style, and curling up at maturity.

History.—All over the United States, from Maine to Louisiana, Missouri and Florida. Very common in woods, coptices, hedges, glades, &c.; nowhere more abundant than in the western glades of Kentucky.

This plant obtained its name from the supposed resemblance of its *germ* and *style* to the beak of the (geranos) crane. It is a beautiful plant, deserving cultivation. The flowers are

large, but scentless, red, purple or white, with darker veins. It blossoms in the spring, from May to July. It has an extensive native range; grows by millions in the glades of West Kentucky, where it could be collected cheaply for use and exportation. The best time for collection is the fall.

The root is nearly scentless; taste astringent, but not unpleasant. It contains much tannin, more than Kino, extractive matter, and a peculiar acid, differing from gallic acid in not reddening vegetable blues, and not passing over in distillation. The active principles are soluble in water and alcohol. The alkalies neutralize them.

There are several other indigenous species. The *G. Carolinianum; G. pusillum*, small Crane's Bill; *G. dissectum*, Wood Geranium; *G. Robertianum*, Herb Robert; *G. Columbinum*, Long-stalked Geranium; *G. sanquineum*, Bloody Geranium.

PROP., &c.—Astringent, tonic, antiseptic. It is one of the most reliable, safe astringents in the Materia Medica, and a complete substitute for the imported articles Kino and Catechu. It is a better tonic than Kino, and therefore preferable to it in the treatment of morbid fluxes connected with relaxation and debility. Its internal use is indicated in the secondary stages of dysentery and cholera infantum. It is extensively used in the country for all bowel complaints, but sometimes improperly or too early. A gargle of the decoction is useful in cynanche tonsilaris and in ulcerations, or apthous sores of the mouth and throat. The infusion is a valuable lotion in unhealthy ulcers and passive hemorrhagy, also one of the best injections in gleet, gonorrhea and leucorrhea. It was once deemed a styptic in bleeding hemorrhagy, but has failed in many instances. United to our native Gentians or to *Frasera*, it forms one of the most effective cures for intermittents. A decoction in milk is very good in looseness of bowels and diarrhea.

The Crane's Bill is valued in cases of menorrhagia or the immoderate flow of the menstrual fluid in young females of debilitated conditions, or in those heavy losses of blood which sometimes afflict females during the "change of life." And it is employed for diabetes, bloody, and involuntary discharges of urine.

Pulvis G. Maculatum—Powdered root, Grs. x to xxx.

Decoctum G. Maculatum—Root, bruised, ℥iij; Water, Oii. Reduce by boiling to one pint, strain. *Dose*—fl℥i to ii.

Geranin—Astringent, styptic and antiseptic. Principles—Resinoid and tannin. *Dose*—Grs. v to x. In some cases, much larger doses may be given, when it becomes advisable to triturate with syrup or mucilage. Indeed *all* concentrated articles should be triturated, say about one to ten grains of white sugar.

GEUM VIRGINIANUM.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Polygynia.

Common Names.—Evans' Root, Chocolate Root, Throat Root.

DESCRIPTION.—Roots perennial, small, brittle, brown, crooked, tuberculated, oblong, horizontal. Stem simple, erect, about two feet high, pubescent, few flowered. Radical leaves on long petioles, without stipules, lower leaves with large stipules and shorter petioles, upper leaves sessile, simple, similar to the folioles of the lower leaves, lanceolate; base acute and acuminate, border deeply and unequally serrate. Flowers terminal, white, few, on erect peduncles. Calyx spreading, ten cleft; segments lanceolate, acute, five alternate smaller. Five yellowish white petals.

History.—Common from Maine to Carolina and Kentucky, in woods, groves thickets, hills, &c.

The *Geum rivale*, or water Avens, a boreal plant, spread from New England to Canada, in damp places, is more commonly employed in the North, and this species in the South. They are both equivalents.

It will be known by its locality in the North, near waters, the radical leaves pinnate, cauline three cleft, and large purplish, nodding flowers. Its decoction of the roots forms an aromatic, pleasant beverage, often used in the North for colds, fevers, and as a substitute for tea and coffee.

G. stylypus—Calyx persistent, campanulate, five cleft, segments reflexed. Five small petals and many stamina inserted on the top of the calyx. Many pistils in a head borne by a cylindrical gynophore. Several seeds or achenes, with persistent, smooth styles.

There are some other species and varieties, possessing similar properties with the *G. Virginianum.*

PROP., &c.—Astringent, tonic, febrifuge, sedative, stomachic. Much used in domestic practice, North and East, in febrile complaints, allaying nervous excitement, and not increasing ar-

terial circulation. It is available in hemoptisis and phthisis. Consumptive patients should resort to the decoction as a daily beverage. The *G. rivale*, Water Avens, is perhaps the most pleasant.

Decoctum G. Virginianum—Bruised Root ℥iij; Water, Oii. Drink freely.

GERARDIA QUERCIFOLIA.

NAT. ORD.—Scrophularia. SEX. SYST.—Didynamia Angrospermia.

Common Names.—Golden Oak, False Foxglove.

DESCRIPTION.—The stem erect, purple, obtusely angled. Leaves lanceolate, pinnate, acute, scabrous. Flowers yellow, axilary, on short peduncles. Calyx five toothed, pubescent. Corolla five cleft, unequal, pubescent on the under surface. Anthers hairy. Stamens four. Capsule two celled.

History.—This plant is found in dry fields in many parts of the United States. There are many species of this genus, most of which are peculiar to the Southern States. They are handsome plants, flowering in August and September. The whole plant is used, and water and alcohol obtain its properties.

PROP., &c.—Stimulant, diaphoretic, sedative. Useful in colds and pleuritic affections, toothache, colic, &c. Some tribes of Indians suppose it will cure the bite of rattlesnakes.

GILLENIA STIPULACEA.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Pentagynia.

Common Names.—Indian Physic, Bowman Root, Western Drop-wort.

DESCRIPTION.—Root perennial, dark brown, amorphous, with large and long fleshy fibres. Several stems from two to three feet high, slender, smooth, brittle, reddish, branched. Leaves large, alternate, sessile, with three folioles and two large stipules. Flowers in loose, thin, terminal corymbs, pedunclcs clingated. Calyx campanulate, with five teeth. Petals white, three times as long, linear, lanceolate, a little unequal; base cuneiform, and nearly obtuse. Stamina short, inclosed, anthers round, yellow. Pistil central, free, five parted, five filiform styles, five obtuse stigmas, five connected capsules, &c.

History.—Found only west of the Alleghany Mountains, from Ohio and West Virginia to Missouri and Louisiana. Rare in the limestone and alluvial regions; very common in

the hilly and sand-stone regions, growing always in poor or gravelly soils, both in woods and glades.

The *G. trifoliata* has similar properties, and will be known by its locality, growing on the Alleghany Mountains, or north, east and south of them, from Canada to Florida, but never west of them. It is a larger plant, with broader folioles,

small, linear stipules and fewer flowers, but larger. The appearance and properties of both are similar. They blossom in June and July, and are pretty plants, worthy of cultivation.

PROP., &c.—Both species are emetic, sudorific, expectorant, cathartic and tonic. The Western Eclectic reform physicians frequently resort to it as a substitute for Ipecac for fevers, colds and pleuritic affections. The powdered bark of the root, cold decoction or infusion, often operates as a mild cathartic. It has been recommended for dropsy, amenorrhea, intermittent fevers, dyspepsia and worms. For tonic purposes, a few grains every three or four hours.

Pulvis G. stipulacea—Bark of root, powdered, Grs. ii to xxv.

GLECHOMA HEDERACEA.

NAT. ORD.—Labiacea. SEX. SYST.—Didynamia Gymnospermia.

Common Names.—Ground Ivy, Robin Runaway.

DESCRIPTION.—The stem creeping, prostrate, hairy. Leaves reniform, petiolate, crenate, glaucous. Flowers axilary, bluish purple. Corolla variegated. Calyx curved, villous.

History.—This little plant appears early in the spring in most parts of the United States, flowering through the spring and summer. It possesses an odor similar to the Nepeta Cataria—taste bitteresh aud aromatic. Yields its properties to boiling water.

PROP., &c.—Expectorant, stimulant, tonic. It is employed for diseases of the lungs, kidneys, sore eyes, ulcers, headache, colic and asthma. Supposed useful in jaundice and hypocondria.

Pulvis G. hederacea.—Powdered leaves, ℈ss to i.

GNAPHALIUM POLYCEPHALUM.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Polygamia.

Common Names.—Life Everlasting, White Balsam, Sweet Balsam, Cudweed.

DESCRIPTION.—Stem erect, downy, whitish, branching near its summit. Leaves sessile, linear, lanceolate, undulating

downy, white beneath. Flowers whitish, dusky appearance, in terminal corymbs. Seeds glabrous.

History.—It grows one to two feet high, in old fields, along the road-sides, in Canada and most parts of the United States. Its leaves and flowers impart a pleasant aromatic perfume. Its taste aromatic and not disagreeable. Flowers appear from June to September. Ten species of this genus.

PROP., &c.—Diaphoretic, sedative, mild astringent and probably vermifuge. This plant forms a most valuable adjuvant in the treatment of all febrile diseases. Its cold infusion is grateful to the patient, fulfilling the constant demand for cold water, acting as a tonic and sedative, moderately lessening the heart's action. In many sections it is so common in domestic practice that physicians either neglect or fear to order its use. To great advantage it may be used for fevers, coughs, colds, dysentery and diarrhea.

A poultice of the leaves will allay inflammation of external piles, of tumors, contusions, sprains, biles and carbuncles. Rafinesque states that, for a trifle Indians will allow themselves to be bitten by rattlesnakes, and then cure themselves with this plant. Both the powder and infusion may be taken in large doses, as no injurious effects follow its use.

GOODYERA PUBESCENS.

NAT. ORD.—Orchidea. SEX. SYST.—Gynandria Monandria.

Common Names.—Rattlesnake Weed, Scrofula Weed, Net Leaf.

DESCRIPTION.—The root perennial. Stem pubescent, about a foot high. Leaves petiolate, reticulate, veined, and radicles ovate. Flowers numerous, white, on oblong spikes. Lips acuminate, inflated.

History.—Common in the Southern and Middle States, in rich, shady woods, blooming in July and August. Imparts its virtues to boiling water. The *G. repens* is another species, bearing white flowers, one-sided, pubescent, with lips and petals lanceolate, most plentiful in the Northern States.

PROP., &c.—Deemed valuable in scrofulous diseases in the form of infusion drank freely. The infusion also per vagina for leucorrhea. Applied as a poultice to reduce inflammation and to prevent mortification.

GOSSYPIUM HERBACEUM.

NAT. ORD.—Malvacea. SEX. SYST.—Monadelphia Polyandria

Common Name.—Cotton Plant.

DESCRIPTION.—The *G. herbaceum*, cultivated in this country, is an annual plant. Root yellowish color. Stem herbaceous, upright, round, three to six feet high, spreading jointed branches. Leaves large, lobed, acute. Flowers large, five petals, with whitish pink color in the morning, changing to a red and sometimes yellowish tinge in the evening, according to the variety of plant. Calyx cup-shaped, five toothed. Capsule divided into four internal cells or divisions. It is egg-shape, and called the *boll* of the plant. When ripe, it bursts open, presenting the cotton ready to gather. Seeds, three in each cell, oval, oblong, three-eighths of an inch in length.

History.—A native of Asia, and cultivated in the warm climates of other countries. It was known to the Chinese in the thirteenth century. In 1775, the Provincial Congress of South Carolina recommended the people to cultivate the cotton. In 1784, the first shipment was made from the United States to Liverpool, amounting to two thousand pounds. In 1823, our exports increased to 509,158 bales, and in 1855, to 2,857,339 bales.

When the cotton was first introduced into Great Britain, it came in contact with the woollen interests. The opposition, rioting and bloodshed were so great that the government prohibited the wearing of cotton. The following letter, written in Cork, Ireland, May, 1784, will exhibit the feeling against it by the woollen weavers:

"This day, one Michael Cormady was executed here for felony, upon which the journeymen weavers of the city assembled in a body, and dressed the criminal, hangman, and the gallows in cotton, in order to discourage the wearing thereof. At the place of execution, the criminal made the following speech:

"'Give ear, O good people, to the words of a dying sinner. I confess I have been guilty of many crimes that necessity

compelled me to commit, which starving condition I was in, I am well assured, was occasioned by the scarcity of money that has proceeded from the great discouragement of our woollen

manufactures. Therefore, good Christians, consider that if you bring your country into misery it will constantly swarm

with such unhappy malefactors as your present object is, and the blood of every miserable felon that will hang, after this warning, from the gallows, will lie at your doors. If you have any regard for the prayers of an expiring mortal, I beg that you will not buy of the hangman the cotton garments that now adorn the gallows, because I can't rest quiet in my grave if I should see the very things worn that brought me to misery, thievery, and this untimely end; all of which I pray of the gentry to hinder their children and servants, for their own character's sake, though they have no tenderness for their country, because none will hereafter wear cotton but oyster women, criminals, hucksters and common hangmen.' "

Authors do not agree upon the number of species. Some say six to thirteen, others say two, and one. Reference is made to the seed to prove the two species. The *G. album*, with white seeds, and the *G. nigrum*, with black seeds. But the specimen which I now have was cultivated in Milton, North Carolina, and presented to me by Dr. Bowles' lady. The seeds of this plant are invested with a green covering, and probably it is the Tennessee cotton.

The cotton plant is not raised north of Virginia, where the climate is too cold. The varieties cultivated in our country are known as the Upland, Mexican, Tennessee Green-seed, Sea Island, and a few others.

As a medical agent, it has been brought into use by the Eclectic profession. As in many other cases, the Allopathic or mineral profession will probably fail to accord the credit where it belongs.

An article known as *Gun-cotton* is prepared by the action of nitric acid upon cotton.

Collodion is formed by taking sulphuric acid eight ounces, nitrate of potassa ten ounces, cotton half an ounce, and when thoroughly saturated, the cotton is transferred into water and so throughly washed and pressed that no acid is left. The cotton, being carefully dried, is dissolved in ether two and a half pints, and alcohol a fluid ounce. Collodion should be kept in closely-stopped bottles.

PROP., &c.—The bark of the cotton plant is the most reliable emmenagogue known in the Materia Medica. I has also a a marked diuretic action. A full chemical analysis is not yet known to the profession. Experience convinces me that the tincture is not a suitable form for its use, because alcohol is not indicated in most cases where emmenagogues are needed, and because, also, alcohol takes up an astringent principle which the plant contains, and for this last reason, neither the alcoholic or hydro-alcoholic extracts are suitable forms for

emmenagogue purposes. I have used it in these forms without any good results.

To boiling water it imparts its emmenagogue and diuretic properties, which is probably a neutral principle.

℞. Bark of root, dried, ℥ii.
Boiling water, Oii.

Reduce by boiling to one pint, and strain through flannel.

Dose—When cold, a wine-glass four times daily.

GUAIACUM OFFICINALE.

NAT. ORD.—Zygophyllacea. SEX. SYST.—Dicandria Monogynia.

Common Names.—Guaiac, Lignum Vitæ.

DESCRIPTION.—The trunk of this tree is large. Bark smooth, furrowed, variegated, grayish color. Leaves opposite, oval, pinnate, in two to four leaflets. Flowers pale blue, eight or ten rising on long axilary peduncles. Calyx five, parted, and velvet appearance. Petals five, oblong, spreading. Stamens ten. Style simple, awl-shape. Stigma simple. Capsule fleshy, yellowish. Seeds, one in each cell.

History.—This tree is found in Florida, though more abundant in the West Indies and South America. It is a fine evergreen tree, rising forty to sixty feet, and two or three feet in diameter. From Jamaica, Cuba and St. Domingo, our markets are supplied with it, cut in logs of various sizes. The wood is of dark gray color, of very hard texture. It is used in machinery and mechanical purposes, as pestles, mortars, rollers, &c. In drug shops it is found as *Guaiac shavings*, chips and dust, which on exposure to air often has a dark greenish appearance. The inhaling of its fine dust excites sneezing and irritation of the fauces. Its taste is somewhat bitter and pungent. It imparts its virtues partially to water, and to alcohol more fully, to ether, potash and soda.

The Guaiacum is known to contain resin, extractive matter, benzoic acid, and probably a volatile oil. The *resin*, which is often called *Gum Guaiac*, of the shops, sometimes exudes through the bark in a concrete form, and collected from the trees, yet the most is obtained by boring a hole lengthwise in the log, and placing one end in a fire, allowing the resin to flow out at the other end. When cold, it becomes hard, brittle, of a dark grayish, glistening appearance.

PROP., &c.—Alterative, stimulant, diaphoretic, and diuretic. When the patient using it is exposed to the cold, its action is

more marked on the kidneys; when covered warm in bed, it terminates on the surface, inducing gentle moisture. Thus its favorable action in urinary affections, or in skin diseases. For many years it has been praised for its efficacy in gout and rheumatism, for scrofula and syphilitic diseases. For those whose systems are injured by drinking, debauchery and extravagant living, with kidney and digestive organs debilitated, the tincture may be advisable.

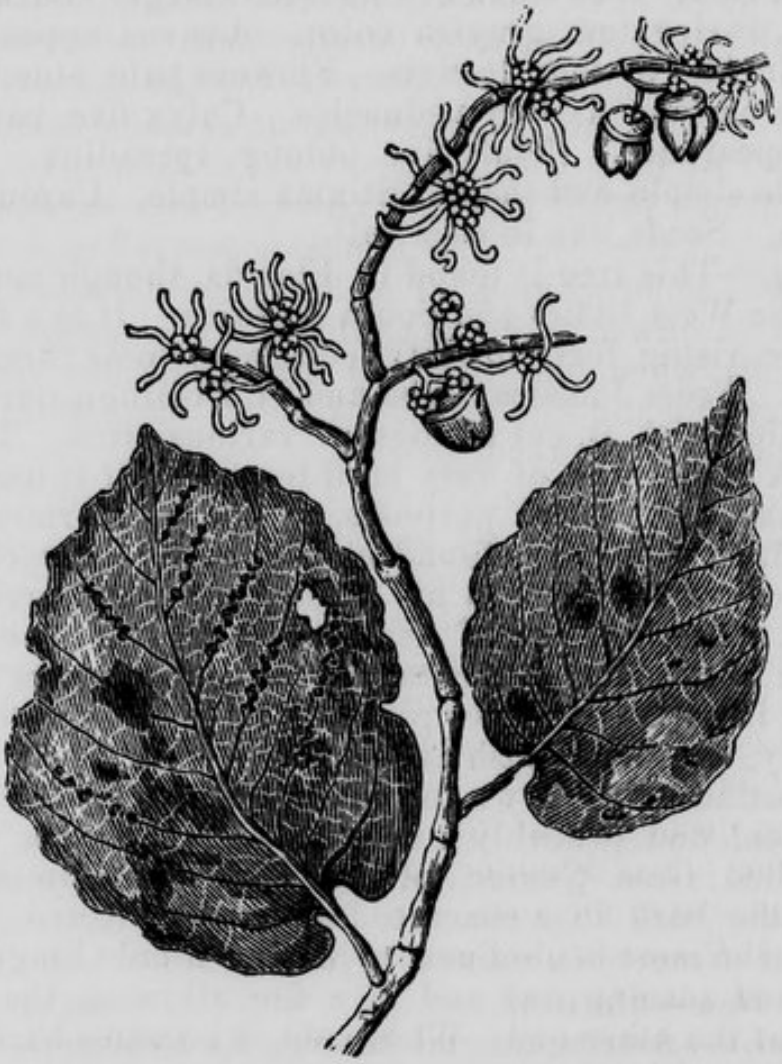
Pulvis G. Resin—Powder, grs. x to xv.

Tinctura G. Resin.—The Resin, ℥i; Alcohol, Oi. *Dose* ℥i to ii.

HAMAMELIS VIRGINICA.

NAT. ORD.—Berberides. SEX. SYST.—Tetandria Digynia.

Common Names.—Witch Hazel, Winter Bloom.



DESCRIPTION.—A shrub from six to ten feet high, with irregular branches, flexuose and knotty. Bark smooth, gray, with brown dots. Leaves rather large, smooth, alternate,

petiolate, obovate. Flowers on short pedicels, clustered three to five together in several places along the branches. Calyx small, but enlarging with the fruit, with three or four scales at the base, divided into four thick oval pubescent segments. Petals yellow, much longer, linear, obtuse, often undulate or revolute. Stamina four, opposed to petals, shorter than the calix. Pistil oval, central. A short style, two stigmas obtuse. Fruit a nut-like capsule, similar to a hazel-nut; but bilobed and split above, pubescent, yellowish, with two cells containing each an oblong black seed, with a broad arilla at the base. This capsule is one year ripening, and opens with elasticity and instantaneously with a noise, by two half valves, throwing the seeds off.

History.—From New England to Carolina and Ohio, commonly on hills and mountains, near stony banks of streams; rare in plains and alluvions. This is a very singular genus, formed by Linneus with the *Trilopus* of Mitchell, which name he ought not to have changed for the actual, which is the Greek name of the *Mespilus* or *Medlar Tree.*

The shrub resembles very much in the appearance of the leaves and nuts, the common hazel-nut, *Corylus Americana*, but the blossoms are totally different. It has become in the United States the Witch Hazel, affording the divining rod, employed by the adepts of the occult arts to find or pretend to find water, ores, salt, &c., under ground. The *Alnus* and *Corylus* are often substituted; a forked branch is used, the two branches held one in each hand; when and where the point drops, the springs or metals sought for are said to be. A belief in this vain practice is as yet widely spread.

Prop., &c.—Sedative, astringent, tonic, discutient. The Indians value this shrub highly, and it is much used in the north by herbalists. The bark affords an excellent tropical application for painful tumors and piles, external inflammations, sore and inflamed eyes, &c., in cataplasm, poultice or wash. An infusion is made with the leaves, and employed for many purposes, in amenorrhea, bowel complaints, pains in the sides, menstrual effusions, bleeding of the stomach.

A strong decoction of the Witch Hazel may be used by injection for piles, dysentery und leucorrhea. The bark of the root and leaves officinal.

Decoctum Hemamalis—Leaves, ℥iv; Water, Oii. Boil to one pint. *Dose*—fl℥i to ii.

Hamamalin—Astringent and tonic. By Professors Buchanan and Clark, recommended for spermatorrhea, but long continued will produce inflammation and swelling of the scrotum.

HEDEOMA PULEGIOIDES.

NAT. ORD.—Labiatea. SEX. SYST.—Diandria Monogynia.

Common Names.—Pennyroyal, Squaw Mint.

DESCRIPTION.—Root annual, small, yellowish, branched, fibrose. Stem upright, about a foot high, with slender, erect branches, terete, pubescent. Leaves opposite, small, oblong, lanceolate or suboval, on short petioles; base attenuated, end sub-acute, margin with small, remote serratures, surface rough or pubescent, nerved and pale beneath. Flowers all along the branches in axilary whorls of six, nodding, on short pedicels, very small. Calyx as above, pubescent. Corolla very small, white, with the lips purple, base slender, then campanulate, with two small lips, the upper rounded, seldom notched, the lower with two rounded, lateral lobes and an obcordate middle lobe. Stamina and style filiform, anthers oblong. Stigma lateral, acute. Fruit four small, oblong seeds in the persistent calyx; mouth closed by the ciliated bristles of the lower lip.

History—Very common and abundant all over the United States, and in Canada, in dry woods and hills chiefly, but also on plains, alluvions, roads, stony fields—never in moist soils. Nowhere more abundant than in lime soils or arid grounds.

The Pennyroyal has a warm, pungent taste and aromatic smell. To some persons it is rather agreeeble, both in taste and smell. Its chief medicinal property is found in its essential oil, which is obtained by the ordinary still apparatus. The oil is a powerful subefacient, employed in lotions or liniments, also to disguise other agents, as Copaiva, &c.

PROP., &c.—Diaphoretic, emmenagogue, stimulant, carminative. The warm infusion is often resorted to in families for colds, aches and pains through the whole body, for obstructed menstruation and febrile diseases, as measles, &c. It is recommended as a relaxant and expectorant for whooping-cough, for hysteria and palpitation of the heart.

With this, as with most all plants containing the active principle in its volatile oil, the form of *decoction* is not advisable. The oil on sugar is the preferable form in some cases.

Infusum Hedeoma—Leaves and stems, ℥i; Boiling Water, Oi.

Oleum Hedeoma—Dose—Gtts. ii to x.

HELLEBORUS NIGER.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Polygynia.

Common Names.—Black Hellebore, Christmas Rose.

DESCRIPTION.—An herbaceous plant, with perennial root and blackish scales; white internally, with numerous large, fleshy fibres. Leaves are large, on radical, cylindrical petioles, of dark green color. Each petiole bears upon its top five, six or seven leaves, which are broad, serrated, veined and pointed both at apex and base. Flowers large, pinkish color, and rose-like appearance. Petals five or more, large. Stamens twenty or more. Calyx none. Capsules many seeded.

History.—The Helleborus is a native of several countries in Europe. It is cultivated in England as an ornamental flower. It is also kept in several gardens in this country as a hot-house plant, putting forth its flowers in December and January, presenting a beautiful appearance, and easy of cultivation.

The *H. orientalis* is a species of this plant, supposed by several authors to have been known to the ancients, and used by Hippocrates for medicinal purposes. This genus of plants is entirely different from the Veratrum Vivide, the American Hellebore.

PROP., &c.—Cathartic and emmenagogue. The decoction and extract acts as a powerful drastic purgative, which is supposed to be the cause of its emmenagogue action. In overdoses, it causes unpleasant and even fatal effects, causing inflammation of the stomach and bowels, vomiting, purging, dizziness and convulsions.

The Hellebore has been used for mental derangement and for nervous diseases, epilepsy, palsy and apoplexy. The juice of the fresh root applied to the skin produces irritation and vesication. In Europe, the infusion is sometimes used by the country people to destroy worms in children, with the addition of aromatics to modify its action.

The *dose* of the powdered root is grs. v. to viij.

In hydro-alcoholic extract, the *dose* is grs. ii to v.

HELENIUM AUTUMNALE.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Superflua.

Common Names.—Sneeze-wort, False Sunflower, Yellow Star.

DESCRIPTION.—Root perennial, fibrose. Several stems from three to seven feet high, erect, angular, winged by the decurrent leaves, branched and corymbose above, covered as well as the leaves, with a very short and dense pubescence. Leaves glaucous, alternate, sessile, decurrent, lanceolate, acuminate, unequally serrate, dotted by small pits, sub-trinervate. Flowers corymbose, golden yellow, large, one or two inches in diameter. Peduncles axilary, uniflore, with one oval, lanceolate bract, clavate or thicker upwards. Perianth with many unequal, linear, acute segments. Rays from five to twenty, spreading flat. Disk greenish yellow, convex; florets small, crowded, five cleft, with syngenesious stamina, a bifid style, oblong germ; pappus formed by three to five chaffs, subulate and awned.

History.—It grows all over the United States, and from Canada to Texas and Florida, in wet meadows and savannahs, damp fields, overflowed grounds, banks of streams, &c.

The *Helenium* was said by the Greeks to have sprung from the tears of the fair Helen. This was once a unique species, but now several others are added, which grow in the Southern States.

The plant has hardly any smell; the taste is bitter and a little pungent, or even acrid. It has not been analyzed, but contains amarine, extractive, and an oil.

PROP., &c.—Tonic, errhine, diaphoretic. It is recommended by some authors for intermittent and other fevers. The powdered blossoms snuffed up the nose will produce powerful sneezing. For obstructions of the nose and frontal sinews, deafness, and neuralgia in the head and face.

HELIANTHUS ANNUUS.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Polygamia.

Common Name.—Sun-flower.

DESCRIPTION.—Stem erect, six to ten feet high. Leaves alternate. cordate, nerved, large, broad. Flowers five or six inches broad, nodding. Corolla surrounding the disk. Petals yellow. Seeds numerous, compact, setting on end; when ripe, a purple color.

History.—The *H. annuus* is a native of Mexico, and cultivated in the gardens of most of our States. The seeds contain mucilage and fixed oil. It flowers in August and ripens in October. Many species—indigenous.

PROP., &c.—The Sun-flower seeds are expectorant and diuretic. A decoction has been employed for nephritis, and also as an expectorant in laryngitis and pneumonia. The Eclectic Dispensary recommends the addition of loaf-sugar and Holland gin.

The leaves containing potash, when burnt to ashes, may be employed on fungus growths or proud flesh. They are also astringent, and have been used for diarrhea.

HELONIAS DIOICA.

NAT. ORD.—Junci. SEX. SYST.—Hexandria Trigynia.

Common Names.—Devil's Bit, Unicorn Root.

DESCRIPTION.—The root oval, about one and a half to one inch long, giving off a few whitish fibres. Stem erect, slightly angled, glabrous, ten to fifteen inches high. Leaves spreading at the base in whorl-form, eight to ten in number, oblong, acute, half to an inch wide; a few cauline leaves, smaller than the radicals. Flowers numerous, small, greenish, in long, nodding, terminal spikes, three to five inches long. Male and female flowers. Calyx none. Corolla six parted. Capsules three celled, three seeded.

History.—The *H. dioica* is an indigenous plant found in many sections of the United States, in woods, fields and moist places. From its radiating leaves, it is often called the *blazing star*, and mistaken for the *aletris farinosa*, (which see). These two plants, both in the shops and fields, are often taken one for the other, which should be obviated, as they are quite different in medical properties.

This plant has light-colored, nodding flowers, whilst the *aletris farinosa* has yellowish flowers separated on its erect stem; besides, the *aletris* has a root two to four iuches long, knotty, scaly, woody or fibrous, with many dark-colored fibres several inches in length. Several species of the Helonias.

PROP., &c.—Tonic, diuretic, alterative, vermifuge, emmenagogue. Whether this plant can fulfil all these indications is probably doubtful, as it has not yet been sufficiently attested. It is reputed valuable for affections of the lungs, kidneys, uterus and stomach, in cases of phthisis, nephritis, prolapsus uteri, leucorrhea, amenorrhea, dysmenorrhea, indigestion, and worms. Cattle are supposed to be injured by eating it, and its decoction used to kill insects, bugs, and cockroaches.

It is highly esteemed for diseases peculiar to females, to give tone and strength in general debility. The root (different from the Aletris) is solid, hard, and brittle. Some advise the powder in doses of twenty to forty grains, which indicates it not very powerful. The decoction from two to four ounces, and the alcoholic extract four or five grains the dose.

Helenin—Neutral principle. *Dose*—Grs. ii to iv. This being a neutral principle, water will hold it in suspension, which is a suitable vehicle for its use. To remove worms, it is recommended to be used for three or four days, followed with a cathartic agent.

HEPATICA TRILOBA.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Polygynia.

Common Names.—Liver-wort, Heart Liver-leaf, Tree-foil.

DESCRIPTION.—Root perennial, fibrose, fibres long, fasiculate, brown. Leaves all radical, on long, hairy petioles, somewhat leathery, and partly persistent in winter. Flowers terminal, drooping at first, spreading when unfolded. Involucre resembling a calyx, very hairy; hairs gray and long, segments very deep, oval, entire, obtuse. Perigone like a corolla, bluish, purplish, or white; sepals elliptic, obtuse, equal, but in two or three series. Filaments subulate, anthers elliptic. pale yellow. Pistils and seeds oval, acute.

History.—A boreal plant, native of the northern parts of

Europe, Asia, and America, spreading in this last Continent from Labrador to Virginia and the Pacific Ocean. Common in woods, hills, and mountains of the United States, from New England to Kentucky. A pretty, vernal plant. The leaves stand the winter, and early in the spring the flowers come out, even when snow is yet falling. They last from March to May, are rather pretty, and deserving cultivation. The varieties are *albiflora*, *acutiloba*, and *purviflora*—flowers half the usual size, and blue. In Kentucky. Perhaps a peculiar species.

Scentless and nearly insipid, not bitter, but a little astringent and mucilaginous. It contains tannin, mucilage, extractive, &c.

PROP., &c.—Sub-tonic, sub-astringent, hepatic, deobstruent, pectoral, demulcent. It was known to the ancients as a medical plant, and Linneus has it in his Materia Medica; but it had fallen into disuse, its properties being very mild. It was formerly used in fevers, liver complaints, indigestion, cachexy, hypochondria and hernia. It has lately been brought to notice in America for hemoptysis and coughs, it has been used in Virginia with benefit, in the form of a strong infusion, drunk cold. It may be serviceable in hepatis and hepatic phthisis, as well as all complaints arising from dyspepsia and hypochondric affections; it may be used as a tea, warm or cold, and adlibitum; but it has no effect on the lungs beyond that of a mild demulcent astringent.

HEMATOXYLON CAMPECHIANUM.

NAT. ORD.—Fabacea. SEX. SYST.—Decandria Monogynia.

Common Name.—Logwood.

DESCRIPTION.—Stem or trunk four to eight or ten inches in diameter. Leaves pinnate. Leaflets obovate. Flowers yellow, in racemes. Sepals five, united at the base. Petals five. Stamens ten. Legume or pods, compressed, lanceolate, two cells. Seeds two.

History.—The Logwood tree is found in South America and West India Islands. It grows twenty to thirty feet high. Much of it comes to us in logs, when it is cut in chips, or made into extracts, chiefly for coloring purposes, ink, &c. Some use is made of it for medicine. It contains a volatile oil, resin, tannin, acetic acid and salts.

PROP., &c.—Astringent and tonic. Both the decoction and extract may be employed for relaxed conditions of the alimentary canal, diarrhea, dysentery, or cholera infantum. If used in decoction, the addition of Cinnamon is advisable in some cases. By injection, it relieves dysentery and leucorrhea.

Pulvis Extractum Hematoxyli.—Dose—Grs. x to xxx.

Decoctum Hematoxyli.—Logwood Chips, ℥i; Water, Oii. Boil to one pint. *Dose*—fl℥ss to i.

HERACLEUM LANATUM.

NAT. ORD.—Umbellifera. SEX. SYST.—Pentandria Digynia.

Common Name.—Masterwort, Cow Parsnip.

DESCRIPTION.—The root is perennial, large, spindle-shape. Stem thick, hollow, furrowed, pubescent, branching. Leaves large, downy. Petioles channeled, villose. Flowers white, umbelliferous, woolly appearance.

History.—This plant grows three to five feet high, in fields and meadows, from Canada to Pennsylvania. The *H. spondilium* is a species found in the Southern States. Its root is officinal, and possesses an unpleasant odor and acrid taste. The green roots and leaves bruised and rubbed on the skin, will produce inflammation. Generally thought poisonous.

PROP., &c.—Stimulant, sialagogue, laxative, diuretic, nervine. The infusion of the root of Masterwort has been used in domestic practice for intermittent fever. It has been recommended as available for epilepsy, colic, asthma, amenorrhea; for palsy and hysteria.

HEUCHERA ACERIFOLIA.

NAT. ORD.—Saxifragea. SEX. SYST.—Pentandria Digynia.

Common Names.—Alum Root, Sanicle, Ground Maple.

DESCRIPTION.—Root perennial, yellowish, horizontal, crooked, with few fibres. Radical leaves on long petioles, slender, and covered with short stiff hair. Flowers very small, forming a long panicle, occupying the upper half of the scape, cylindrical, but loose, small pinnatifid bracts at the base of the branches. Calyx with five acute teeth. Petals lanceolate, flesh colored, filaments subulate, erect, jutting-out, anthers rounded. Pistil bifid with two long styles; stigma obtuse. Capsule with two beaks, opening inside of the beaks, with two cells formed by the involute valves. Many small black seeds.

History.—In the mountains, hills, cliffs and fissures of rocks in Kentucky, Tennessee, West Virginia and Pennsylvania, Ohio, Maryland, &c. Rafinesque enumerates six other species: the *H. villosa*, *H. pulverulenta*, *H. squamosa*, *H. reniformis*, and *H. glauca*. The *H. pulverulenta* and some of its varieties, are found in the Eastern and Middle States. It blossoms from June to August. This genus was dedicated to Heucher, a German botanist. It contains, tannin and acid, but has not yet received that attention from the Eclectic profession which it deserves.

PROP., &c.—Astringent, tonic, antiseptic. It is one of the most active astringents known in the vegetable kingdom. The infusion is employed for dysentery, diarrhea and hemoptysis. The powder is used for the same purposes, and applied to foul ulcers and cancers, to arrest discharges of a saneous and mucus character, and to contract relaxed and spongy tissues. The infusion is indicated per rectum and vagina either to arrest hemorrhage or mucus discharges.

Pulvis Heuchera—Powdered root, grs. v to x.

Decoctum Heuchera—Bruised root ℥ii; Water, Oii. Boil to one pint and strain or filter. *Dose*—fl℥ss to ii.

HICORYA SULCATA.

NAT. ORD.—Terebintacea. SEX. SYST.—Monœcia Polyandria.

Common Names.—Hickory Tree, Shell-bark Hickory.

DESCRIPTION.—A middle sized tree. Leaves pinnate. Leaflets lanceolate, obovate, serrate, seven to nine, the terminal one tapering at its base. Aments pendulous. Florets terminal. Pericarp thick. Nut oval, quadrangular, smooth. Fruit roundish, four heeled.

History.—This tree grows forty to seventy feet high, in heavy woods. In fields and along the borders of woods not so high, and more branching. Its fruit is highly prized as a luxury. The wood is sometimes used for mechanical purposes, but generally for fire-wood.

This genus is the *Carya* of Nuttall and the *Juglans* of Linneus. There are several species—the *H. alba*, Shag-bark hickory; *H. tomento*, common hickory, with a thick, hard shell; *H. amara*, bitter-nut hickory; the *H. porcina*, pig-nut, or bitter hickory, from which hickory brooms are made in the Northern and Eastern States; the *H. equatica*, *H. myristicaformis*, and *H. oliva formis*.

PROP., &c.—Cathartic and mild astringent. The infusion of the leaves may be used in diarrhea and to allay nervous irritation. The decoction of the inner bark of the root acts as a gentle cathartic.

HIERACIUM VENOSUM.

NAT. ORD.—Cichoracea. SEX. SYST.—Syngenesia Polygamia.

Common Names.—Hawk Weed, Snake Plantain.

DESCRIPTION.—Caudex giving off many small fibres, from two to four inches long, of light color. Stem herbaceous, hairy at the base, glabrous towards the summit, six to twelve inches high, two or three branches, bearing each two or three yellow flowers. Leaves radiate, spreading, ovate, serrate, ciliate, hairy beneath, some purplish veins on the under side. Flowers yellow.

History.—The Hieracium grows in many parts of this country, on dry sandy soil, in open oak woods. With some a vulgar opinion has been that hawks removed films from their eyes with it; hence the name of hawk-weed.

This plant was first brought to my notice by a friend, Charles Lippincot, Esq., of Burlington, N. J., who had used it in his family for dysentery. From this I was not long in giving it a fair trial, which pleased me so well that for the last seven summers I have collected it expressly for curing dysentery. This plant has sometimes one or two small leaves on its stem, near the base. There are three other species of this genus, and probably they all possess similar properties.

PROP., &c.—Tonic, mucilaginous and mild astringent. The whole plant should be employed. When chewed, it imparts

its mucilage, bitter and astringent taste. The strong infusion or the decoction is the most available form for use, which is not unpleasant, though a little loaf sugar may be added to advantage. In this way it is readily taken by children. Of this, I usually direct one half to a wine-glassful every three hours, relying with entire confidence that a cure will be effected in twenty-four to forty-eight hours, unless the disease

is complicated with fever or other constitutional derangement, when of course other means should be resorted to. Its bitter principle increases the appetite and imparts strength; its mucilage shields the abraided surface, and its astringency, though mild, gradually aids to constringe the injured blood vessels. It is useful in hemoptysis.

Decoctum Hieracium.—Roots and leaves, ℥ii; Water, Oi. Boil fifteen minutes, and strain when cold. *Dose*—fl℥ii to iii every three hours.

HOPEA TINCTORIA.

NAT. ORD.—Meliæ. SEX. SYST.—Monadelphia Polyandria.

Common Names.—Sweet Leaf, Horse Sugar.

DESCRIPTION.—A small tree, with smooth bark and spreading branches. Leaves lanceolate, glistening on the upper surface. Flowers axilary, sessile without, petiolate. Calyx campanulate.

History.—This small tree, of fifteen to thirty feet high, ranges from Delaware to Florida. It bears yellow flowers in March and April, and its leaves are readily eaten by horses and cattle.

PROP., &c.—Tonic. The decoction of the bark of the root is rather agreeable to the stomach, giving tone and strength in relaxed and weakened conditions of the system. The leaves are sweetish, and said to impart a yellow color to wool and silk.

HORDEUM VULGARE.

NAT. ORD.—Graminacea. SEX. SYST.—Triandria Digynia.

Common Name.—Barley.

DESCRIPTION.—Annual. Roots fibrous, mucilaginous. Stem cylindrical, two or three feet high. Leaves alternate, lanceolate, sheathing. Flowers thick, in rows or spikes. Stamens three. Ovaryum hairy. Stigmas two, sessile, feathery. Scales two, entire, hairy or ciliated. Calyx, the outer chaff. Corolla, the inner chaff. Fruit in four rows.

History.—The Barley is a native of Asia, and cultivated in Europe and America, where it is employed as food, medicine, and for brewing.

Pliny gives Menander as authority that Barley was a most ancient food for mankind, and that it was cultivated in Egypt nearly fifteen hundred years before Christ—see Exodus ix, 31. Hippocrates mentions three kinds, which Pareira supposes to be *H. vulgare*, *H. dischicon*, and *H. hexastichon.* There are several varieties of the species, which are cultivated.

Three kinds are recognized in Europe, and partially so in this country—the *hard flinty*, the *soft* kind, and the feeding Barley. From the *pearl* or *flinty* Barley is made the *farina* of our shops for dietetical and medicinal purposes. In some countries, Barley is used as feed for horses.

Fine Barley meal contains in one hundred parts—starch sixty-eight, gluten, albumen, &c., fourteen, fattty matter two, saline matter two, water fourteen.

PROP., &c.—Demulcent and nutritive. The decoction of Barley is sometimes accepted when other agents are rejected by the stomach, when that organ is affected directly or by sympathy; besides, it is soothing and healing where there is inflammation of the alimentary canal. It is cooling, shielding, and nourishing; especially indicated in febrile diseases. The meal of Barley made into a thin gruel, by the aid of boiling water, a little salt, with a small proportion of powdered cinnamon, is exceedingly useful in relaxed and weakened conditions of the stomach and bowels.

HUMULUS LUPULUS.

NAT. ORD.—Urticea. SEX. SYST.—Diœcia Pentandria.

Common Name.—Hop.

DESCRIPTION.—Root perennial. Stem annual, forming a climbing vine, twining from right to left, angular, rough, with minute, reflexed prickles. Leaves opposite, petioles crooked, smaller and floral leaves cordate, acuminate, serrate. Flowers numerous and greenish.

Perigone caliciform, with five oblong, obtuse, concave, and spreading sepals; five stamina, filaments short, anthers oblong, opening by two terminal pores. Pistilate flowers forming oval, opposite, axilary, drooping, and peduncled strobiles or cones. Scales imbricate, oval, acute, tubular at the base, each covering two sessile flowers.

History.—Native of Europe and America, and cultivated in both Continents. Schoepf found it wild in Virginia, Nuttal on the Missouri, and Rafinesque in New York and Kentucky.

The Hop is supposed to have been known to Pliny. In Europe, it has been cultivated for several centuries. In our Northern States, it is an important article of culture with many farmers, though some risk is incurred if the seasons are cold and backwards; yet where the soil and seasons are favorable, it is a far more profitable production than any crop of grain. The roots live three years. In May, the poles are set by the roots, about six feet apart.

In October, the Hops (strobiles or catkins) are carefully picked and put in hop-houses, arranged for drying by means of fire, after which they are put into sacks for market. During this process, the *lupulinic glands*, appearing as a yellow powder, are often lost, and lessens the value of the hops, when sold in shops.

The greatest use for Hops is found in the extensive manufacture of beer and ale, to which it imparts its tonic, nervine, and anodyne properties. They are much employed for yeast by bakers, and for domestic use.

PROP., &c.—Nervine, anodyne, tonic. Lupulin contains a volatile principle, resin, tannin, gum, lignin, and various salts. The principal medicinal use of Hops is to relieve from pain and to induce quiet and repose. For this purpose, the most common form has been the strong infusion. Some people who suffer for want of sleep use pillows of them in place of feathers, and in this way sometimes are relieved from neuralgia and other painful affections of the head. By some it is recommended for urinary affections, delirium tremens, chordee, and erection of the penis.

The Hop poultice, two ounces to a pint of wheat bran, properly mixed with hot water, gives great relief in abdominal inflammation. Hops one ounce, Gympson leaves two ounces, Yarrow leaves two ounces, boiled for a few minutes in one and a half pounds of lard, form an excellent anodyne and discutient ointment for swelled breasts, painful tumors, ulcers, and carbuncles.

Infusum Lupuli.—Hops, ℥i; Boiling Water, Oi. After a few hours strain. *Dose*—fl℥i to ij.

Lupulin—Resin, resinoid and neutral principle. *Dose*—Grs.

ij to v. I have found this valuable for neuralgia, nervous irritation and want of sleep. Yet some weak and debilitated patients have objected to its use, because when its effects are passing off, feelings of both body and mind are very unpleasant.

HYDRANGEA ARBORESCENS.

NAT. ORD.—Caprifolia. SEX. SYST.—Decandria Digynia.

Common Names.—Hydrangea, Sevenbacks.

DESCRIPTION.—Stem six feet high. Leaves opposite, oblong, ovate, acuminate, glabrous. Flowers white, tinged with pink, fastigiate cymes. Calyx hemispherical, ribbed. Petals ovate. Stamens eight or ten. Capsule two celled. Seeds numerous.

History.—This small shrub, with opposite leaves and white flowers, is found in Pennsylvania and other Middle States, together with the *H. cordate.* The *H. nivea* and *H. quercifolia*, which are handsome plants of the Southern States.

PROP., &c.—Tonic, diuretic, cathartic and sialagogue. A Dr. Eoff is the first physician known to have recommended this plant for gravel, dyspepsia, and other diseases. Of late years its use has been revived by Dr. Butler, editor of the New Jersey *Medical Reporter.* The leaves and bark of the root have been used in decoction and syrup.

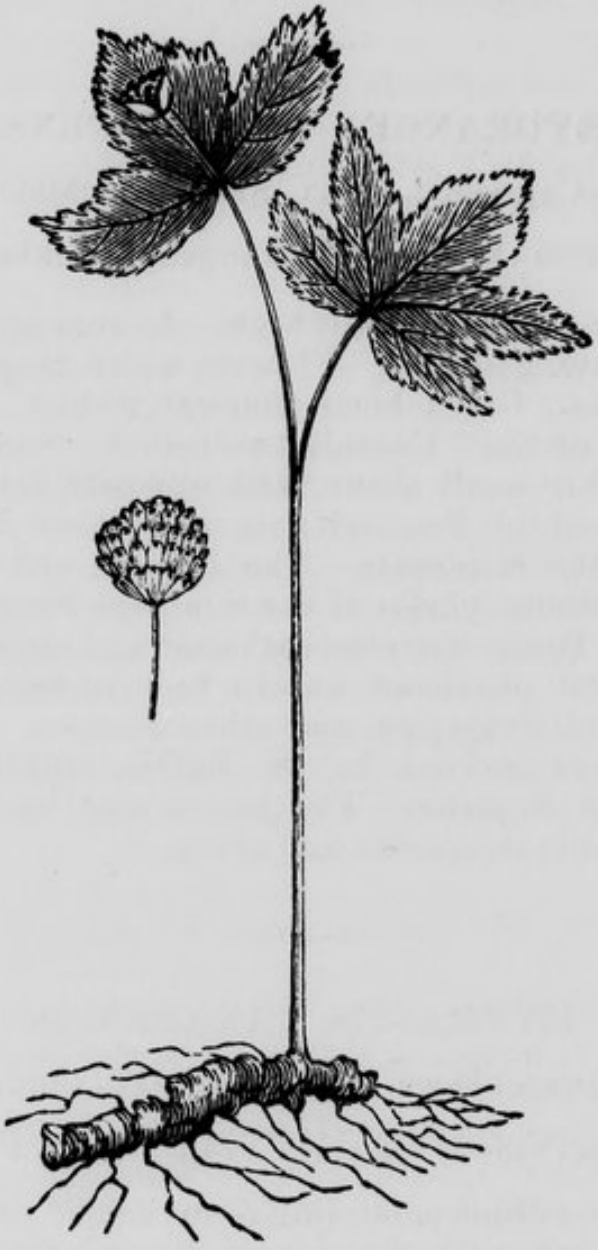
HYDRASTIS CANADENSIS.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Polygamia.

Common Names.—Golden Seal, Yellow Puccoon.

DESCRIPTION.—Root perennial, of a bright yellow, tortuose, knobby, wrinkled, with many long fibres. Stem a foot high or less, simple, straight, round, pubescent, base naked, top with two unequal alternate leaves. First leaf petiolate, cordate, palmate, five or seven lobed, sinuses oblong and obtuse; lobes oval, unequal, acute, with irregular sharp serratures, five branched nerves. The upper or second leaf similar, but sessile and commonly trilobe. These leaves are not quite expanded when the blossoms appear. Flowers single, terminal, on a peduncle shorter than the upper leaf. Three petals or petaloid leaves, flesh or rose colored, oval, obtuse, equal. Many unequal filaments, shorter than the petals, linear and compressed; anthers oblong, obtuse, compressed. Many pistils, oval,

crowded, forming an oval head; styles very short, stigma dilated, compressed. Berry red and oval, formed by many oblong grains or acines; fleshy, obtuse, muricated by the persistent styles, each one seeded; seeds oblong.



History.—From Canada and Maine to Carolina and Tennessee, in rich shady woods, on the banks of streams, sides of hills, deep valleys; very common in West Kentucky, Indiana, Ohio, &c., rare in limestone plains. A pretty and singular plant, easily known by its habit. It blossoms very early in the spring, in March and April, and the petals are so caducous and fugaceous that they fall off as soon as the blossoms expand, leaving the stamina and pistils bare. The common name of *Puccoon* is one employed by the Indians, and applied to other plants dyeing red and orange colors, such as *Sanguinaria*, *Batschia*, *Galium Ceanothus*, &c.

The root of the Golden Seal is officinal, and readily yields its properties to water and alcohol. It contains extractive matter, albumen, coloring matter, starch, resin, and a substance called *Hydrastin.* As a medical agent, this plant has been brought into use by the reform profession, and is known to Eclectic physicians as a valuable agent.

PROP., &c.—Tonic, anti-periodic, laxative, detergent, alterative. It is employed to aid vitality in all stages of typhus, typhoid, bilious, nervous and exanthematous fevers. It aids secretions of alimentary canal and glandular system, and in relaxed conditions of the mucus surfaces it imparts tone and strength. The infusion, both internal and external, is greatly esteemed for erysipelas, for its tonic, alterative and disinfecting action.

The Golden Seal is employed for dyspepsia, affections of the liver, chronic dysentery and diarrhea. The decoction or infusion is highly valued as a wash for sore eyes and indolent ulcers.

Pulvis Hydrastis Radix.—Powdered root, grs. v to xx.

Infusion Hydrastis—Root, bruised, ℥ss; Boiling Water, Oi. Let stand one hour, strain. *Dose*—fl℥i.

Hydrastin—Principles, resin, resinoid, alkaloid, and neutral. *Dose*—Grs. i to ii, three times daily.

HYOSCYAMUS NIGER.

NAT. ORD.—Salanea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Henbane.

DESCRIPTION.—Root biennial, fusiform, whitish. The whole plant glaucous, hairy, glutinous, lurid and fetid. Stem one or two feet high, stiff, round, branched. Radical or first year leaves spread on the ground, oval or oblong, undulate, contorted, acute, sessile, sinuated by large acute unequal teeth, nerve thick and branched. Lower leaves of the stem similar, crowded, alternate, clasping; upper leaves smaller, narrower, nearly entire. Flowers forming unilateral rows on the branches, extra axilary and opposed to the leaves. Calyx urceolate with five short acute and stiff segments. Corolla irregular, funnel-shaped, with five unequal, spreading, rounded and entire lobes, with acute sinuses; this corolla is of a dingy yellow, with a pretty net work of purple veins. Stamina inserted in the tube of the corolla; filaments filiform, unequal; anthers oblong, large, yellow. Style slender, longer than

stamina, with an obtuse stigma. Capsule rounded, invested by the calyx, two celled, opening by a circular lid. Seeds numerous, unequal, small, oblong, brownish.

History.—In the Northern and Eastern States only, from Nova Scotia to Rhode Island, and extending west to New York and Canada; very rare in Ohio and Pennsylvania; unknown in the South. It is supposed to be a naturalized plant, being found merely near houses, roads, rubbish, in old fields and gardens. It is properly an European plant, scattered all over Europe and extending to Asia. History supposes the

name of this plant to be from the Greek word *us*, a hog, and *kuamos*, a lot or measure, because it is good enough for hogs. Probably named by a Jew. The taste of the plant is insipid, mucilaginous and slightly acrid. Its smell rank, narcotic, fetid, unpleasant when green. When burnt, smells like tobacco. It was known to the ancients as poisonous to horses and cattle. Both its smell and appearance guard against its use, except with children. It contains, resin, mucilage, extractive matter, gallic acid, and several salts; also a principle called *Hyoscyamin.*

PROP., &c.—Narcotic, anti-spasmodic, anodyne, repellant, discutient. An agent of doubtful utility. It has been adminis-

tered for many diseases, yet seldom used; for epilepsy, mania, hysteria, rheumatism, neuralgia, spasms, glandular swellings, and asthma. For these diseases its powdered extract and tincture are employed.

Externally its field has been equally large—painful swellings, schirrous, scrofulous and cancerous ulcers, piles, swelled breasts, rheumatic pains, inflamed eyes, and swelled testicles; to dilate the neck of the uterus and pupil of the eye—in the forms of infusion, poultice, ointment, tincture and extracts. Externally, no bad effects are likely to follow its application.

This plant being powerfully narcotic, acting on the arterial circulation, and especially on the brain and nervous system, may bring on the following symptoms: Irregular pulse, thirst, headache, vertigo, anxiety, intoxication, delirium, falling sensation, dilitation of the pupil, double vision, blindness, convulsions, apoplexy, loss of speech, blue-face, gangrene, and death. We might suppose it advisable to avoid its internal use. The root of this plant has been eaten in mistake for parsnip. In such cases the vegetable acids, lemon juice or cream of tartar, are advised, and active emetics administered as soon as possible.

Pulvis Hyoscyami—Powdered leaves, grs. iii to viii.

Tinctura Hyoscyami—Leaves, ℥ii; Alcohol, Oi. *Dose*—Gtts. x to xxx.

Extractum Hyoscyami.—Leaves bruised, ℥viii; Alcohol. Oiv. Macerate ten days and filter. Put the leaves in a displacement apparatus, passing through them a pint of water, which should be reduced one half by boiling; then add this decoction to the tincture, and by vapor-bath reduce to the consistence of thin cream. *Dose*—Gr. ss to i. The extract, well incorporated with lard, is a convenient and useful discutient ointment.

HYPERICUM PERFORATUM.

NAT. ORD.—Hypericea. NAT. ORD.—Polyandria Pentagynia.

Common Name.—St. John's-wort.

DESCRIPTION.—A perennial plant. Root fibrous, rough, tortuous. Stem erect, branching, twelve to eighteen inches high. Leaves numerous, elliptical, ovate, three-fourths to one inch long, with transparent dots. Flowers numerous, yellow, arranged on forked panicles. Calyx composed of five sepals united at the base. Petals five, yellow, variegated, with glands on their borders. Stamens numerous, caped, with small anthers. Styles three. Capsule globose. Cells three. Seeds numerous.

History.—The St. John's Root is a native of Europe, and probably naturalized in this country. In some sections it spreads over fields so as to be troublesome to farmers. There are some fifteen species of this plant found in Canada, the Eastern, Northern and Middle States, and over twenty species in the Southern States. The ancient physicians were acquainted with this article, and used it for several diseases.

The London Dispensatory of the seventeenth century (about 200 years ago), speaking of the oil of St. John's-wort, says: "An excellent medicine for green and deep wounds that are through the body, punctures of the nerves, poisoned instruments, &c. Paracelsus (who first introduced mercury and other fatal minerals) saith, it drives away witch-craft and spirits, and uses it as an amulet for the same, to be put under pillows, laid under the head, smelt, spread about the house, hung on the walls, &c., but advises it to be gathered under the influence of Jupiter, Mars or Venus, in the morning." There are some vestiges of superstition like the above lurking about in the nineteenth century.

This plant is one of pretty active properties, yet its use is chiefly confined to domestic practice. It has not been analyzed.

PROP., &c.—Nervine, sedative, astringent, diuretic. The infusion of the flowers and leaves has been used for nephritis and urinary affections, for hysteria and other nervous diseases; for female weakness and loss of blood at usual times. Some families employ it for worms, diarrhea, and jaundice. Externally by fomentations or poultices for caked and swelled breasts and other swellings, carbuncles, biles, &c. The ointment, by boiling four ounces of the flowers and leaves fifteen or twenty minutes in one pound of lard, can be employed for ulcers and swellings. The oil of St. John's-wort, a bright yellow, is an active stimulant.

Infusum Hyperici—Leaves, ℥ii; Boiling Water, Oiss. *Dose*—One half to one wine-glass.

HYPOXIS ERECTA.

NAT. ORD.—Narcissi. SEX. SYST.—Hexandria Monogynia.

Common Name.—Star-grass.

DESCRIPTION.—The leaves entire, hairy, channeled, three nerved. Stem three to six inches high. Flowers yellow, enclosed in a two-valved spathe. Capsules oblong. Cells three. Seeds numerous, globular, naked.

History.—This little plant, bearing yellow flowers, blossoming in April and May, is found in the fields and pastures of the Middle and Southern States.

PROP., &c.—Emollient, refrigerant. The root and stems are employed. The infusion may be used as a cooling drink in febrile complaints, and the bruised leaves applied to painful swellings, boils and ulcers. The *H. filifolia* is a Southern species.

HYSSOPUS OFFICINALIS.

NAT. ORD.—Labiacea. SEX. SYST.—Didynamia Gymnospermia.

Common Name.—Hyssop.

DESCRIPTION.—Stems branched, spreading, woody at the base, twelve to twenty inches high. Leaves numerous, sessile, lanceolate, acute. Flowers violet-colored, on leafy spikes, terminal. Corolla with lower lip divided in three, the upper lip roundish. Stamens four. Calyx toothed.

History.—A native of Europe, and cultivated in the gardens of this country. The leaves, small stems, and flowers are used, imparting a pleasant odor and warm, aromatic taste. Its principal employment is in domestic practice. Water and alcohol extract its virtues. It contains a bitter principle, extractive matter, and yellow volatile oil.

PROP., &c.—Stimulant, tonic, anodyne, expectorant. The infusion is a good and pleasant agent for colds, coughs, asthma, or inflammatory fevers, with a tendency to excite perspiration, and allay coughs and nervousness. It aids mucus secretions and hastens expectoration. The tops have been applied as a poultice for local inflammation, bruises, &c.

ICTODES FETIDA.

NAT. ORD.—Aroidea. SEX. SYST.—Tetandria Monogynia.

Common Name.—Skunk Cabbage.

DESCRIPTION.—The root is large, dark brown color, one to two inches in diameter, deep in the ground, giving off many long, fleshy fibres. Stem none. Leaves radical, large, broad, ovate. The spathe or calyx appears before the leaves, which is variegated, spotted, reddish, and dark purple, handsome, and within this spathe is found the flower-stem, bearing flowers in a globose form. Corolla none. Stamens four. Style four. Stigma small, pubescent.

History.—An indigenous plant found in most sections of the United States. It inhabits low, wet ground, in meadows, borders of woods and streams. By some it is called Polecat Weed and Meadow Cabbage. The odor that it imparts when green and bruised has given it the name of *Skunk Cabbage.*

The root contains mucilage and some resin, with a volatile principle in which consists its most active properties. When dry, the peculiar odor of the *polecat* passes off, and the root gradually deteriorates in value. The seed of the fruit, which is found on short stems between the radical leaves, near the ground, contains mucilage of fatty matter and oil that may, with some trouble, be bruised in a mortar and pressed through coarse linen, and used for pulmonary affections and whooping-cough.

PROP., &c.—Expectorant, sudorific, anti-spasmodic, and sedative. It is considered useful for hysteria, epilepsy, scurvy, spasms, worms, rheumatism, amenorrhea, and in parturition. With the profession, its use has been chiefly confined to diseases of the respiratory organs, irritation of the fauces, throat, trachea, and bronchial vessels, whooping-cough, and pulmonary affections. It disengages mucus secretions, aids expectoration, allays cough and spasmodic action. It should be remembered that after one or two years it deteriorates in value. The best form for its use is the dry powder mixed with molasses or syrup. The leaves have been applied for dressing blisters, ulcers, &c.

Pulvis Ictodes—Powdered root, Grs. x to xxv.

ILEX OPACA.

NAT. ORD.—Rhamni. SEX. SYST.—Tetandria Tetragynia.

Common Name.—American Holly.

DESCRIPTION.—A tree from ten to forty feet high, small in the North, larger in the South, with handsome evergreen leaves, forming a compact foliage with spinose teeth, on short petioles, oval, or oval-lanceolate, both ends sharp, texture firm. The flowers are small, yellowish white, in small fascides on the small branches. The berries are scarlet, round, and handsome.

History.—Found from Long Island to Florida, chiefly on the alluvial region. The berries remain on the tree throughout the winter, and form a fine contrast with the deep green

leaves. It blossoms in May. It is introduced in gardens as ornamental, and forms fine hedges. The bark of the branches is very viscid, and produces the best bird-lime by boiling. It contains gum, wax, a yellow resin, many salts, &c.

There are several species in the Southern States, two of which are the *I. cassine* and *I. dakoon*, both evergreen shrubs. The true *cassine* is reckoned a holy plant by several tribes, being used in their religious rites and solemn councils to clear the stomach and head by emesis and diuresis. Their squaws are forbid its use. These two species are said to be active diuretics. Rafinesque mentions the *I. Canadensis*, found on the Alleghany Mountains and in Canada.

PROP., &c.—The bark, leaves and berries are employed, being tonic, expectorant, laxative, and febrifuge. The infusion of the bark and leaves may be employed for pleurisy, coughs, catarrh, gout, fever, colic, constipation, jaundice and small-pox. The berries possess active purgative powers.

A principle called *Ilicine* has been obtained from the leaves, which the Eclectic Dispensatory recommends as useful for febrile diseases, and a cheap substitute for quinine.

Pulvis Ilex—Powdered leaves, ℈i to ii.

ILLICIUM FLORIDANUM.

NAT. ORD.—Magnolia. SEX. SYST.—Polyandria Polygynia.

Common Name.—Florida Anise Tree.

DESCRIPTION. — Leaves sub-verticillate, sub-sessile, broad, lanceolate, acuminate, entire, evergreen. Flowers germinate, nodding. Petals many, oblong, obtuse. Calyx six leaved. Corolla seven to twenty-seven petals. Many stamina and pistils. Capsules ranged like a star around a central receptacle, bivalve, one seeded.

History.—A handsome large evergreen, ten to twenty feet high, with fine purple flowers, similar to those of the Calycanthus. The leaves grow in tufts or whorls, three or four together, are similar to those of Kalmia, but sharper. The calyx is deciduous, shorter than the corolla, which has many (twenty to twenty-seven petals) oblong, linear, or cuneate, distorted, obtuse. The pistils form a kind of yellow star in the centre. This genus is nearly related to *magnolia* and *liriodendron*. Two species—are both found in Florida; equally fragrant in all their parts, like the *I. anisatum* of China. Their fragrance is, however, different—the Asiatic species smell like Aniseed.

the *I. floridanum* somewhat between Coriander and Magnolia, and the *I. puruiflorum* exactly like Sassaffras. This last is distinguished by small yellow flowers, with few (seven to nine) round petals, and the leaves alternate. Both grow in East and West Florida, Louisiana, and Texas.

PROP., &c.—The bark of *I. floridanum* is bitter, pungent, and aromatic, with a spicy taste and smell. It is tonic, stimulant; diaphoretic chiefly, like the barks of the Magnolias and of

Cascarilla, to which it is equivalent. Bigelow has found in it, mucilage, extractive, and an aroma soluble in the distilled water. The leaves and seeds have the same qualities. It may be substituted for Cascarilla in some peculiar fevers, and for the Starry Anise of commerce, which the Chinese chew after dinner as a stomachic and sweetener of the breath. They mix it also as a condiment in some dishes, in tea and sherbet, besides burning it as a perfume, and considering it as an antidote to various poisons.

IMPATIENS PALLIDA.

NAT. ORD.—Gerania. SEX. SYST.—Pentandria Monogynia.

Common Names.—Jewel-weed, Touch-me-not, Snap-weed.

DESCRIPTION.—Stem succulent, smooth, jointed, branching, two to four feet high. Leaves on long petioles, ovate, serrate, mucronate, glabrous. Sepals four. Petals two. Stamens five. Capsules bivalved, cylindrical, one half to one inch long, and when ripe, a little pressure causes them to burst open, scattering their seeds. Hence *Touch-me-not.*

History.—This odd-looking plant grows in many parts of the United States, in wet places, by little streams, fences and hedges, bearing yellow flowers. There are two more species. The *I. pulva* is found in the same localities, and most common, called *speckle-jewels*, &c., because of its variegated or spotted stems and leaves. The *I. balsamina* is found in gardens, called *ladies' slipper* and balsam-weed, with variegated flowers.

PROP., &c.—Diuretic, emetic, alterative. It has been employed for jaundice, dropsy, and asthma. In large doses it produces vomiting. The juice is applied to ring-worms, warts, &c. An ointment has been made by boiling the green leaves in lard, and recommended for piles, tumors, and sores. Seldom used by the profession.

INDIGOFERA CAROLINIANA.

NAT. ORD.—Leguminosea. SEX. SYST.—Diadelphia Decandria.

Common Name.—Indigo Plant.

DESCRIPTION.—Stem erect, glabrous, branching. Leaves pinnate, unequal. Leaflets in five or six pairs, mucronate, oval, oblong, glaucous. Flowers on axilary racemes. Calyx small, five toothed.

History.—This plant is found in the Southern States, on poor soil, three to seven feet high, bearing yellowish flowers. The *I. tinctoria*, also found in Georgia. From this genus of plants is obtained the Indigo of the shops, so much used in this country during the washing of clothes. The *I. tinctoria* is a native of the East Indies, where the plant is submitted to the process of fermentation, in order to obtain the extract or Indigo.

PROP., &c.—Indigo is seldom used as a medical agent. Probably tonic, nervine, and anti-spasmodic. Has been employed for spasms, epilepsy, chorea, and hysteria.

Its physiological effects are constriction of the fauces and metallic taste, nausea, vomiting, giddiness, and other unpleasant symptoms. *Dose*—Grs. x to xxx.

INULA HELENIUM.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Polygamia.

Common Name.—Elecampane.

DESCRIPTION.—Root perennial, thick, fleshy, dark brown outside, light within. Stem erect, leafy, downy, three to five feet high. Leaves ovate, cordate, clasping the stem, deeply serrated, downy beneath, three to five inches long, radical leaves on short petioles. Flowers large, solitary, terminal. Disk flowers perfect. Recepticle naked. Anthers two bristles at base. Ovary one cell. Style two cleft. Fruit an achenium, dry, crowned with a pappus. Seeds solitary, quadrangular.

History.—The Inula is a native of Europe, and believed to have been known to the ancient physicians. It is naturalized in our country, growing spontaneous in the Northern States, along road-sides, the borders of gardens, and about the ruins of old buildings. Its broad disk, in which are found the evenly set and compact seeds, with its rays of yellow and variegated flowers, gives it a resemblance to the *Sun-flower* (Helianthus Annuus). By analyzation, the Elecampane is found to contain volatile oil, extractive matter, acetic acid, resin, albumen, and fibrous matter.

PROP., &c.—Expectorant, emollient, tonic, and mildly diuretic and diaphoretic. Chiefly used in domestic practice for affections of the liver and pulmonary diseases; for rheumatism and skin diseases. The syrup and decoction is the common mode of preparing it. Its tendency is to act gently on the bowels, cleansing and giving tone to the alimentary canal. It is thought to be useful in female diseases, suppressed menstruation, &c.

Pulvis Inula—Powdered Root, ℈i to ij.

Decoctum Inula—Bruised Root, ℥i; Water, Oi; Boil ten or fifteen minutes. *Dose*—fl℥i to iii.

IPECACUANHA (CEPHALIS).

NAT. ORD.—Cinchonacea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Ipecac.

DESCRIPTION.—The root is three to six inches long, with diverging branches, knotty, about as thick as a quill; when dry, its epidermis or bark wrinkles so as to form rings around the inner part, which is fibrous, tough. When dry, it is gray

or ash color. Stem partly creeping, two to four feet long, downy near its base. Leaves sparse, four to eight, opposite, obovate, acute. Flowers small while in globose form. Calyx small, five short teeth. Corolla white and funnel shape. Stamens five. Ovary beneath its fleshy disk. Stigmas two. Fruit ovate, similar to the coffee bean.

History.—A native of Brazil, Rio Janeira, and other parts of South America. From these places is derived the Ipecac of the shops of this and other countries. It flowers in January, February and March. The native Indians collect the roots for the markets. The root is imported in large bales, and ground in the drug mills. The powder is of a light gray color, and is liable to adulteration, especially when in great demand.

In Peru is found a species of this genus, known as the *striated* or *black* Ipecac, which yields a darker powder, of less medical virtues. As analyzed by Pelletier, Ipecac contains in one hundred parts—emetic extract sixteen, volatile fatty matter two, wax six, gum ten, starch forty-two, lignin twenty, loss four. There are several species of this plant, but that which comes from Brazil is considered the best.

The powder has but little nauseous smell, slight bitter, acrid, and nauseous taste on first tasting it, which gradually increases to a pungent and nauseous impression. The Ipecac, especially for children, ranks among the best of agents for bronchial diseases.

History relates that Michael Tristam first introduced the Ipecac into medical notice in Paris. In 1684 it was described by Piso. In 1686, it had gained notoriety for the cure of dysentery. After this a physician held it as a secret, which he sold to King Louis XIV. for a large sum of money. The first botanical description was in the year 1800, by Dr. Gomes, who visited Brazil.

PROP., &c.—Emetic, diaphoretic, expectorant. Its action is marked on the mucous membrane; when inhaled, producing a tightness or constriction of the bronchial vessels. When taken into the circulation, it relaxes that tissue, allowing a free discharge of mucus secretion; hence its value in pulmonary diseases. By its relaxing power, it is important in inflammation of the lungs, subduing both local and general febrile action, by inducing free perspiration. It is one of the safe and reliable emetics, and in this way, by its revulsive action, it terminates upon the surface in diaphoresis, followed, as with Lobelia, with a tendency to sleep and repose.

Ipecac is not so quick in its action as some other emetics, yet safer and easier, which makes its use admirable in weak and delicate conditions of the system, as in pregnancy,

tenderness of the epigastric region, pulmonary diseases, &c. The Ipecac is indicated in pneumonia, pleuritis, hepititis, bilious and nervous fevers, croup, quinsy, whooping-cough, catarrh of the chest. In large doses, emetic and anti-spasmodic; in small doses, nauseant, diaphoretic, and expectorant.

The root has been analyzed by several chemists. It contains emetina, soft resin, wax, gum, starch, woody fibre, bitter extract, and sugar.

Pulvis Ipecacuanha—Powdered Root, Grs. i. to xx.

Syrupus Ipecacuanha—The Root, bruised, ℥iijss; Alcohol, Oi. Digest forty-eight hours, filter, and set aside; then add diluted Alcohol Oi. Digest forty-eight hours, and filter; add the two tinctures together, and reduce by vapor-bath to ten ounces, and while hot add simple syrup four pints. *Dose*—As emetic, one drachm for children, and one ounce for adults. As expectorant, smaller doses.

Vinum Ipecacuanha—The Root, bruised, ℥ii; Sherry Wine, Oii. Digest ten days, and strain or filter. *Dose*—fl℥i to v, as emetic. As expectorant and diaphoretic, smaller doses.

IPOMEA JALAPA.

NAT. ORD.—Convolvuli. SEX. SYST.—Pentandria Monogynia.

Common Name.—Jalap.

DESCRIPTION.—The root perennial, tuberous, oval, in size from a pear to the fist, the largest a pound in weight; dark brown outside, cream color within. Stem annual, twining, branching, smooth, several feet long. Leaves on long petioles, ovate, acuminate at the apex, cleft at the base, entire, smooth. Flowers purplish, on long axilary peduncles. Sepals five, unequal, smooth. Corolla cylindrical, broadly expanding at the top into five petals. Capsule two cells. Seeds, two in each cell.

History.—This plant is a native of Mexico, and received its name from the city of Jalapa (Xalapa). It was first noticed in 1552, by Mr. Dodens, and by others in 1568 and 1674. Its botanical history and description was fully noticed in 1827, by Prof. Coxe, of Philadelphia, by Nuttall, Lindley, and others.

The natives of Mexico collect the Jalap root, carrying it into the large cities and sea-ports, from which the various markets are supplied. The *true Jalap* varies in size to the fist, and one pound in weight, and should have a compact,

heavy feel in the hand. In the same localities is found a spurious or *false Jalap*, that is sometimes mixed with the true article. Nearly all in the drug stores, and seen by physicians, is in the powdered form. But the commercial agents and importers of this article can readily detect a spurious kind, and prevent frauds upon the profession. The *false* Jalap is less oval and round, not so solid and heavy, containing woody fibres, and less medical properties.

Several chemists have analyzed the Jalap, yet none of them agree precisely. Guibourt finds in 100 parts—resin eighteen, liquid sugar and alcohol nineteen, brown saccharine extract, obtained by water, nine, gum ten, starch nineteen, woody fibre twenty-one, loss four. Its prominent physiological action is caused from the resin it contains, and alcohol is the best agent to extract its properties, though water will suspend the sugar, gum and starch. It is a powerful cathartic, causing watery discharges and griping pains, making its chief impression on the alimentary canal, acting upon the serous and mucus tissues, draining the system in watery discharges; hence, to a certain extent, it is useful in dropsical affections. Its action is similar to the mandrake.

PROP., &c.—Cathartic, uritant, emetic, anthelmintic. Not indicated when there is much irritation or inflammation of the stomach and bowels. It may be used for constipation, after which costiveness is not very likely to follow. For cerebral inflammation or dropsy of the head, its revulsive impression on the alimentary canal makes its use advisable. For this reason, and because of its impression on the serous tissue, it is useful in dropsical conditions of the abdomen and extremities. Because of its great power to produce large watery discharges from the bowels, it becomes a vermifuge, for worms can hardly resist the force of the current. Its action in the bowels and pelvic cavity imparts its stimulating and secreting effects on the uterus, aiding the catamenial flow.

Pulvis Jalapa—Powdered Root, Grs. x. to xxx.

Tinctura Jalapa—Bruised Root, ℥iv; Alcohol, Oi. *Dose*—fl℥i to ii. Seldom used.

Extractum Jalapa—Coarse powdered Root, lb. i; Alcohol, Oiv. Digest ten days, and filter; then add two quarts of water; boil one half hour and strain. Reduce this decoction by boiling to one half pint; then add it to the tincture, and by water-bath reduce to the consistence of cream. *Dose*—Grs. iij to xii.

Jalapin—This preparation is a substitute for other preparations. *Dose*—Grs. ss to ii.

IPOMEA QUAMOCLIT.

NAT. ORD.—Convolvuli. SEX. SYST.—Pentandria Monogynia.

Common Names.—Cypress Vine, Red Jessamine.

DESCRIPTION.—Annual plant. Stem running and twining. Leaves pinnated, small, linear, numerous. Flowers solitary,

on long petioles, purplish red. Calyx five cleft. Corolla funnel-shape, five lobed, obtuse. Stigma globe-headed. Capsule two or three cells, many seeds.

History.—This delicate twining plant is a native of Florida, Mexico, and the West Indies. It is cultivated in many gardens of the Middle States, running upon fences and arbors, and its delicate deep green leaves and beautiful flowers make it an admirable ornament.

Under this genus may be found the *I. jalapa*, or Jalap of Mexico; the *I. orbicularis*, having large edible seeds, and the *I. macrorhiza*, having very large roots, which are extensively eaten by the Indians.

PROP., &c.—Purgative and stimulant. The root has been used to some extent, and yet its peculiar action on the alimentary canal is not known. The powder may be used as cephalic snuff, to excite secretions in the frontal sinuses and nose.

IRIS VERSICOLA.

NAT. ORD.—Irides. SEX. SYST.—Triandria Monogynia.

Common Names.—Blue Flag, Flag Lily.

DESCRIPTION.—Its rhizoma or root grows horizontal, fleshy, with joints one half to one inch apart, from which start off innumerable fibres. Stem bearing the flowers, erect, one to two feet high. Leaves radical, sword-shape, long. Flowers large, varying, blue and purple. Stigmas three. Stamens three. Capsule three celled. Seeds flat, numerous.

History.—The Blue Flag is found in most sections of the United States, in low, wet grounds, meadows, fields, and along the borders of streams. For its large, beautiful flowers, it is cultivated in many gardens, when its root grows much larger, and possesses less of its acrid volatile principle. Its leaves resemble the Acorus Calamus, Sweet Flag, so that when its flowers disappear it is difficult to distinguish one from the other; but on tasting the root of the Blue Flag, it will in a few minutes be understood by the severe acrid pungent impression on the tongue and fauces of the mouth, which lasts many hours. Several other species.

The root is officinal, and alcohol takes up its active properties. It contains mucilage, resin, resinoid, and a volatile acrid principle. Age impairs its active properties.

PROP., &c.—This plant possesses alterative, diuretic, stimulant, sialagogue, and cathartic properties. In whatever form given, its action is slow, except as a sialagogue, when, owing to its special effects on the glandular system, especially of the mouth, producing salivation in some cases. The powder is a good form, unless over-heated in drying; and it should be kept in closely-stopped bottles, excluded from light. In decoction, it loses its volatile principle by the boiling water. The tincture is advisable, for either this or the powder can well be added to simple or compound syrups.

As with a large majority of indigenous agents, we are indebted to the reformed or Eclectic profession for our knowledge of the virtues of this plant. When the secretions of the liver have become lessened with induration, hepatitis and jaundice, its action is beneficial. It is employed to remove mercurial and syphilitic diseases, for scrofula, rheumatism, anasarca, thickening or enlargement of the spleen; and some recommend it for tape-worm, gonorrhea, dysmenorrhea and leucorrhea. It is *one* of the valuable *alteratives* peculiar to the Eclectic profession. Should it act as a sialagogue, it will be *salivation* only, without separating the gums from the teeth,

destroying the tissues, or sloughing, which so often follows the use of mercury.

Pulvis Iris—The root, without its fibres, carefully dried and powdered. *Dose*—Grs. v to xx, in simple or compound syrup.

Tinctura Iris—Bruised root, dry, ℥iss. Alcohol, Oi. *Dose*—Gtts. v to fl℥i, in syrup.

The *Irisin* or concentrated form (if good) is very convenient. *Dose*—Grs. iii.

JEFFERSONIA DIPHYLLA.

NAT. ORD.—Ranunculacea. SEX. SYST.—Octandria Monogynia.

Common Name.—Twin-leaf.

DESCRIPTION.—Root large, perennial, yellow, multiform. Scapes erect, naked, thicker above, bearing one single flower,

very much like that of Sanguinaria, white, inodorous. Petals oblong, lanceolate, obtuse, longer than the calyx. Anthers yellow. Folioles pendulous, entire, oblique, acute. Scape subclavate; stigma four lobed. Capsule angular behind. Pod coriaceous, covered with a lid like a helmet.

History.—A very singular plant, mistaken by Linneus for a *Podophyllum*, and called *P. dyphyllum*, distinguished by Dr. Barton, who dedicated it to the philosopher, naturalist and statesman, Jefferson. He called it binata, a name applying to all the species. Michaux gave it the actual name. It has a few varieties such as 1. *Cespitosa*, 2. *Grandiflora*, 3. *Undulata*, 4. *Rosea*, &c. It is found from Virginia and Maryland to Ohio and Missouri, chiefly near streams and rivers; it appears to be unknown in Carolina, since Elliot has omitted it. By the singular leaves and seed vessels, and the fragrant flowers of *J. odorata*, smelling like *Narcissus jonquilla*, these plants deserve cultivation in gardens; they blossom early in April, and the flowers are very fugacious, lasting only a few days. The squirrels eat the seeds. The *J. odorata* is chiefly confined to the Western States, Ohio, Kentucky, &c., and the *J. lobata* to Carolina and Georgia. Their properties are alike.

PROP., &c.—Diuretic and alterative. It excites the secretions of the kidneys, relieving dropsical effusion and rheumatic affections, and recommended in scrofula and syphilitic diseases. The decoction has been most employed. Externally as a wash for sore eyes, ulcers and sore throat. The tincture may also be used. Not much employed by the profession.

Decoctum Jeffersonia—Root, bruised, ℥ii; Water, Oi. Boil a few minutes. *Dose*—fl℥i to ii.

JUGLANS CINEREA.

NAT. ORD.—Terebintacea. SEX. SYST.—Moncœcia Polyandria.

Common Names.—Butternut, White Walnut.

DESCRIPTION.—A tree. Leaves alternate. Leaflets numerous, opposite, oblong, lanceolate, serrate, downy, two or three inches long. Male and female flowers separate. Stamens numerous. Filaments short. Anthers two celled. Ovary one celled. Styles one or two, short. Fruit single or in clusters, of three to five. Capsules thick, tough. Nuts dark brown, hard, oblong. Fruit partly divided.

History.—The Butternut Tree is found in Canada, the Eastern and Northern range of States; seldom south of Philadelphia. In woods of good soil it reaches sixty feet in height. With farmers it is a favorite shade tree in pastures and meadows, where its branches spread out, attaining twenty to thirty feet.

There are two other species—the *J. nigra*, Black Walnut, which grows larger, with darker and thicker bark, larger

leaves and leaflets. Capsule larger, oval; nut larger, richer, and when its fruit is green contains a pleasant aroma. Some of the trees in fields and pastures of New Jersey have broad, expanded foliage, making a delightful shade, and in the fall of the year literally cover the ground with their large, blackish nuts, some trees yielding ten and twelve bushels, becoming an abundant article of luxury sold in the markets and stores. Seldom seen in the Northern States. The *J. paxinea* or Ash Walnut is occasionally noticed. The wood of all species used for furniture and other purposes.

PROP., &c.—Cathartic, anthelmintic, alterative, and mild astringent. The bark of the root is officinal. It is a gentle purgative, that should not be forgotten in those low, debilitated conditions which follow lingering fevers, either bilious, nervous or typhoid; and so in bilious dysentery, for its chief action is on the mucus coat, purging the bowels without loss of vitality, leaving its mild, astringent, and tonic effects to follow at the desirable time.

Its action is similar to rhubarb, and for which it may in almost all cases be employed as a substitute. It is recommended for derangement of the liver, costiveness, worms and dysentery. The decoction is sometimes used, but the extract and wine of butternut are altogether preferable.

Vinum Juglandis—Inner bark of the root, coarsely powdered, ℥is; Good Wine, Oi. Digest ten or twelve days and strain. *Dose*—fl℥i to iii.

Extractum Juglandis—Inner bark of the root, coarsely powdered, lbs. ii; Diluted Alcohol, cong. i. Digest fourteen days and filter; reduce by water-bath to the consistence of thick cream. *Dose*—Grs. ix. to xviii, in pills.

Juglandin—Resinoid and neutral principles. *Dose*—Grs. x to xv.

JUNCUS EFFUSUS.

NAT. ORD.—Junci. SEX. SYST.—Hexandria Monogynia.

Common Name.—Bullrushes.

DESCRIPTION.—(This and two other species, the *J. acutus* and *J. setaceus*, are without leaves.) The stem or scape, about the size of a pipe-stem, erect, ten to eighteen inches long, numerous, light green outside, spongy within, sheathed at the base. Flowers in compound panicles. Stamens three. Capsule three angled. Seed oblong.

History.—The Bullrush is found in most sections of this country, in wet, marshy situations. Often seen in bunches, or

like a bundle of small rods standing on end. They have been used for braiding into mats, baskets, and for seats of chairs. This genus derived its name from the Latin *jungo*, to join, tying and binding things together.

PROP., &c.—Cathartic and mild astringent. The roots and seeds may be used in decoction for dysentery and diarrhea.

JUNIPERUS COMMUNIS.

NAT. ORD.—Coneferea. SEX. SYST.—Dicœcia Monadelphia.

Common Name.—Juniper.

DESCRIPTION.—A small, shrubby branching tree. Leaves alternate, spreading, mucrunate, linear, small, shining above, glabrous beneath. Flowers small, axilary, male and female on separate trees. Fruit globular, the size of a pea; when ripe, bluish purple color.

History.—A native of this country, Europe and Asia. Plentiful in Canada, and found in the Northern and Eastern States. In Upper (West) Canada its fruit grows in profusion.

The *J. virginiana*, White Cedar, is also found in the Northern, Middle and Southern States, sometimes fifty feet high; a tree used for lumber in mechanical purposes. The *J. bermudiana*, Sea-side, Red Cedar, is found in Bermuda, the coasts of Florida and South Carolina. This is used in wares, buckets, tubs, and has a pleasant aromatic odor. The *J. sabina*, the Savin of this country, is a small, shrubby tree, ten to fifteen feet high, found in Canada, the Eastern and Northern States.

The cedars are evergreens, and the small species are valued for ornamental purposes, along fences, in pastures for shading. Some of these species have their varieties in botanical characters, which would make their description difficult and lengthy, but to aid in this particular, we quote from Rafinesque's account of the fruit:

J. communis.—Berries globose, pediculated, small, smooth, three seeded, bluish.

J. virginiana.—B. oval, globose, small, warty, one or two seeded, glaucous, bluish.

J. bermudiana.—B. globose, warty, purplish.

J. sabina.—Four kinds or species at least: *Excelsa*, or arboreous; berries blackish, one seeded, globular; found in Asia and Oregon, in the United States. *Rupestris*, or Rocky Savin of Canada; berries blue, ovoid, two seeded (dark blue). *Cupressiforme* of Europe, with berries globular, three celled.

PROP., &c.—The leaves, berries and oil are employed, possessing volatile oil, resin, sugar, wax, and gum. Stimulant, diuretic, carminative, with some emmenagogue powers. The oil is stimulant and rubefacient. A docoction of the berries and leaves is often employed for suppression of urine, catarrh of the bladder, nephritis, gonorrhea, leucorrhea, and suppressed menstruation. The oil is the most available in practice, and which gives the active diuretic properties to Holland Gin.

Oleum Juniperi.—Dose— Gtts. v to x, on sugar.

Savin (J. sabina).—Properties—Stimulant, diuretic, and emmenagogue. The leaves, berries, and oil employed. Much has been written upon the physiological effects of the European Savin, which is supposed to be more powerful than our own production. Several cases are related where it has produced death by taking large doses of the infusion to produce abortion. The late Dr. Dewes, of Philadelphia, mentions a case of this kind. Pareira says: "According to my own observation, it is the most certain and powerful emmenagogue of the whole Materia Medica." It is not indicated when there is irritation or inflammation of the uterus.

By those who use the leaves of the Savin, it should be remembered that it is liable not only to deterioration by the loss of its volatile principle, but it is sometimes adulterated with other species of the Juniperus; therefore the oil is the most certain, as well as the most convenient form of its use. I have several times employed the infusion, and without any apparent impression of its action. Various opinions exist in this country as to its reliability.

Pulvis Sabina—Powdered Leaves, Grs. v to xv.

Oleum Sabina—Submit the fresh leaves to the ordinary process of distillation. *Dose*—Gtts. ii to vi, in mucilage or on sugar.

Ceratum Sabina—Savin Ointment—Fresh clean Leaves, lb. i; Lard, lbs. ii; Wax, lb. ss. Boil the leaves in the lard ten or fifteen minutes, and strain; to this add the wax, and submit to a boiling heat. This, when applied to the abraded surface, keeps up irritation, and often used as a dressing to blisters.

KALMIA LATIFOLIA.

NAT. ORD.—Rhododendra. SEX. SYST.—Decandria Monogynia.

Common Names.—Sheep Laurel, Mountain Laurel.

DESCRIPTION.—A shrub, four to ten feet high. Leaves evergreen, thick, coriacious, very smooth, lucid above, pale beneath, entire, acute at both ends, on short petioles, and growing at the end of the branches in clusters. Flowers very handsome, in terminal, compound corymbs, pubescent, viscid, with small, subulate tracteas. Flowers large, corolla of a rose-color, tube short, limbus, like a cup, with five short, acute lobes; ten long staminas, lodging their anthers in the ten cavities of the corolla. Calyx five parted. Corolla five lobed, with ten cavities. Anthers lodged in the cavities. Stamens ten. Pistil one. Style one. Capsule five cells. Seeds many.

History.—A beautiful genus of evergreen shrubs, peculiar to North America. Dedicated to Kalm, a Swedish traveller and botanist. Several species belong to it, all highly valued in gardens as ornamental. This is the largest and most splendid. Their vernal blossoms are beautiful, but scentless. The *K. Latifolia* grows all over the mountains and hills of the United States.

It has been by many deemed poisonous to men and cattle. It is certainly deleterious to horses, calves, and sheep feeding on it in winter, because indigestible to them. Sheep, if not soon relieved by oil, will swell and die; yet deer and goats feed on the leaves, and can digest them. The American partridge, feeding on the buds in the winter, is said by some to become deleterious as food. Bees collect honey on the flowers. The wood is soft when fresh, but becomes hard and dense, nearly similar to box; much used for tools, instruments, spoons, and smoking-pipes. The Kalmia grows very slow, and lives a century or more.

The other species of this genus having equal properties, ought to be slightly mentioned.

K. angustifolia, or Sheep Laurel. Leaves ternate, oblong, obtuse, rusty beneath.

K. glauca, or Swamp Laurel. Leaves opposite, oblong, glaucous beneath.

K. hirsuta. Hairy, leaves opposite, alternate, lanceolate. Flowers axilary, solitary. Southern States.

PROP., &c.—Narcotic, alterative, errhine. In large doses, poisonous. Rafinesque infers that Indians may have used it as a means of suicide. Its unfavorable symptoms are dimness of

vision, vertigo, loss of muscular power. When these symptoms become dangerous, emetics and stimulants should be administered.

Some of our profession praise this article for its control over syphilitic diseases. It has been employed in inflammatory diseases and hypertrophy, to lessen the heart's action; also for herpes, itch, and other cutaneous diseases. It should be used with caution. The decoction may be employed, but the tincture is probably the best form.

Pulvis Kalmia—Powdered Leaves, Grs. v to xx.

Tinctura Kalmia—Leaves bruised, ℥ii; Alcohol, Oi. Digest fourteen days, and filter. *Dose*—Gtts. x to xxv.

KRAMERIA TRIANDRIA.

NAT. ORD.—Krameriacea. SEX. SYST.—Tetrandria Monogynia.

Common Name.—Rhatany.

DESCRIPTION.—Root long and branching, with reddish bark. Stem shrubby, branched, procumbent. Leaves oblong, ovate, acute, silky. Flowers axilary, solitary. Sepals four, spreading. Petals five. Stamens three. Fruit globular. Cell one. Seed one.

History.—The Rhatany is a small shrub that is found in South America; chiefly obtained in the Province of Peru. The bark of the root, which is a dark reddish color, is collected for the markets. Ruiz brought it into medical notice in 1779, by observing the ladies of Peru using it to cleanse their teeth and harden their gums. Cold water and alcohol are employed to extract its active properties from the root. It contains tannin, gallic acid, gum, extractive and coloring matter, with a small portion of what has been termed krameric acid. It is an active astringent, owing to the tannin, and its krameric acid is deemed a styptic.

It is the extract that is principally found in our markets, although the infusion or syrup may be used. This extract is brittle, usually in small pieces of a reddish, glistening appearance. Frequently used in the adulteration and making of cheap wines.

PROP., &c.—An active astringent and mild tonic. It is indicated in hemorrhages of the lungs, stomach, gums, and nose. For unnatural secretions of the mucous membrane, as dysentery, diarrhea, leucorrhea, and also the extract in powder sprinkled upon indolent sores and ulcers.

Infusum Krameria—Bark of Root, ℥i; Boiling Water, Oi. *Dose*—fl℥i to ii.

Extractum Krameria—Dose—Grs. x to ℈i.

Syrupus Krameria—Extract Rhatany, ℥ii; dissolve in Water Oi; add Sugar lb. iss, and by gentle heat make into a syrup. *Dose*—fl℥i to iij. A pleasant form for use.

LACTUCA ELONGATA.

NAT. ORD.—Cichoracea. SEX. SYST. Syngenesia Polygamia.

Common Name.—Wild Lettuce.

DESCRIPTION.—Stem three to six feet high, hollow, one or two branches. Leaves few, the lower broader, upper long, lanceolate, partly clasping the stem, winged, pale green color. Flowers axilary, on long peduncles, yellowish and purplish color.

History.—The Wild Lettuce is found in most sections of the United States, in damp, shady grounds, in and along the borders of woods.

PROP., &c.—The Lactuca Elongata has occasionally been employed in the form of an extract, as a substitute for the garden Lettuce. It possesses anodyne, diuretic, and diaphoretic properties. Its preparations, indications, and doses, are generally classed with, though probably not so reliable as the garden Lettuce.

LACTUCA SATIVA.

NAT. ORD.—Cichoracea. SEX. SYST.—Syngenesia Polygamia.

Common Name.—Garden Lettuce.

DESCRIPTION.—Annual. Flower-stems one or two feet high, branched at the top. Leaves radical, numerous, broad, rounded, large, undulating, narrow at the base. Flowers yellowish, small, irregular, corymb form.

History.—The Lettuce is cultivated in most parts of the world for table use. It was known to the ancient Romans and Greeks for food and medicine. Hippocrates understood its use to allay pain and to induce sleep. Fabulous history infers that Venus threw herself upon a bed of Lettuce to suppress her grief and desires on the death of Adonis.

It is found in most all gardens of our country, and its narcotic effects are often noticed after eating it, produced by the lactucarium, the milky juice it contains. There are several varieties of this species, greatly improved by cultivation. Some of them very simple, of a light green color; others in very large heads, tinged with purple.

The *L. elongata*, or Wild Lettuce, is found in many parts of the country, along road-sides, fences, and in fields. It has a stem two to four feet high, bearing small yellowish flowers. The *L. hirsuta*, the *L. virosa*, and some other species, are found in this country.

Lactucarium, or *Lettuce Opium*, is best obtained by making lateral incisions in the roots and flower-stems, carefully scraping off the white milky juice that exudes, then by water-bath reducing it to a proper consistence, or to a dry extract, having a brown color. This contains a bitter extract, resin, wax, and principle not clearly defined.

PROP., &c.—Anodyne, diuretic, and diaphoretic.

The *Lactucarium* is mild and sometimes uncertain in its action. It is indicated in nervous fevers, in hysteria and spasmodic affections. A most favorable consideration in its use is, that it does not stimulate the vascular and nervous systems, so that it does not derange the functions of the brain in febrile and pulmonary diseases. It is employed for uterine affections, and to allay seminal discharges.

Lactucarium.—Dose—Grs. iii to x.

Tinctura Lactucarii—Lactucarium, ℥ii; Alcohol, Oi. Digest a few days and filter. *Dose*—fl℥ss to i.

Extractum Lactuca. Fresh roots, leaves and stems bruised in a clean mortar, with a little water; strain or press out the juice, and reduce by gentle heat to the consistence of cream. Seldom used. *Dose*—Grs. v to x.

LAMIUM AMPLEXICAULE.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermium.

Common Names.—Dead Nettle, Hen-bit.

DESCRIPTION.—Stem square, pubescent. Leaves pubescent, ovate, cordate, serrate; the radical leaves petioled, broad at base; upper ones sessile, acute at base and apex. Flowers purple color, in axilary whorls.

History.—An indigenous plant of six to ten inches high; common in this country; found in fields and along fences.

PROP., &c.—Stimulant, sudorific and laxative.

The decoction or infusion may be used in fevers; diaphoretic and mild laxative powers. It has been in this way employed for gout and rheumatism. The powdered leaves can be used as a cephalic snuff for catarrh and polypus of the nose.

LANTANA CAMARA.

NAT. ORD.—Vitices. SEX. SYST.—Didynamia Angiospermia.

Common Names.—Sage Tree, Cailleau.

DESCRIPTION.—The stem is woody, rough, square. Leaves opposite, ovate, serrate, pubescent on the veins. Flowers numerous, axilary, bright yellow color. Berries globular, hanging, small.

History.—This small shrub is found in Georgia, but most plentiful in Louisiana, where it has been employed as a substitute for the imported teas. It grows three or four feet high. The leaves officinal.

PROP., &c.—Diaphoretic and sedative. Employed in febrile diseases to induce perspiration and to allay nervous excitement, in the form of infusion or decoction.

LAURUS SASSAFRAS.

NAT. ORD.—Lauri. SEX. SYST.—Enneandria Monogynia.

Common Name.—Sassafras Tree.

DESCRIPTION.—A tree from fifteen to thirty feet high. The large trees covered with rough grayish bark. Leaves vary in shape, ovate, entire, lobed, pubescent, deciduous. Flowers appear as soon as the leaves, yellowish green, in umbil form. Calyx six, parted. Stamens nine sterile, and six pentile. Fruit oval, blue when ripe.

History.—The Lauras Sassafras inhabits most of our States, yet most abundant in New Jersey and other Middle States. It prefers dry soil, and is found along skirts of woods, fences and fields. The flowers and leaves have a spicy odor; the whole tree, particularly the bark of the roots, contain a large amount of volatile oil. The Sassafras Oil is quite an item in our markets, which is obtained by chopping up the roots of the tree and submitting them to the common distilling process.

Among the several species of this genus are found the *L. carolinensis*, the *L. benzoin*, spice bush, fever bush; the *L. camphora*, camphor tree, from Japan, and the *L. alba*, white sassafras.

PROP., &c.—The Sassafras possesses alterative, stimulant, diaphoretic, with slight diuretic properties. Its greatest value may be noticed in full plethoric patients afflicted with rheumatism and gout. It changes the condition of the blood, its quality and quantity, inducing depletion, paleness and debility. Especially, for these reasons, it is advisable for such as are fleshy, full habit, with a disposition to congestion of the lungs, liver and brain, induced by high living, daily drams, &c. Its active use for a few days will make favorable changes in cases of this kind. It has been recommended for syphilis, scrofula, cutaneous diseases, &c. The decoction or infusion is a frequent form of its use, although in this process its volatile oil is thrown off, yet other principles, perhaps neutral, tannin and resin are obtained, which are more effectual than the oil.

The powdered bark of the root is stimulating, detergent and discutient, when applied to indolent sores and ulcers. To break down the tissues and hasten suppuration in tumors, abcesses, swelled or *gathering* breasts of females, for biles, carbuncles or felons, it is equal to any other article; in these cases it is advisable to combine it with ground flaxseed. The decoction should be employed as a wash to arrest unwholsome discharges from ulcers, &c., and also per injection for leucor-

rhea and unhealthy discharges from the uterus. An infusion of the pith or madullary of sassafras has long been known as a soothing application to sore eyes.

The oil may be used in some of the above indications in emulsions, or dropped on sugar for painful menstruation and urinary affections. It is employed externally as a counter-irritant and rubefacient for rheumatism, sprains and swellings, or combined in liniments for such purposes.

Oleum Sassafras.—Dose—Gtts. ii to x.

Decoctum Sassafras.—Coarse powdered bark of the root, ℥ii; Water, Oii. Boil five or ten minutes and strain. *Dose*—A wine-glassful three or four times daily.

LAVANDULA VERA.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Name.—Lavender.

DESCRIPTION.—Leaves lanceolate, oblong, entire, revolute at the edges, and hoary when young. Flowers lilac color, in whorls of six to ten. Corolla cleft, two lips, throat dilated. Stamens didynamous. Filaments smooth. Anthers reniform. Fruit one celled.

History.—This little bush, of two or three feet in height, is supposed to be a native of Europe, from where it has been introduced into this country and cultivated in our gardens. When in blossom, the tops gathered should be carefully dried and kept dry. It has a pleasant aromatic odor, owing to the volatile oil that it yields. It received its name from the Latin *lavo*, to wash and sprinkle with its distilled waters.

PROP., &c.—Stimulant, diaphoretic and aromatic. The infusion is sometimes used for colic, pains and indigestion. The oil is used in a few drops for similar purposes, but more in perfumery than any other way. The tincture is employed to disguise the taste of other medicines.

LEDUM LATIFOLIUM.

NAT. ORD.—Rhododendra. SEX. SYST.—Decandria Monogynia.

Common Name.—Labrador Tea.

DESCRIPTION.—A shrub. Leaves oblong, linear, folded in at the margin. Flowers white, in corymb form. Corolla five. Stamens five.

History.—This small evergreen shrub is found in damp ground and swamps, in the Northern and Western States.

The *L. palustre* or Marsh Tea grows in Canada and the Eastern States, in appearance similar to the first. Rafinesque refers to the leaves of these shrubs as possessing a large number of chemical properties, imparting a strong, pleasant and fragrant taste, making them equal to the Chinese tea, which, if true, should be better understood than at present.

PROP., &c.—Stimulant and narcotic. Recommended for irritation of the throat, bronchial vessels, pulmonary affections, febrile diseases, and cutaneous eruptions. The decoction has been used.

LEONORUS CARDIACA.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Names.—Motherwort, Lion's Tail.

DESCRIPTION.—The lower leaves are ovate, three lobed, toothed, upper ones entire. Stem two to three feet high, angular, channeled, downy, purplish. Flowers purple, numerous, axilary whorls. Corolla divided in two lips, the upper covered with white hairs, the lower one variegated and smooth.

History.—The Motherwort is found in most sections of the United States, in partially uncultivated fields. It is found in other divisions of the world, for it derived its name from the Greek *leon*, lion; *oura*, tail, because its bushy leaves and tuft of yellow flowers was supposed to resemble the lion's tail. Its leaves and flowers are officinal.

PROP., &c.—Emmenagogue, nervine. The infusion of the flowers and leaves is often resorted to in domestic practice for uterine difficulties, suppressed and troublesome menstruation. It allays the nervous spasms of hysteria, quieting and strengthening to the whole system. By some it has been employed in typhoid fevers, delirium, &c. Both water and alcohol are used to extract its properties. The hydro-alcoholic extract is perhaps the best mode of preparation and use.

LEONTODON TARAXACUM.

NAT. ORD.—Cichoracea. SEX. SYST.—Syngenesia Polygamia.

Common Name.—Dandelion.

DESCRIPTION.—A perennial plant. Leaves radical, smooth, oblong, acute, deeply cut or notched, unequal. Stems, or naked scape, erect, six to eighteen inches high, cylindrical, smooth, milky when broken, bearing each one yellow blossom. Flowers golden yellow color.

History.—This well known plant is found in America, Europe and Asia. It blossoms from April to October, and found on most all farms of our country. The leaves were compared to lion's teeth by the Greeks and Romans.

Rafinesque makes several varieties of the *L. taraxacum.* The *L. palustre* is the second species of this plant, and known as the Marsh Dandelion. The juice of the plant has been analyzed by several chemists, and found to contain *taraxacin*, a bitter principle, with gum, resin, sugar, starch, and *inulin.* The root is the officinal part, which should be collected late in the fall of the year.

PROP., &c.—Alterative, diuretic, aperient, tonic. There are no very marked impressions made by the use of the Dandelion, and, so far as the profession can testify, its reputation is greater than its merits demand. Its best application is found in hepatic and nephritic affections, and here its use should be continued some time before any good effects can be observed. It has been used for jaundice, enlargement of the spleen, dropsy, and cutaneous diseases.

The extract in pills is the best form for its use, although generally prepared in decoction, infusion, and compound syrup.

Extractum Inspisati Taraxicum—Take of clean, fresh Roots and Leaves any quantity, thoroughly bruise them in a mortar, and strain through a coarse piece of linen, or put the mass in a small screw press. This should be put in a flat earthen vessel, and near a fire allowed to evaporate slowly. *Dose*—Grs. vi to xii.

LEPIDIUM VIRGINICUM.

NAT. ORD.—Crucifera. SEX. SYST.—Tetradynamia Siliculosa.

Common Name.—Peppercress.

DESCRIPTION.—Stem branching, herbaceous, glabrous. Leaves sessile, ciliate, notched, alternate. Flowers white, in terminal racemes. Sepals lanceolate. Pods in silicle form.

History.—This plant is common through the country, along roads, fences, in fields, twelve to eighteen inches high, flowering from April to July. Sometimes called *wild* Peppercress. The *L. sativum* sometimes cultivated.

PROP., &c.—The chewed leaves are somewhat pungent, and possess diuretic and alterative properties. It is considered an anti-scorbutic agent, and used for scrofula, dropsy, gravel, and asthma.

LEPTANDRA VIRGINICA.

NAT. ORD.—Scrophularia. SEX. SYST.—Diandria Monogynia.

Common Names.—Leptandra, Black Root, Culver's Root.

DESCRIPTION.—Root perennial, large, black, with many long fibres. Stem fifteen to twenty inches high, simple, erect, smooth, round. Leaves whorled by three, sessile, smooth, longer than the intermodes below, shorter above. Flowers in a handsome single, terminal spike, three to four inches long, purplish, rachis angular, bearing crowded whorls of flowers, separated towards the base. Calyx with five equal divisions, oval, acuminate, somewhat ciliate. Corolla tubular, cylindric, limbus, with four oval, acute divisions, nearly equal. Two filaments, twice as long as the corolla. Anthers fulvous, oblong, obtuse, sulcate. Style as long as the filaments. Stigma simple, acute.

History.—This beautiful plant is found in most all sections of this country, though more plentiful in the Western States. There are two other distinct species of this genus. The *L. alba* has a stem angular and smooth. Leaves vercillated, commonly by five, semi-petiolate, lanceolate, acuminate, unequally and mucronately serrate. Spikes dense, cylindrical. Flowers white. In this are found several varieties. The *L. villosa*—Stem round, branched, hairy, and brown. Leaves oval, lanceolate, sub-petiolate, sub-serrate, acuminate, hairy, and brownish beneath; lower whorls by five, upper by three or four, and sessile. Spike cylindrical, pubescent, base lax, bracts subulate. Calyx lanceolate, unequal. Flowers white.

The root of Leptandra, which is horizontal, thick, woody, irregular, dark brown color, with many fibres, is the officinal part of the plant. It yields its properties to boiling water and alcohol. It contains gum, tannin, extractive matter, and resin.

Much praise has been bestowed on the virtues of this article. Drs. Bowman, Brinton, Culver, and others, who chiefly relied upon the vegetable agents in cure of disease, gave it celebrity in the reform profession some forty years ago. Being far in the interior, necessity, as well as the advantages derived from its use, induced them to employ it as a substitute for calomel and other cathartic and alterative agents.

PROP., &c.—Cathartic and alterative. In hepatic diseases, it is deemed equal to any other in the Materia Medica. For bilious, nervous, and typhoid fevers; it removes the unhealthy and offensive accumulation of the intestines without inducing debility, making it one of the most desirable of cathartics. In moderate doses, its action is gentle, with little or no pain, rather imparting tone and strength than weakening the digestive organs; hence its favorable action in dyspepsia, attended with constipation. It is recommended for dysentery, intermittent fever, dropsy, rheumatism, and bronchitis.

It should be remembered that the fresh root is too acrid and drastic for use, liable to produce pain, dizziness, and vertigo. Formerly the infusion and decoction were used, but the extract and *leptandrin* are now principally employed by the profession. In the crude forms, it is bitter and rather nauseous.

Pulvis Leptandra—Dried Root, powdered. *Dose*—Grs. xx to xxx.

Decoctum Leptandra—Bruised Root, ℥i; Water, Oi. Boil ten minutes. *Dose*—fl℥ii to℥i, repeated.

Extractum Leptandra—Root, coarsely powdered, lb. i; Alcohol, Oii. Digest ten days, and filter. Evaporate the alcohol by water-bath to proper consistence. *Dose*—Grs. ii to v.

Leptandrin—The resin, resinoid, alkaloid, and neutral principles. *Dose*—Grs. i to iij.

LIATRIS SPICATA.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Polygamia.

Common Names.—Button Snake-root, Gay-feather, Rattlesnake Master.

DESCRIPTION.—Its root perennial, tuberous. Stem erect, simple, glabrous, three to four feet high. Leaves linear, lanceolate, acute, dotted. Flowers purple, terminal spikes, bracteal leaves. Involucre a leaf-like calyx, oblong, imbricated, with scales. Achenia pubescent. Pappus colored. Seeds hairy, furrowed.

History.—This attractive plant is found in many parts of the country, often in dry fields and barren places. It flowers in August and September. The roots are tuberous, and impart a bitterish, pungent, spicy taste and smell, possessing a balsamic principle similar to Turpentine and Juniper. Alcohol takes up its active properties, and yields a portion to boiling water. This genus has two or three species—the *L. scariosa* and *L. squarrosa*, similar in appearance and properties to the Spicata.

PROP., &c.—Diuretic, stimulant, diaphoretic, tonic, emmenagoge. Further investigation will probably prove the Liatris to be a valuable medical agent. Now it is reputed useful in urinary difficulties, exciting the secretions of the kidneys, relieving stranguary, gravel, and dropsy. For these affections, the decoction or infusion is drank in large quantities.

One of its common names indicates its power to counteract the poison of the rattlesnake. In such cases, large draughts of the decoctoin, with its application to the injured part, is recommended. We find many articles in the traditions of our country, nearly all derived from Indians, which probably are of but little value to arrest this fatal poison.

The Button Snake-root is further rocommended for gonorrhea, croup, hives, sore throat, scrofula, and for uterine pains.

LIGUSTRUM VULGARE.

NAT. ORD.—Jesminea. SEX. SYST.—Diandria Monogynia.

Common Names.—Privet, Prim.

DESCRIPTION.—The stem is woody, smooth, five to six feet high. Leaves obovate, ovate, smooth, opposite. Flowers white, numerous, crowded, panicled. Calyx four toothed. Corolla funnel-shape. Stamens two. Anthers large. Style short. Berries black, two celled.

History.—A small shrub of the Northern and Eastern States, found in woods, along fences, and sometimes cultivated along the borders of gardens.

PROP., &c.—The leaves and flowers are medicinal. Astrin gent and detergent. The decoction is employed for diarrhea sore mouth and throat, and as a wash for indolent sores. The bark of the root may be used as the leaves. It contains resin, tannin, and a bitter principle. Not thoroughly understood by the profession.

LILACA VULGARIS.

NAT. ORD.—Jesminea. SEX. SYST..—Diandria Monogynia.

Common Name.—Lilac.

DESCRIPTION.—A shrub or bush. Leaves alternate, broad, acute, cordate, veined, deep green color. Flowers blue, in dense panicles. Corolla four parted, open. Capsule two celled.

History.—The Lilac bushes are cultivated in gardens as ornaments, and for the delightful fragrance of the flowers. This is the *syringa* of Linneus and other botanists. It flourishes best in New York, New Jersey, and Pennsylvania. In the symbolic language of flowers, it is designated as the *first love.* We occasionally see the *L. alba*, or white Lilac, similar in growth and perfume, Supposed to be naturalized in this country.

PROP., &c.—Tonic and anti-periodic. The infusion of the bark is bitter, and may be used as a tonic and anti-periodic in intermittent fevers. The wood contains a balsamic principle.

LILIUM CANDIDUM.

NAT. ORD.—Liliacea. SEX. SYST.—Hexandria Monogynia.

Common Name.—White Lily.

DESCRIPTION.—Root bulbous. Stem herbaceous, two to three feet high. Leaves lanceolate, alternate, tapering at the base. Flowers large, white, bell-form, glabrous within.

History—The White Lily is a naturalized plant, and for its beauty and perfume, cultivated in many gardens. We have several native species—the *L. Canadense*, Nodding Lily; *L. catesbaci*, Southern Lily; the *L. Carolinianum* (Southern) and some few others. The whole tribe presents beautiful flowers.

PROP., &c.—The roots may be eaten when roasted, and sometimes applied as poultices for biles and carbuncles. It is demulcent, mucilaginous, and slight astringent. The flowers impart their odor to boiling lard or cream, and in this way a pleasant ointment is made for sore nipples and excoriated surfaces. If exposed to the air, the volatile principle soon escapes.

LINARIA VULGARE.

NAT. ORD.—Thymelea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Toad Flax.

DESCRIPTION.—Stem erect, branching, herbaceous. Leaves numerous, narrow, linear. Flowers large, yellow, in terminal spikes.

History.—This plant is supposed to have been introduced from Europe. It is found in the Northern and Middle States, along roads and fences, flowering in July and August.

PROP., &c.—Emmenagogue, purgative, discutient, diuretic and vermifuge. Although seldom used, it has been employed for jaundice, dropsy, sore eyes, worms, and cutaneous eruptions. Its modes of use, infusion and ointment. The infusion has been bnown to produce powerful uterine contraction in cases of retained placenta, &c. Little used by the profession, and deserves attention.

LINUM USITATISSIMUM.

NAT. ORD.—Caryophilla. SEX. SYST.—Pentandria Pentagynia.

Common Name.—Common Flax.

DESCRIPTION.—Annual plant. Stems erect, slender, branching near the top. Leaves alternate, lanceolate, linear, sessile, smooth. Flowers blue, on long peduncles, in corymbs. Sepals acuminate, ovate. Petals five, blue, large, deciduous. Capsule larger than a pea, full of seeds.

History.—This species of the flax has been naturalized in this country from Europe, and found in all divisions of the world. It was known to the ancients in the earliest ages for the making of clothing. For the last several centuries it was a most important article in agriculture and manufacturing, until about 1790, when the cotton plant began to displace its use and importance. To some extent it is yet cultivated for making linen, as well as the tow obtained from its dressing, that is highly valued for the caulking of ships, packing, &c.

The *L. virginianum*, or Wild Flax, is a native of this country, found in the Western States, and used medicinally by the Indians. Another wild species is the *L. perenne*, found in Canada; also the *L. rigidum*, found in Missouri.

Besides the great value of the flax which is obtained by separating the bark or outer coating from the stems of this plant, it also produces the flaxseed, from which is obtained the linseed oil, extensively used in painting.

PROP., &c.—The flaxseed is medicinal. Its outer surface is covered with soft mucilage, and the white inner portion contains a fixed oil. The infusion of the seeds gives a mucilage, which is so highly valued in affections of the throat, stomach and intestines. It is emollient, demulcent, shielding, soothing, healing, nourishing. Its use is well understood for inflammation of the stomach and kidneys; for dysentery, gonorrhea and leuchorrhea. Frequently used for injection.

The ground flaxseed is one of the most available applications in poultices for abcesses, carbuncles, biles, felons and tumors, especially to hasten the formation of puss. To lessen inflammation in these cases, the ground slippery elm should be added. To aid in breaking down the tissues and produce suppuration and sloughing, ground sassafras bark should be mixed with the flaxseed.

The flaxseed oil is cathartic, though seldom used in this way. Sometimes applied to burns, sores, &c., for ointments, in combination with other articles.

Infusum Linum.—Flaxseed, ℥ss; Water, Oi. Drink freely. Sugar and lemon juice may be added, or some of the aromatics, essence of cinnamon or peppermint, as seems to be indicated.

LIQUIDAMBER STYRACIFLUA.

NAT. ORD.—Amentacea. SEX. SYST.—Monœcia Polyandria.

Common Name.—Sweet Gum.

DESCRIPTION.—A large tree, with dark gray furrowed bark. Leaves alternate, lobed, palmate. Flowers, those with stamens are conical shape, and those with pistils are globular; calyx one leafed. Styles two. Capsules two, one celled. Seeds many.

History.—The Sweet Gum Tree is large and beautiful; found in all parts of our country; from forty to eighty feet high. Its flowers and leaves have a fragrant odor. The southern trees of Mexico, Louisiana and Texas, yield a liquid juice, which has a pleasant balsamic odor and yellow color, and used as incense by the Mexicans.

PROP., &c.—In form of salve or ointment, applied for piles, ringworms, and other skin diseases. The infusion of the bark is employed for nervous diseases, and the leaves dried and used as tobacco for smoking. Its buds are used in the infusion for fevers, and said to cure effectually in two or three days.

LIRIODENDRON TULIPIFERA.

NAT. ORD.—Magnoliacea. SEX. SYST.—Polyandria Polygynia.

Common Names.—Tulip Tree, Yellow Poplar.

DESCRIPTION.—A large tree. Leaves large on long petioles, three lobed, the middle truncate, glabrous. Flowers greenish yellow, and orange color within. Calyx double, spreading. Corolla of six or more petals, variegated. Stamens numerous. Pistil large, conical, bearing dark colored stigmas.

History.—This majestic forest tree is remarkable for its size, foliage and beautiful flowers. When in full bloom it perfumes the air with its fragrance. The peculiar shape of its deep green leaves and large handsome flowers is very attractive to the eye. It is found growing throughout the country. Rafinesque makes two varieties of this genus—the *L. alba*, white wood, and *L. flava*, yellow wood. This genus does not belong to the poplars.

The bark of the tree is officinal, and yields its properties to water and alcohol. It contains resin, gum, bitter extract, and volatile principle. The earliest notice of the medical properties of Poplar bark (including this with the Poplars), we find in the work of the celebrated Dr. S. Thomson.

PROP., &c.—The bark of the Tulip tree is anti-periodic, tonic, stimulant, vermifuge, anodyne. By some it is asserted to be equal to the Cinchona barks for intermittent fever. It is among the best of tonics, and valuable in low conditions of the system, to give tone and strength to the alimentary canal, in diarrhea and indigestion. For derangement of the nervous system in fevers, and for hysteria, it is one of our most valuable agents. *Dose* of the powdered bark, Grs. x to xv.

Its volatile principle is lost either by decoction or infusion, to retain which, it may be prepared by displacement.

Extractum Fluidum. — Hydro-alcoholic. Bark, coarsely powdered, lb. i; Alcohol, Oiv. Digest ten days and filter. Evaporate this by water-bath to one half pint. Now place the bark in a displacement apparatus, and pass through two quarts of boiling water, repassing it two or three times, and set aside; then for several times pass one quart of cold water. Add these three quarts together and slowly boil to one half pint, and to this add the alcoholic fluid and boil in a water-bath for ten or fifteen minutes. *Dose*—Gtts. x to xx.

The infusion and decoction are generally employed, and to a good advantage.

LOBELIA INFLATA.

NAT. ORD.—Campanulacea. SEX. SYST.–Pentandria Monogynia.

Common Names.—Lobelia, Emetic Weed.

DESCRIPTION.—A biennial plant. Stem twelve to eighteen inches high, erect, ramose, flexuose, sub-angular, hirsute. Leaves alternate, oval, or oblong, acute, sessile, or semi-amplexicaule, unequally serrate or toothed, pubescent, racemes of flowers terminal, erect, foliose. Flowers remote, each nearly sessile and axilary to a bract, somewhat similar to the leaves, but smaller, the upper ones smallest; lower flowers pedunculated. Ovary swelled, oval, globose. Calyx with five unequal, subulate divisions. Corolla small, blue. Capsule crowned by the calyx, swelled, striated, two celled, full of very minute seeds.

History.— The Lobelia is an indigenous, biennial plant, and found in nearly all of our States. It grows in uncultivated fields, in pastures, and along the road-sides. It received its name in honor of M. de Lobel, a German botanist, who was probably the first to notice its botanical character; and Schoepf is said to have been the first who noticed its astringent (?) medical properties. It is also believed that the Indians had some knowledge of this plant, and used it to cleanse their stomachs and brighten their intellects before meeting in council.

The records prove beyond dispute that Dr. Samuel Thomson, author of the Thomsonian practice, and the best isolated system of medicine yet produced, is justly entitled to the praise of placing the Lobelia in the medical profession. If it

is possible that one medical plant is superior to another in importance, then this one stands at the head of the list, unrivalled by all.

Through a steady opposition and persecution from the Alopathic profession against Thomson and his adherents for more than forty years, this plant was steadily denounced in the popular schools of the country as a *fatal narcotic poison*. By reference to my notes, I find that in 1843 the then Professor of Materia Medica in Jefferson College, Philadelphia, noticed the Lobelia as a leading agent in Thomson's empirical practice, and a *poison* which should be avoided by every intelligent physician. In 1844, the same professor, after passing some sharp epithets relating to it, advised that it might, with proper caution, be used for asthma. The following year he recommended it as an emetic and anti-spasmodic. Now it is recognized in their text-books and schools as a valuable agent, yet without any reference to those who brought it into medical notice.

The important advantages derived from the use of the Lobelia are best understood by the Eclectic reform profession. Others are still too far veiled in prejudice. The proper time to collect this plant is when in full bloom. Its leaves, flowers, and seeds are officinal, although some authors speak of the root as equally efficient. When chewed, it imparts an unpleasant, nauseous, pungent taste in the mouth and throat, inducing a flow of saliva. When the seeds are fully ripened, they are separated from the pods or capsules, and known in market as *brown Lobelia*, and possess more volatile and fixed oil than the other parts of the plant. The green leaves, flowers, and small stems, are recognized in the shops as *green Lobelia*, and contain gum, resin, lobelin, lignin, salts of potassa and lime, and a neutral principle. There are several preparations.

The *volatile* oil is not separated for use.

The *fixed oil* can be obtained by bruising or grinding the seeds, and through linen forcing it out under the screw-press. *Dose*—Gtts. i to v, in warm sweetened water. This is a very efficient and convenient mode of administration. It may be first triturated with sugar, then added to the water.

The *extract* of the *brown* or *green*, or both combined, is frequently resorted to. *Dose*—Grs. i to v.

The *concentrated* principle, *lobelin*, has of late years been resorted to. *Dose*—Grs. ss to ii. But little in market.

The *infusion* of the green Lobelia, however, is decidedly the best mode of its administration, performing the desired office more prompt, and much easier than any of the above forms. Water will suspend such of its principles as are most efficient in therapeutical action.

Under the genus Lobelia, some botanists enumerate seven other species—the *L. amena*, *L. cardinalis*, *L. claytoniana*, *L. glandulosa*, *L. palida*, *L. puberula*, and *L. syphilitica*.

Lobelia Cardinalis has an erect, simple stem. Leaves ovate, lanceolate, serrate, tapering at the base. Flowers scarlet, red, on terminal racemes. Filaments red. Anthers blue.

This plant, with handsome scarlet flowers, is found in the Middle and Southern States, in damp places, fields, and borders of meadows. It grows two to three feet high, and flowers in August and September—called the Cardinal Flower. Anthelmintic, nervine. Seldom used.

Lobelia Syphilitica—Stem erect, hirsute, angled, somewhat glabrous at the base. Leaves oval, lanceolate, sessile, large, lower ones glabrous. Flowers blue, on leafy racemes. Calyx reflex margins. Corolla large.

This species is most plentiful in the woods of hilly, mountainous sections. It has a spike or raceme of large blue flowers, putting forth in September.

Its use is not well understood, and seldom employed. It possesses emetic, cathartic, diuretic, and alterative properties; has been employed for dropsy, rheumatism, dysentery, and diarrhea, gonorrhea and syphilis. The whole plant possesses medical properties. Powdered Root, Grs. v to xx. Powdered Leaves, Grs. x to xxx.

PROP., &c.—Emetic, anti-spasmodic, diaphoretic, alterative, revulsive, expectorant, anti-periodic, anodyne, and cathartic. For all violent attacks of disease, it is the most reliable emetic in our list of agents. Its first impressions are upon the nerves of the stomach, inducing relaxation of this organ, which is soon followed by re-action, contraction, and vomiting. In some cases, where there is much acidity of the stomach, its effects are more lingering, even prostrating, painful, and alarming, as I know by experience. For a time re-action fails, allowing its prostrating effects to produce these unpleasant effects. But all of our physicians understand that in such cases an alkali, carbonate of soda, saleratus, &c., are indicated. Indeed this agent may always be added at first, especially in summer seasons.

On sight, it should be employed for *all* fevers, of whatever grade or character, whether for the suckling infant or the old and infirm. To subdue Asiatic cholera, it is unsurpassed. To quiet the brain in delirium of any kind, or from any cause.

It may be resorted to for local congestions—the brain, lungs, stomach, intestines, liver, kidneys, bladder, and uterus. For some of these cases, many will doubt and fear; but reflect upon its physiological action. Through the arterial and nervous circulation, it produces general relaxation, terminating in the

capillary system, inducing perspiration, equalizing the blood circulation, thus relieving the congested organ, when, if desired, by giving sufficient doses, vomiting ensues without danger.

In all cases of epilepsy, I have met with decided success, relying chiefly upon emetics two and three times per week, and giving daily small doses, accompanied with other treatment.

For tedious and troublesome child-delivery, I esteem it among the best of remedies. Why? Because it relaxes the *whole* system, excites secretion and excretions, and reaction comes back just in time to aid the natural contractions of the uterus. To be sure this requires some boldness and authority. But don't you sometimes see, in difficult cases, that without any apparent cause, nausea and vomiting comes on, followed with profuse perspiration, general relaxation, when the uterus returns to its labor, and in one, two, or perhaps three or four efforts, the work of salivation is fully attained? Thus nature herself indicates the means which ought to be employed.

For hysteria, it is generally advisable to give the Lobelia, because it nauseates, prostrates, gives the patient some *realities* to think about, thus changing the current of thoughts, modifies the cerebral and nervous action, and, as the old writers would say, quiets the *archeus* of nature.

The Lobelia stands next to Sanguinaria for croup. These two agents, combined with Ipecac, are well understood by our profession—Dr. Beache's emetic powders. The Lobelia emetics are indicated in dyspepsia or indigestion. It is one of our most serviceable expectorants, especially in the early stages of pulmonary affections, either in syrup combination, or the infusion sweetened; and for whooping-cough, by vomiting every two or three days, it is seldom that any other medicine is indicated.

For asthma, we have the Old School for its use at least. It was through this distressing, wheezing, and suffocating disease they first yielded its admission down their rebellious throats. The dose was hard, but what better can they do? For this disease, it should first be carried to vomiting, then repeated in small doses.

As a cathartic, it only acts so when in large doses, it fails to produce vomiting.

Pulvis Lobelia—Powdered Leaves, ʒss to i, mixed in half a glass of warm sweetened water. Of the powdered Seeds, Grs. x to xx. These forms are convenient for emergencies.

Infusum Lobelia—The fresh dried Leaves and Pods, ʒss; Boiling Water, Oi. When cold, strain and give in four doses about ten minutes apart. The warm infusion of catnep,

ginger, &c., may be taken before and during the operation. When there is excess of acid in the stomach, a few grains of soda or saleratus should be added. This form is preferable to any other.

Tinctura Lobelia—Coarsely powdered Leaves and Pods, ℥ii; Alcohol, Oi. Digest ten days, and filter. *Dose*—fl℥i to ii, in warm sweetened water, and repeated every ten minutes until free emesis takes place. A valuable local and general relaxant, per enema.

Where any of these preparations are desired to produce diaphoresis, relaxant, or expectorant offices without vomiting, proportionate smaller doses should be given.

Syrupus Lobelia—Coarsely powdered Leaves and Pods, ℥iv; Water, Oii. Boil ten or fifteen minutes, and strain. To this decoction add three pounds of sugar, and gently simmer for a few minutes. While hot, a fl℥ of the essence of Peppermint, Cinnamon, &c., may be added to improve its taste. *Dose*—One to two or more teaspoonfuls, as indicated. This is the best form for children.

LONICERA HIRSUTA.

NAT. ORD.—Caprifolia. SEX. SYST.—Pentandria Monogynia.

Common Name.—Rough Woodbine.

DESCRIPTION.—Stem twining twenty or thirty feet on trees and objects near it. Leaves broad, abruptly acuminate. Flowers of spike whorls, large, hairy. Calyx five toothed. Corolla tubular, cleft. Stigmas globose. Berries two celled.

History.—The Woodbine grows spontaneously in woods, and found in the Middle and Eastern States. There are several other wild species found in different sections of the country. The *L. caprifolium*, Honeysuckle, and the *L. periclymenum*, Woodbine, are cultivated in gardens.

PROP., &c.—But little is known of the medical virtues of this genus. Some are found to be bitter, astringent, and mucilaginous, and have been used in syrup for sore throat and inflammation of the bronchial vessels.

LYCOPUS VIRGINICUS.

NAT. ORD.—Labiatea. SEX. SYST.—Diandria Monogynia.

Common Names.—Bugle-weed, Water Hoarhound, Betony.

DESCRIPTION.—Root perennial, creeping, and fibrous. Stem erect, commonly simple, somewhat rough, with four furrows and four obtuse angles. Leaves opposite, sessile, acuminate, or attenuated and entire at both ends, remote, serrate in the middle, broad, lanceolate, as long as the internodes, somewhat rough, covered with glandular dots beneath. Flowers sessile, in small axilary whorls, very small, two small subulate bracteas under each flower. Calyx with four ovate, lanceolate, and acute segments. Corolla white, tubular, with four small round lobes, upper larger and notched; two stamina, hardly exert, filiform. Style exert, four seeds, longer than the calyx, obovate, compressed, crenate at the top.

History.—This plant is found in most parts of the United States, in damp grounds, along the skirts of woods, fences, and meadows, twelve to fifteen inches high, flowering in July and August. Of this Rafinesque enumerates five varieties.

The genus Lycopus has several species—*L. vulgaris*, *L. uniflorus*, and *L. obtusifolius*. All the species are estival plants, blossoming in summer, and growing near water, ditches, creeks, swamps, &c. Although so similiar to mint, their properties are entirely different, not being at all stimulant nor heating. All the species have minute glandular dots under the leaves, affording the smell and a peculiar essential oil. To this oil, probably, the plants owe their active properties. It is easily soluble in hot or

boiling water. They contain also a little tannin, although they are scarcely astringent, yet Schoepf says they dye black with vitriol.

PROP., &c.—Tonic, sedative, and slightly astringent.

The Bugle-weed was highly esteemed by our early reformers, though of late years it is but little used. It seems well adapted in nervous conditions of the system, inflammation of the lungs, uterus and bladder; for hemorrhage, diabetes, diarrhea and dysentery, for its astringent and tonic action. By its sedative principle it is believed to lessen the heart's action, similar to Digitalis, and is employed for cardiac affections, and to allay febrile excitement. The warm infusion aids perspiration, equalizing the circulation.

It is employed to arrest bleeding from the stomach and lungs, for dyspepsia, and to aid expectoration. May be taken freely without producing any unfavorable symptoms. A valuable plant.

Infusum Lycopus.—Leaves and stems, ℥ii; boiling Water, Oii.

Lycopin.—Resinoid and neutral principles. *Dose*—Grs. i to ii.

LYSIMACHIA QUADRIFOLIA.

NAT. ORD.—Lysimachia. SEX. SYST.—Pentandria Monogynia.

Common Name.—Crosswort, Yellow Balm.

DESCRIPTION.—Stem erect, hairy. Leaves ovate, in whorls of four, nearly sessile. Flowers yellow, axilary. Peduncles short, supporting each one flower. Calyx pubescent, dotted. Stamens shorter than corolla, cohering at the base.

History.—This little plant is found in the Southern and Middle States, one to two feet high, bearing small delicate yellow flowers. In this genus there are several species, to some of which the name of *Loose-strife* is applied.

PROP., &c.—Expectorant, tonic and mild astringent. The infusion may be given for inflammatory fevers, affections of the chest, coughs and colds. In the South, used in domestic practice.

LYCOPODIUM COMPLANATUM.

NAT. ORD.—Filices. SEX. SYST.—Cryptogamia Filices.

Common Name.—Ground Pine.

DESCRIPTION.—The stem is creeping, trailing, with ends erect. Leaves partly two rowed, lanceolate spikes. Capsules roundish or kidney-form, two to four valved, opening elastically.

History.—The Ground Pine is found in woods of the Middle States, eight to ten feet in length, flowering in August. There are several other species. The *L. clavatum* and *L. sclago* have been used iu domestic practice.

PROP., &c.—Diuretic, cathartic, emmenagogue, and nervine. The infusion is useful in dropsy and urinary disorders, for gout, rheumatism, diarrhea, and suppressed menstruation, and under favorable circumstances, so as to produce perspiration. The strong decoction is applied externally for sores, ulcers, and cutaneous diseases.

Infusum Lpcopodium—Leaves, ℥i; Boiling Water, Oi.

LYTHRUM SALICARIA.

NAT. ORD.—Salicaria. SEX. SYST.—Icosandria Monogynia.

Common Names.—Willow-wort, Loose-strife.

DESCRIPTION.—The root is woody. Stem purplish, erect, leafy, downy, quadrangular. Leaves opposite, or in whorls, numerous in spikes. Calyx cylindrical, striated, downy, marginal teeth unequal. Petals six, waved. Stamens twelve, unequal.

History.—There are several species of the Lythrum, and this one is found in Canada and our Northern States, whilst others are peculiar to the South. Generally in damp ground, marshes and sea-coast. The *L. salicaria* grows about two feet high, and flowers in August.

PROP., &c.—Mucilaginous, emollient. So far as known, its indication is in dysentery and diarrhea, allaying irritation and inflammation of the alimentary canal.

MAGNOLIA GLAUCA.

NAT. ORD.—Magnoliacea. SEX. SYST.—Polyandria Polygynia.

Common Name.—Magnolia.

DESCRIPTION.—The *M. glauca* is a small tree of ten to thirty feet high; more frequent in the Middle States, in the woods of damp ground, and near the sea-coast, frequently in clusters. The bark is smooth, and bluish gray color. Leaves scattered, petiolate, oval, oblong, obtuse, entire. Flowers terminal, solitary, whitish, cream-color, fragrant. Calyx composed of three membraneous sepals. Corolla of nine to twelve petals, narrowed at the base. Stamens numerous. Anthers linear, two celled. Fruit cone shape, fleshy, with many cells of one seed each. Seeds oval.

History.—Besides this one, there are some six other species of the genus Magnolia. The *M. acuminata*, Cucumber Tree; the *M. tripetali*, Umbrella Tree, found in gardens, for its unusual appearance of immense large leaves and flowers. These are found in the Northern and Middle States. Those peculiar to the South are the *M. glandiflora*, Big Laurel Magnolia, with evergreen leaves, white flowers, red fruit, and several varieties. The *M. cordata*, yellowish flowers, faintly streaked with red, fifty feet high, in hilly country. The *M. auriculata*, and the *M. macrophylla.*

All of these are believed to have similar medical properties, but the *M. glauca* is the principal one employed. The genus received its name in honor of Peter Magnol, a botanist.

PROP., &c.—The bark of the root is officinal, yielding its properties to alcohol and water. The leaves and buds have been used in decoction and infusion. The flowers, boiled a few minutes in lard or sweet oil, make a fine aromatic ointment for ordinary purposes. The odor of the *Glauca* and some others, depends upon a volatile principle, which is unpleasant to some and much liked by others.

The bark is tonic, astringent, and somewhat stimulating; containing a bitter extractive, resin, tannin, and probably other principles. The Magnolia is a useful tonic in low fevers, erysipelas and other cutaneous diseases. It is believed to have control over intermittent fevers, similar to Cinchona; and for dyspepsia considerable importance is attached to it. For undue discharges from the mucous membranes, as dysentery, leucorrhea, &c., in form of decoction by injection.

Externally a strong decoction and the ointment is used with excellent success for erysipelas, tetter or saltrheum, itch, &c. Cones, leaves and flowers may all be employed in same form as the bark.

Pulvis Magnolia.—Powdered Bark of Root, ℥ss to i.

Infusum Magnolia.—Coarse powdered Bark, ℥ii; Boiling Water, Oi. In wine-glass doses.

Decoctum Magnolia.—Coarse Powdered Bark ℥iii; Water, Oii. Boil to one and a half pints; strain. *Dose*—fl℥i to ii. Also per injection or wash, at discretion.

Unguentum Magnolia.—Bark, ℥ix; Water, Oiii. Reduce one half by boiling, strain. Boil slowly to one half pint; add lard, one pound—slowly simmer, often stirring, until the water disappears.

MALVA ROTUNDIFOLIA.

NAT. ORD.—Malvacea. SEX. SYST.—Monadelphia Triandria.

Common Name.—Mallows, Cheeses.

DESCRIPTION.—The stem is partially prostrate, eight to eighteen inches long. Leaves on very long petioles, oval, deeply cleft at its attachment, serrate. Flowers on axilary peduncles. Calyx cleft in five, double row, outer half the length of the inner. Corolla in five partial clefts, pink color. Fruit one, flatish oval.

History.—This species is found in gardens and cultivated fields, about buildings and fences; supposed to have been naturalized. Children often eat the fruit.

The *M. sylvestris*, High Mallow, often found in gardens; two to three feet high. Leaves alternate, petiolate, downy. Flowers large, purplish, on axilary peduncles. Calyx five cleft. Petals five.

The *M. papava* of the Southern States has a prostrate stem one or two feet long, downy. Leaves digitate, three to five lobed. Flowers dark purple. Calyx usually double, five parted. Petals five.

PROP., &c.—Mucilaginous, laxative. The infusion is very soothing and healing for dysentery and diarrhea, for gonorrhea, stranguary, inflammation of the stomach and kidneys. In poultice it is cooling to piles and local inflammation.

MARANTA ARUNDINACEA.

NAT. ORD.—Marantacea. SEX. SYST.—Monandria Monogynia.

Common Name.—Arrowroot.

DESCRIPTION.—The root or *rhizoma* is large, long, white, tuberous, jointed, with numerous fibres. Stem annual, slender, one to three feet high. Flowers white, small.

History.—The Arrowroot is a native of the East Indies, where it is cultivated, also in the West Indies and Brazil. It has also been cultivated in our Southern States. It is an extensive article in commerce, and much attention is given to its cultivation and preparation for the markets. After taking off the epidermis or skin, the root is ground in a mill, when the pulp is thoroughly washed in suitable machines. The fecula is then carefully dried. Arrowroot is sometimes adulterated with the starch of potatoes and wheat, although both possess similar properties.

Our country is chiefly supplied from the West Indies, Bermuda, Jamaica, St. Vincent, &c. The best starch is snow white, in very small granules, and when pressed or rubbed by the finger has a peculiar crackling feeling. As analyzed by Benzon, the root possesses starch, albumen, woody fibre, gummy extract, volatile oil, muriate of lime, and water. There are several species of the Maranta.

PROP., &c.—Demulcent and nutricious. Its chief employment is in diet for the sick, by making it in puddings with milk, or by simply adding boiling water, sweetening with sugar, and flavoring with lemon, orange, &c. In the form of injection for dysentery and inflammation of the rectum and colon. It is serviceable for infants, when they are not sufficiently supplied from the breast of the mother.

MARRUBIUM VULGARE.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Name.—Hoarhound.

DESCRIPTION.—The root is perennial. Stems annual, numerous, erect, leafy, pubescent. Leaves oval, rugose, dentate, wrinkled, hoary beneath. Flowers white, axilary, whorls. Calyx, ten toothed. Corolla tubular, labiate margins. Stamens four. Style lobed. Seeds four.

History.—This plant is supposed to have been naturalized from Europe. It is found in most all sections of this country, along road-sides, about gardens and old buildings, growing one to two feet high, flowering July and August.

The leaves and flowers are used in medicine. Its odor is somewhat peculiar, balsamic, aromatic, and bitter taste. It possesses a volatile oil, a bitter principle, resin, tannin and lignin. Alcohol takes up the volatile and bitter principle. The infusion or decoction generally employed.

PROP., &c.—Tonic, stimulant, diaphoretic, expectorant, and thought to have emmenagogue powers. It is most frequently used in affections of the chest, asthma, colds, coughs, and hoarseness. The warm infusion for obstructed menstruation, inflammatory fevers and hysteria. It has been employed as a vermifuge and for jaundice. The syrup is the most pleasant form of its use. Much of it is used for making hoarhound candy.

Infusum Marrubium.—Leaves and blossoms ℥i; boiling Water, Oi. Strain and add half a pound of sugar.

MEDEOLA VIRGINICA.

NAT. ORD.—Asparagi. SEX. SYST.—Hexandria Trigynia.

Common Name.—Indian Cucumber Root.

DESCRIPTION.—The root is large, tuberous, esculent. Stem erect, terete, small sheaths at the joints. Leaves in whorls of six to eight, three nerved. Flowers yellow from the axils of upper whorls.

History.—This plant is found in rich shady soil of the South-western States, and one to two feet high. The root is eaten by the Indians as we do cucumbers. Some authors place this species under the genus Gyromia.

PROP., &c.—Diuretic and mild hydragogue cathartic. Useful in dropsical and urinary diseases.

MELILOTUS VULGARIS.

NAT. ORD.—Leguminosa. SEX. SYST.—Diadelphia Dicandria.

Common Name.—Yellow Millet Clover.

DESCRIPTION.—Stem erect, branching. Leaflets obovate, lanceolate, remotely serrate, glabrous. Flowers yellow, in loose racemes. Calyx unequal. Legumes two seeded.

History.—This indigenous plant, of two or three feet high, is found in the Middle and Southern States, flowering from June to August. The *M. alba* or White Millet, is found growing wild. Both sweet scented. In the South is found the *M. officinalis*, with white flowers.

PROP., &c.—The flowers and leaves of the yellow and white Clover are expectorant, diuretic and emollient, and employed in infusion for dropsy, suppression of urine, diarrhea, leucorrhea, coughs, and pulmonary affections.

MELISSA OFFICINALIS.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Name.—Balm.

DESCRIPTION.—The root perennial. Stem annual, erect, quadrangular. Leaves broad, ovate, serrate, cordate, pubescent. Flowers yellowish white, in partial whorls. Calyx dry, flatish. Corolla two cleft, upper lip vaulted.

History.—The Balm is believed to have been introduced from Europe. Cultivated in gardens, and blossoms in June and July. The leaves and flowers are used, and possess a mild, fragrant odor, similar to the lemon. Its name is from the Greek word *melissa*, a bee, because this insect is fond of its flowers. The Balm has a volatile oil, bitter extract and gum.

PROP., &c.—Diaphoretic, expectorant, sedative. The warm infusion is usually employed for fevers; and when cold, a pleasant drink to allay thirst, inducing repose. For suppressed menstruation, hysteria, pleurisy and asthma. Principally used in domestic practice.

MENISPERMUM CANADENSE.

NAT. ORD.—Menispernia. SEX. SYST.—Diœcia Polyandria.

Common Names.—Moonseed, Yellow Sarsaparilla.

DESCRIPTION.—Stem slender, herbaceous, partially climbing. Leaves in lobes of three to five. Flowers greenish yellow, in racemes. Sepals four to seven, large. Petals six or seven, cuneate, orbicular. Drupe black, curved. Nut black, nearly a ring.

History.—The Moonseed grows in many parts of the country in damp places, on banks and streams. The *M. lyoni* is

another species found in the Southern States. Its name is from the Greek word *mene*, moon, and *sperma*, seed, having a crescent shape.

PROP., &c.—Tonic, mucilaginous. The infusion of the leaves, flowers and stems is useful for indigestion, to give tone and strength to the system. It relieves dysentery and irritation of the mucous membrane, and for stranguary and other urinary affections. Highly esteemed for scrofula, syphilitic and mercurial diseases. In decoction for cutaneous affections, externally.

MENTHA PIPERITA.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Names.—Peppermint.

DESCRIPTION.—The root is creeping, perennial. Stem purplish, channeled, quadrangular, erect. Leaves opposite, acute, serrate, ovate. Flowers bluish purple, small, on short spikes, terminal. Calyx five cleft, tubular, dotted. Corolla tubular, in four segments. Ovary four lobes. Seeds four.

History.—This herbaceous plant is supposed to have been brought from Europe. It grows wild in fields, along the borders of moist grounds, and gardens. By some it is cultivated for its oil, that is obtained in common mode of distilling.

PROP., &c.—The Peppermint is stimulant, diaphoretic, carminative and sedative. The infusion of the leaves forms a pleasant drink for colds, inflammatory and other form of fevers. It is always acceptable to children for colic, colds, flatulence, and diarrhea. When freely given its tendency is to promote diaphoresis, and allay pain and nervous irritation. An invaluable agent in domestic practice.

Infusum Mentha Piperita.—Dried leaves, ℥ss; boiling water, Oi. Drink at discretion.

Oleum Mentha Piperita.— Active stimulant, irritant, and carminative. *Dose*—Gtts. iii. to x, on sugar, &c.

Spiritus Mentha Piperita.—Oil, fl℥ss; in Alcohol, Oi. *Dose*—Gtts. x to xx. Often used as Essence of Peppermint.

Essence of Peppermint.—A cheap mode is by the Oil, fl℥ii to Alcohol, fl℥iv; then triturate well in the mortar, with two ounces of lump magnesia, and place this in a displacement apparatus, gradually adding one pint of pure water. Other essences may be prepared in a similar way.

MENYANTHIS VERNA.

NAT. ORD.—Gentiana. SEX. SYST.—Pentandria Monogynia.

Common Names.—Buck-bean, Water Shamrock.

DESCRIPTION.—Root perennial, creeping, jointed, leaves and scapes proceeding from the joints, sheathed at the base by broad, oblong, obtuse stipules. Leaves on long terete petioles, cut up into three deep segments or folioles, sessile, oblong, oboval, obtuse, somewhat repand or erose on the margin, thick and glabrous; scape ascending, terete, smooth, about a foot high, bearing a conical raceme of flowers.

History.—The Buck-bean is found in the Northern and Middle States, and as far south as the mountains of Virginia. Generally found in wet ground and marshes. It flowers in July and August. The root, stems, and leaves are employed, possessing an active bitter principle, tannin, fecula, and mallic acid. It yields its properties to alcohol and water.

PROP., &c.—Tonic, astringent, cathartic, emetic. A very intense bitter, that is valuable for indigestion, and a good anti-periodic, that should be more extensively employed for intermittent and remittent fevers. It has a reputation for herpes, dropsy, worms, scorbutic affections, and several skin diseases. We are informed by history that Boorhave used the European species for gout. In Germany it is substituted for Hops, being far more active and preferable in the making of beer. The powder is used in ten to twenty grain doses, as a tonic. The extract from five to eight grains. The infusion and decoction has been generally employed.

MIRABILIS JALAPA.

NAT. ORD.—Nyctagines. SEX. SYST.—Pentandria Monogynia.

Common Names.—Four O'clock, False Jalap.

DESCRIPTION.—Stem two to three feet long, few branches. Leaves broad, acute, glabrous. Flowers on long peduncles, in bunches, light purple color. Corolla funnel-shape, narrow below. Calyx inferior. Germ between the calyx and corolla. Stigma globular.

History.—A perennial plant, found in old fields, flowering from June to July. From the Latin *mirabilis*, wonderful, having different colored fragrant flowers on the same stalk. There are fwo other species.

PROP., &c.—Hydragogue, cathartic, uncertain in its action. The root yields a large amount of resin. It deserves further investigation.

MITCHELLA REPENS.

NAT. ORD.—Rubiacea. SEX. SYST.—Tetrandria Monogynia.

Common Names.—Partridge-berry, Squaw Vine, Checker-berry.

DESCRIPTION.—The stem is jointed, creeping, glabrous. Leaves ovate, entire, glabrous, deep green, veined. Flowers white, axilary, solitary, on short peduncles. Calyx four toothed, parted. Stigmas four cleft. Berry red, double. Seeds four.

History.—An indigenous plant found throughout the United States, on dry soil in pine woods. This evergreen plant is often seen thickly spread on and partly under the leaves and rubbish on the ground. Its small, white, scattered flowers appear from June to July, and in the summer and fall followed with red berries. The whole plant is officinal, and boiling water is generally employed to take up its properties. It was named in honor of Dr. John Mitchell, an English botanist. Not yet been analyzed.

PROP., &c.—Diuretic and astringent. Its chief reputation has been as a parturient agent for females near the approach of confinement, to aid a successful delivery. Our early reformers took this idea from the Indians, hence its name, Squaw-vine. Some of the *female syrups* are chiefly composed of it. I have used it in this way for several years. Its general reputation is good. It is said to be a good diuretic, yet I am not aware of any *positive* evidence of such action. The berries have been employed for disury and diarrhea, in form of infusion. This plant is often taken for the *gaultheria*, *wintergreen*, which see.

The ordinary infusion or decoction are the best forms for use.

MONARDA COCCINEA.

NAT. ORD.—Labiatea. SEX. SYST.—Diandria Monogynia.

Common Names.—Rose Balm, Mountain Balm.

DESCRIPTION.—Root perennial. Stem erect, three to four feet high, branched, tetragone, angles acute, somewhat pubes-

cent. Leaves opposite, petiolate, commonly oval, lanceolate, but sometimes almost ovate; base round or sub-cordate, end acute or acuminate, margin with remote serratures, surface pubescent or nerved. Flowers in terminal multiflore heads, of a bright scarlet color. Corolla very large, tube compressed, the two lips elongated, narrow, upper curved, channeled, notched, lower with three small lobes. Stamina and style long and filiform.

History.—One of the handsomest plants of North America, with sweet leaves and many heads of flowers of a bright scarlet. It is cultivated in the gardens of America and Europe for its beauty, and its medical properties give it additional value. The whole genus *Monarda* is beautiful, and peculiar to North America. It is dedicated to Monard, a French botanist. There are eighteen or twenty species known already, all more or less medical, but the *M. coccinea* and *M. punctata* have been best investigated. They are commonly estival plants, blossoming in summer. The *M. coccinea* is found from Canada to Pennsylvania, and even further south, to the Alleghany Mountains. It delights near pure streams, and in rich soil.

PROP., &c.—Diaphoretic, diuretic, tonic, carminative, and anti-periodic. It is not only an agreeable drink in fevers, but the warm infusion greatly aids the perspiratory office and quiets nervous irritation. It has been employed for piles, colic, paralysis, and rheumatism, and said to be beneficial for intermittent fevers. Its action chiefly depends upon a volatile principle.

MONARDA PUNCTATA.

NAT. ORD.—Labiatea. SEX. SYST.—Diandria Monogynia.

Common Name.—Horsemint.

DESCRIPTION.—Stem one to two feet high, herbaceous, downy, branching. Leaves remote, oblong, acute, tapering at the base. Flowers bluish-purple, in whorls. Calyx long, tubular, downy. Bracts obovate, acute, entire. Corolla hairy, dotted, upper lip arched, and longer than lower one.

History.—It is found in the dry soil of most of our States. In some uncultivated fields of New Jersey, it may be seen thickly covered over many acres. In some places, it is mowed down, raked up, and, by the ordinary still apparatus, large quantities of its oil is obtained for the markets.

This is more active and important than any other species of this genus, although not so pleasant as the *M. coccinea* and some others. Profusely it yields a volatile oil, with a bitterish, pungent taste, and aromatic odor.

PROP., &c.—The oil is stimulant, irritant, sudorific, diuretic, and probably emmenagogue. The warm infusion is much employed for inflammatory fevers and colds, in domestic practice, and often for suppressed menstruation, for colics, flatulency, &c. Its taste is unpleasant to many.

The oil is a powerful rubefacient, and most in demand for the *horse liniments* of the country. The oil is a convenient form for use, to act upon the kidneys, to allay pain, &c.

Oleum Monarda.—Dose—Gtts. iij to viij, on sugar.

Infusum Monarda—Leaves and Blossoms, ℥ss; Boiling Water, Oi. Drink at discretion.

MONOTROPA UNIFLORA.

NAT. ORD.—Ericea. SEX. SYST.—Decandria Monogynia.

Common Names.—Ice-plant, Nest-root, Fit-root, Indian Pipe.

DESCRIPTION.—The root is matted, resembling a chestnut-bur, dark brown color, fibrous. Stems or scape short, erect, glabrous, succulent, white. Leaves are scales, ovate, white. Flowers white, terminal. Petals five, distinct, fleshy, erect, pubescent on the inside. Stamens ten, unequal. Anthers short, reniform. Pods of five cells. Seeds numerous.

History.—This peculiar plant is occasionally found in most States of this country, in heavy-timbered woods, about or upon the roots of large trees, from which it is supposed to receive its growth, being a parasite. The stems are wax-like, white, extremely tender, soon losing its shape, comparatively like ice, melting away, hence the *Ice-plant*. The root is the part employed, and in powder, carefully prepared.

PROP., &c.—Nervine, anti-spasmodic, and diuretic. The expressed juice of the stems has been employed as an emollient for opthalmia and inflammatory sore eyes. The powdered root in teaspoonful doses, for convulsions, for epilepsy, chorea, St. Vitis' dance, &c. Seldom used by the profession.

MORUS RUBRA.

NAT. ORD.—Urticea. SEX. SYST.—Monœcia Tetrandria.

Common Name.—Red Mulberry.

DESCRIPTION.—A branching tree, fifteen to thirty-five feet high. Leaves cordate, acuminate, ovate, serrate, pubescent,

sometimes lobed. Flowers monecious, having stamens on some of its flowers, and pistils on others. The *male* flowers in spike-form, and *female* flowers in clusters. The fruit is hanging, and black when ripe.

The *male* flowers have four *stamens* alternate with the segments of the perianthe. The *female* flowers have four scaly sepals overlapping each other.

History.—Rafinesque has given (1839) the most extensive description of Mulberry trees. He enumerates sixteen of foreign growth, and nine species of this country. Of the first, the most important, perhaps, is the *Morus multicaulis*, a native of China, introduced into Europe and America. During the years 1837 to 1840, many people in the Middle States, especially of New Jersey, experienced a mania in speculation with this little shrub. Its cultivation was forced to a great extent. Suddenly some became immensely rich, and others utterly poor and prostrated, so that, within the space of three years, hundreds of thousands of dollars exchanged hands in this wild and ruinous traffic. At first each little tree was eagerly seized at one dollar each. The knowing ones sold out and "stood from under," whilst the dupes soon found on their hands millions of trees utterly worthless. The bubble burst. The object—to feed silk-worms.

The Mulberry is found in China, Persia, and all divisions of the world. It is believed to have been noticed by Dioscorides and other ancient physicians, and also supposed by some authors to be the *Sycamine tree* mentioned in Luke xvii, 6. The *M. alba*, white Mulberry, ten to twenty feet high, bearing pleasant white berries, found in our Middle States, is supposed to be a native of Asia.

The American species enumerated by Rafinesque are *Morus rubra*, the red Mulberry of Linneus; *M. reticulata*, net Mulberry; *M. Canadensis*, rock Mulberry; *M. scabra*, rough Mulberry; *M. tomentosa*, woolly Mulberry; *M. reparia*, water Mulberry; *M. parvifolia*, small leaf Mulberry; *M. celtidefolia*, nettle-leaf Mulberry; *M. corylefolia*, hazle Mulberry. The leaves of all species are considered available for silk-worms to feed upon. The fruits of all are said to contain tartaric acid, and consequently possess refrigerant properties, the white species being the sweetest.

The bark of some of these trees has been by the Indians of our country, made into ropes, mats, and baskets; also paper has been manufactured from them.

PROP., &c.—The only notice of the bark having been employed for medicine is by Rafinesque, that it has been used to expel the tape-worm.

The Mulberries are recognized as officinal, containing some

mucilage, saccharine matter, and tartaric acid. They are laxative and refrigerant, and in the form of syrup, applicable in fevers, sore mouth and sore throat, and irritation of the alimentary canal.

MUSA PARADISIACA.

NAT. ORD.—Musacea. SEX. SYST.—Hexandria Monogynia.

Common Names.—Banana, Plaintain Tree.

History.—This valuable tree is a native of Florida, South America, and India. It is extensively cultivated as food for the inhabitants where it grows, and for exportation. The fruit on its stem is in spikes, and some of these clusters or bunches weighing fifty pounds. They are kept in our fruit stores through the summer, and eaten by many who are fond of them.

The leaves of this tree are immensely large, and by the natives spread as table-cloths and used as napkins. These green leaves have also been employed by surgeons for dressing blisters. The fruit pods are mealy in appearance when opened, soft, sweetish, clammy. They form a partial substitute for other food. The young shoots of the tree are boiled for table use.

The juice of the trunk of the tree is said to be astringent, and has been used for diarrhea.

MYRICA CERIFERA.

NAT. ORD.—Myricea. SEX. SYST.—Dicœcia Tetandria.

Common Names.—Bayberry, Wax Myrtle, Sweet Gale.

DESCRIPTION.—A small shrub, three to ten feet high. Bark grayish. Leaves perennial, obtuse, petiolate, entire, dotted, shining, about two inches long, curving. Flowers cylindrical, on axilary aments, male and female on separate bushes. Upon the aments appear the berries in clusters of greenish color, followed with a light green wax.

History.—This shrub is found abundantly in the United States, particularly in New Jersey, near the borders of the sea. Its stem is woody, bark of gray and yellowish color, growing to the height of ten or twelve feet. The bark of the root is most desirable for medical use, and should be collected early in the spring or late in fall.

This excellent agent was brought to notice by the greatest and best of medical benefactors, whose crude system of practice broke the mysterious chains which had bound the people of America and Europe for about two centuries. This man was Samuel Thomson, born February 9, 1769, in the town of Almstead, County of Cheshire, State of New Hampshire. Our profession is yet ungrateful for his services, yet we have the hope, even to expectation, that a monument, a suitable tribute, will yet be erected over his grave.

The powdered bark of the root of the Bayberry has become an important article in our drug markets. In large quantities it is collected, carefully dried in the shade, and ground in the large mills of our cities.

The berries are thinly coated with the *myrtle wax* of a light green color, that is disengaged in boiling water, floating and adhering together, after which it is melted and poured into vessels for suitable sized cakes. This wax may be burned like tallow candles, or used for medical purposes, as it is astringent, discutient, and has slight anodyne properties.

PROP., &c.—The Bayberry bark is astringent, stimulant, tonic, emetic, sialagogue, errhine. It contains gallic acid, tannin, extractive matter and lignin. This article is valuable for the relief of many diseased conditions of the system. Dr. Thomson first observed its power to disengage the thick viscid secretions of the mucous membrane of the stomach, and following with his active Lobelia emetic, he speedily arrested many violent diseases; from this he called it his *canker* powder. Acting specially on the serous tissue, it excites a flow of serum, followed by its astringent and tonic effects; hence it is one of the best of articles for intermittent, bilious and typhoid fevers. Moderate doses of the infusion should never be omitted in these diseases, especially of a typhoid character.

Bayberry is indicated in phthisis, hemorrhages, dysentery and diarrhea, either in syrup or infusion. The powder should be applied to indolent ulcers, for its stimulating and astringent action. It is also a good cephalic snuff for colds and obstructions of the sniderian membrane and frontal sinus.

The infusion per vagina is quite valuable for leucorrhea, and by the *uterine syringe*, may be introduced into the womb for hemorrhages after delivery, one of the most effectual remedies for this alarming condition. The powder is the principal ingredient in the celebrated Composition Powder of Dr. Samuel Thomson, and so highly valued for its efficient action upon the secretions and excretions of the whole system, especially in colds, sore throat, intermittent fever, flatulence, indigestion, colic, cramps, &c. For indigestion and general debility, it should be used in wine-glass doses of the infusion

when cold; for other purposes internally, it should be carried to perspiration, by frequent doses of the warm infusion.

Pulvis Myrica—Powdered Bark of Root, Grs. x to xx.

Infusum Myrica—Powdered Bark, ℥ss; Boiling Water, Oi. The *dose* at discretion.

Syrupus Myrica—Powdered Bark, ℥vii; Water, Oiv. Boil half an hour and strain, then boil to half a pint; add sugar one pound, simmer gently, and skim for a few minutes. *Dose*—One half to one tablespoonful. A pleasant remedy for dysentery, diarrhea and hemorrhages.

Myricin—Resinoid and tannin. *Dose*—Grs. ij to iij.

MYROZPERMUM PERUIFERUM.

NAT. ORD.—Leguminosa. SEX. SYST.—Decandria Monogynia.

Common Names.—Balsam Tree, Balsam of Peru.

DESCRIPTION.—A tall branching tree. Leaves in opposite leaflets, four or five pairs, terminal. Flowers on axilary racemes, white. Calyx campanulate, five toothed. Corolla white. Petals five. Stamens ten. Ovary oblong. Fruit pendulous. Seeds one, reniform, surrounded by a yellowish liquid balsam.

History.—This tree is found in Peru and other parts of South America. The bark presents numerous vessicles or blisters, from which, when punctured, exudes a resinous liquid, aromatic balsam of a reddish-brown color. When exposed to the air, it becomes solidified, and darker in color. The young branches are boiled to obtain the balsam, yet by incisions of the bark, the purest and best is obtained. It is usually brought to us in cans, which should be closely stopped to retain its semi-fluid state. It is soluble in ether and oils, though alcohol is preferable.

M. Toluiferum is a tree similar to the above, found in Tolu and Carthagenia. From this tree is obtained the Balsam of Tolu, though some authors (Ruiz) express the opinion that these two balsams are one and the same; and, according to Fremy, they are identical in constituent properties.

PROP., &c.—Both are considered expectorant and tonic. The Tolu is chiefly recognized in medicine. It has a pleasant taste and smell, and sometimes used to disguise other articles. When softened with oil, it has been employed to dress sores and indolent ulcers. It seems to possess stimulating and healing action upon the mucus surface, hence its application

in pulmonary diseases, catarrh, asthma, dysentery, gonorrhea, and leucorrhea. A few drops of the tincture will flavor unpleasant draughts.

Tinctura Tolutana—Balsam Tolu, ℥iss; Alcohol, Oi. Digest ten days. *Dose*—℥ss. The white of eggs or sugar may be mixed with each dose.

MYRTUS PIMENTA.

NAT. ORD.—Myrtacea. SEX. SYST.—Icosandria Monogynia.

Common Names.—Pimenta, Allspice.

DESCRIPTION.—A beautiful evergreen tree, about thirty feet high. Leaves petioled, opposite, shining, deep green color, oblong, dotted, about four inches long. Flowers numerous, small, on axilary peduncles, in panicle form. Calyx divided in four sepals. Petals four, greenish color. Stamens long, numerous, bearing white anthers. Berries round, about the size of a pea, with calyx firmly attached. When ripe, they are of a dark purplish color.

History.—The Pimenta or Allspice tree is found in the West Indies, Mexico, and South America. The berries are gathered a little before their maturity, and dried in the sun, when they present a wrinkled appearance. They have a fragrant odor, and a warm, aromatic taste. They contain essential and fixed oil, resin, tannin, gallic acid, and extractive matter. The volatile oil is obtained by distilling the berries, which resembles the oil of cloves.

PROP., &c.—Aromatic, stimulant. It has been employed as a carminative, to allay pain of flatulency, &c., though seldom used as a medical agent. Its chief demand is for culinary purposes.

NASTURTIUM PALUSTRE.

NAT. ORD.—Crucifera. SEX. SYST.—Tetradynamia Siliquosa.

Common Name.—Yellow Watercress.

DESCRIPTION.—The root is perennial, fusiform. Stem twelve to eighteen inches high, branched. Leaves alternate, nearly sessile, smooth, spreading, lyrate, or pinnatifid at the base, with confluent, oval lobes. Flowers on terminal racemes.

Calyx and corolla obtuse and equal. Petals four, and yellow. Stamens six. Silique or pod subterate and short, with convex valves.

History.—There are several species of the genus *Nasturtium*, or Watercress, probably first arranged by Tournefort, but Linneus united it to *Sisymbrium*.

The common Watercress is the *N. officinale*, or *Sisymbrium Nasturtium* of Linneus. It differs from this by white flowers and pinnate, cordate leaves. They both grow near or in water, brooks, swamps, ponds, in North America and Europe. The *N. amphibium* is also common to both Continents, and a few peculiar species or varieties are spread through the United States, not yet well distinguished. The *N. diffusum* and *N. arcuatum* grow in the Western States. They can all be eaten in salad, and form a good spring diet. Their taste is warm, pungent, and somewhat acrid, like that of Lepidium and Radishes, but by no means unpalatable, and mixed with a sweet, juicy flavor.

PROP., &c.—A mild stimulant, diuretic, anti-scorbutic, deobstruent, hepatic, and stomachic. The whole plant must be used fresh, in salad or their fresh juice, since these properties are lost by drying and boiling. The leaves may be found all the year round, but are best in the spring; they are then a very useful diet for those who have scorbutic affections and spots, spungy gums, liver complaints, scorbutic rheumatism, pituitous asthma, &c. Watercresses are excellent, and milder substitues to horseradish or cochlearia, mustard, and scurvy-grass, in almost all cases, except in palsy. Their active properties reside, as in all the cruciferous, in an acrid volatile oil, containing sulphur and an ammoniacal salt.

Watercresses were formerly used for many other diseases, in gravel, hysterical affections, diarrhea and polypus, and even worms; but there is not sufficient proof of their service in these complaints.

NELUMBIUM LUTEUM.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Polygynia.

Common Names.—Yellow Water Lily, Water Shield, Rattle Nuts, Water Chincapin, Sacred Bean, Lotus.

DESCRIPTION. — Roots perennial, creeping, cylindrical, brownish, white inside, fleshy and knobby. Leaves radical, on long cylindrical, rough and spongy petioles, orbicular, entire, peltate, centre like a navel, a little eccentric, from which radiate many branched nerves beneath; above of a fine green, perfectly smooth. Petioles from three to five feet long, limbus floating on the water, from six to twenty inches in diameter. Scapes uniflore, similar to the petioles, flower pale yellow, from six to eight inches in diameter, and erect above water. Calyx small, with ovate obtuse folioles. Corolla with many imbricate petals on several rows, the inner ones largest, elliptic, obtuse. Stamina numerous, yellow, surrounding the torus, and shorter. Filaments linear, anthers adnate below the end, so as to leave a linear appendage at the end; central torus spongy, becoming the fruit, and then large, three to four inches diameter, obconical sulcated, summit truncate, flat, with a waved margin, and having many perforated cells, containing nuts of an elliptic shape, with the persistent short style and obtuse stigma, as big as filberts, of a black color, but white inside.

History.—This beautiful genus is known from the most remote antiquity, as a holy emblem of the fecundity of nature, has only lately been properly designated. Linneus hardly

knew it, since he united it to *Nymphea*. Jussieu distinguished and named it properly, from one of its Hindoo names. Several English and American botanists have since attempted to change the name into *Cyamus* (meaning a bean), already the name of a crustaceous animal. If good local names are to be changed, we ought to change also, *Coffea*, *Yucca*, &c. There are several species in Asia, blended under the name of *N. indicum*, with

rose, blue and white blossoms. Ours is not a variety of it, but a peculiar species. We have three or four species in North America; the others are:

N. codophyllum, Raf. in Flor. Louis. Petioles rough, furrowed inside, thicker above; leaves peltate, campanulate, tomen-

tose beneath; calyx four leaved. First described by Robin, who gave a long account of it under the name of Napoleon plant; admitted by Decandolle. Flowers yellow.

N. pentapetalum. Walter.—Leaves peltate, orbicular, entire, calyx five leaved, five to eight petals. Considered a doubtful species by many, but I have found it again in West Kentucky; it has yellow leaves also; calyx equal, from five to eight petals nearly so, concave, smaller than in *N. luteum.*

N. reniforme. Walter.—Leaves reniform; corolla polypetalous. Doubtful, seen only by Walter, probably a *Nuphar.*

Our *N. luteum* offers several varieties—*Pallidum*, flowers of a straw color; *Albiflorum*, flowers white. *Muculatum*, yellow flowers, with rusty spots. *Undulatum*, with waved leaves. *Levigatum*, with petioles and scapes nearly smooth.

The Asiatic species are called *Lianhua* by the Chinese, *Padma* in the Sanscrit language, *Nelumbo* in Malabar; formerly the sacred Lotus or bean of Egypt. The Hindoo gods are represented sitting on them; in their mythology they were the first plants that sprung on the waters covering once the whole earth, and gave birth to many gods. The Chinese also venerate them as sacred plants. Cultivated in China and India for food and beauty. They all grow in lakes and ponds only.

Our American species are also deemed holy plants by some tribes of Indians, who feed on them likewise. They are called *Terowa* and *Taluwa* by the Otos and Quapaws. The *N. codophyllum* is peculiar to Louisiana, while the *N. luteum* is spread from New Jersey and Carolina to the Mississippi River and beyond it, in lakes, ponds, deep swamps, bayous and ditches. As it is scarce in the Atlantic States, it is said to have been planted in some ponds by the Indians.

PROP., &c.—Alike in all the Asiatic and American species. The roots, leaves and nuts are edible, cooling, laxative, diuretic, emollient, &c. The Chinese and Hindoos make many dishes with them. The roots have some acrimony when raw, which they loose by roasting or boiling; they taste like Artichoke and Colocasia or Edoes. A kind of bread and cakes are made with them; the Otos like them very much. The petioles and young leaves may be eaten as greens, but the nuts are chiefly used.

NEPETA CATARIA.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Name.—Catnep.

DESCRIPTION.—Root perennial. Stem herbaceous, erect, pubescent, quadrangular, branching. Leaves on petioles, cor-

date, serrate, pubescent. Flowers whitish, in verticilate spikes. Calyx tubular, five toothed. Corolla small, throat dilated, two lips, upper two and lower three cleft.

History.—This plant is common in all sections of the United States, found along the roadsides, in the borders of gardens, and around buildings. It should be collected when in blossom, and dried in the shade, and kept in packages or drawers, to prevent the escape of its most active principle, a volatile oil; it also possesses a little tannin and a bitter principle.

Nepeta is supposed to be derived from *nepa*, a scorpion, whose bite it is said to cure. *Cataria* was probably derived from the known fondness that cats have for it.

PROP., &c.—The Catnep is an aromatic stimulant, diaphoretic, anti-spasmodic and anodyne. Its chief use is in domestic practice in the form of infusion, for colic, flatulency, and general irritability of children; also for inflammatory fevers, hysteria, and other nervous conditions. It is asserted to be a specific for chlorosis, which, however, needs confirmation. The warm infusion, as hot as can be borne by the patient, in large draughts, often repeated, exhibits itself markedly on all of the exhalants, relieving menstrual and other obstructions induced by colds.

Infusum Nepeta.—Leaves and blossoms, ℥ss; Water, Oi. *Dose* at discretion.

NEVROSPERMA BALSAMINA.

NAT. ORD.—Cucurbitacea. SEX. SYST.—Monœcia Monadelphia.

Common Name.—Balsam Apple.

DESCRIPTION.—Plant annual, with climbing vine. Leaves palmate, broad. Calyx five cleft. Corolla five, parted. Fruit rough, pointed at the apex, four to seven inches long; when ripe, of a yellowish green externally, with pulp reddish yellow inside. Seeds flattened or compressed. When ripe, the fruit bursts open elastically. The *Momondica Balsamina* of some authors.

History.—The Balsam vine is supposed to be a native of the East Indies. It is cultivated in many gardens of this country, and generally so that it can spread itself on brush or bushes. A tender plant.

PROP., &c.—Little use is made of the Balsam Apple internally, though it is said to be useful for hepatic diseases, for dropsy, and to possess emetic powers. Externally, the tincture is often found in families for sprains, sores and bruises. The pulp of the fruit when fully ripe, may be incorporated with sweet oil, forming a yellowish red salve, used for piles, burns, chopped hands, old sores, &c.

NICOTIANA TABACUM.

NAT. ORD.—Solanea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Tobacco.

DESCRIPTION.—Annual plant. Root fibrous. Stem three to five feet high, erect, branched. Leaves numerous, alternate, sessile, ovate, entire, acuminate, pubescent, light green color. Flowers in terminal racemes, rose color. Calyx in five segments, viscid, hairy. Corolla funnel shape, five cleft. Stamens the length of corolla. Anthers compressed. Fruit ovate. Capsule two celled.

History.—This plant received its generic name from John Nicot, who first introduced it into Europe. Although a native of America, it is said to have been known in Asia before the discovery of this continent by Columbus. Cultivated in China, Persia, Syria, Peru and the West India Islands.

The four species designated in the United States are—*N. tabacum*, Virginia tobacco; *N. rustica*, common tobacco; *N. paniculata*, small flowered tobacco; and the *N. quadrivalvis*.

Tobacco is among our important articles of agriculture and commerce. Among our States which give it most attention may be noticed Connecticut, Ohio, Maryland, Virginia, North Carolina, Kentucky, and several other Southern States. However, more or less is produced in every State in the Union. In the year 1840, Virginia produced seventy-five million pounds, and Kentucky fifty-three million pounds. The finest flavored smoking tobacco is raised in the West Indies, Cuba, Jamaica, &c. In the culture of tobacco, the object is to increase the *size* and not the number of leaves; to effect this the top of the plant is cut off at suitable times, thus it is prevented from running to seed, and the lower leaves grow two feet in length and eight to ten inches in width. It is produced every year from the seed, which is sown in beds, and when a few inches high, transplanted in suitable rows in the field. When the leaves are sufficiently ripe, having lost their green color, and changed to its different shades of brown, they are collected and dried in the shade, tied into bundles, and packed in packages or hogsheads.

It is remarkable that Tobacco should have become so extensively used for luxury, since it is among the most nauseous, disgusting, sickening, dangerous, poisonous plants. All animals, except the goat, avoid its use. But man lessens his claims to intelligence and discretion by smoking, chewing, and snuffing it. Men are not content with smoking alone, but chew and snuff. Women are not satisfied with *snuffing*, but

indulge in the exquisite pleasure of lining their mouths with it. And now it is not uncommon to see a boy eight years old with a segar stuck in his mouth. Doctors talk about the laws of health, and preachers advise temperance in all things, whilst thousands of them are given over in this injurious practice. Some authors say that its use was first adopted by the priests of Indian nations to appear inspired under its use, from which the low and vicious savages and civilized men followed suit.

It is utterly useless to moralize and talk of reformation in this matter, for as well might one seek to turn the current of a mighty river, as to redeem the people from this ruinous infatuation. It is useless to charge this scourge to any one, since no one can stop it. No legal power, no moral suasion can stay this scourge; and as for myself, now, whilst I write, the segar is in my mouth. To excuse myself, need I add the common phrase, "As the preacher says, do as I say, not as I act."

Our remarks seem already too lengthy, yet we must quote from Dr. W. Beache's American practice: "Simon Pauli, physician to the King of Denmark, in a treatise on tobacco says, that the merchants frequently lay it in bog-houses, to the end that, becoming impregnated with the volatile salt of the excrements, it may be rendered brisker, stronger, and more fetid. A person whose curiosity led him to see Tobacco spinning, observed that the boys who opened out the dry plants had a vessel of urine by them, with which they moistened the leaves to prepare them for the spinner. What a delicious morsel a quid of Tobacco must be!"

The bad effects upon the human economy cannot be told. By either smoking or chewing, its chief action is on the nervous system, digestive organs, and the brain. With some it exhilerates for a time, causing its devotees to be relieved partially from mental difficulties, producing an unconcerned deportment, and tone of importance, yet upon the great majority of those who use it, unpleasant feelings follow, such as dizziness, trembling sensation, husky throat, and general prostration. It acts upon the glands of the mouth and throat, inducing a constant flow of saliva, thus causing an unnatural chain of the system, depriving the stomach of some of the necessary fluids in the process of digestion. The general use of Tobacco in our country is gradually undermining the physical and mental energies of each successive generation. The oil of Tobacco is well known to be an active poison, yet some of the sensitive and tenacious of our profession cry out against the use of all fatal agents, whilst they smoke, chew, and snuff this powerful plant. The system once

habituated to its use, nothing but sickness or the most determined resolution will break the enchantment.

In the United States and several foreign countries, Tobacco is one of the leading articles of agriculture, commerce, and manufacturing interests, and so interwoven with habits of business and pleasure, as to preclude any hope of a favorable change for ages to come.

PROP., &c. — Tobacco is anti-spasmodic, emetic, sedative, expectorant, diuretic, sialagogue, discutient, and errhine. It has been analyzed by several eminent chemists, and by Conwell as follows—Gum, mucilage, tannin, gallic acid, chlorophylle, green matter, yellow oil, having the odor, taste, and poisonous properties of Tobacco, pale yellow resin, nicotina, a substance analogous to morphia, and orange-red coloring matter.

Nicotina or nicotine, is a poison nearly as active as hydrocyanic acid. The oil is an energetic poison, one drop having been known to kill a dog. Sir Charles Bell and Dessault concur in the opinion that Tobacco smoke has produced death, and Dr. Copland states that half a drachm proved fatal under his observation. The excessive use of Tobacco, by smoking and chewing, has produced paralysis and sudden deaths, whilst long and excessive use of snuff destroys the power of smelling, and causes an unnatural sound of the voice; yet these seldom occur.

As an anti-spasmodic, it has been employed both in form of infusion and smoke, for tetanus, hydrophobia epilepsy, and spasmodic asthma. I remember to have used Tobacco smoke in a case of severe spasms of Asiatic cholera, when our most active and reliable agents had failed. The mode of using it is by taking a common Tobacco pipe with the contents well lighted; clasp the bowl with the hand, and apply the mouth, forcing the smoke through the stem into a tumbler of water, which becomes impregnated with the smoke; then allow the patient to drink it in divided doses. In this case the spasms soon ceased, and the patient vomited freely.

As an emetic, the infusion of five to eight grains of snuff may be given. It has diuretic properties, though seldom employed, either for dropsy or suppression of urine.

Externally, the infusion has been used for gout, rheumatism, inflammation of the testicles, inflammation of the joints and erysipelas. The infusion is also destructive to vermin; and one drachm of it in half pint of warm water per injection, not only removes seat-worms, but is quite an efficient relaxant for hernia, stricture at the neck of the bladder, and for costiveness. On the surface for hernia, wet leaves of Tobacco and the ointment have been employed. The ointment of Tobacco

is one of our most efficient discutients for tumors and indurated ulcers. On raw or abraided surfaces it, should not be applied, as it is liable to become absorbed, and produce bad impressions on the system.

The internal use of Tobacco is not advisable, except in emergencies, especially as we possess other remedies far safer.

Enema Tabacum—Tobacco, ℥i; Boiling Water, Oii. With a common syringe throw up the rectum about six ounces, and wait a reasonable time to observe its effects. Cases are reported where it has had injurious effects.

Unguentum Tabacum—Tobacco, ℥i; Lard, lb. i. Boil twenty to thirty minutes, and strain through coarse linen. This is a powerful discutient and relaxant, and its use should not be long continued.

NYMPHEA ODORATA.

NAT. ORD.—Nymphacea. SEX. SYST.—Polyandria Monogynia.

Common Names.—White Pond Lily, Cow Cabbage.

DESCRIPTION.—Roots large, perennial, knotty, creeping, dark brown color. Petioles one to five feet long, spongy, filled

with oblong tubes, supporting each one leaf, which lies on the surface of the water. Leaves floating, nearly round, one side cleft to the petiole or leaf-stem that is attached to the centre and under surface of the leaf, the upper surface deep green, shining, under surface purplish. Peduncles terete or cylindrical, smooth, bearing each one a flower that floats on the water. Calyx, four equal, oblong petioles, green outside, white within. Petals in numerous rows, the inner ones shortest, oblong, obtuse, flat. Stamens numerous, in several rows.

History.—This aquatic plant is found in shallow ponds, marshes, and swamps, in most sections of this country. Its large round leaves and handsome white flowers, are observed floating on the surface of the water. The flowers perfume the air with a delightful odor. The root is officinal. It is of dark brown color, fleshy, and possesses a slight bitter and astringent taste. When dry, it is spongy. It should be excluded from the air.

PROP., &c.—The astringent and emollient properties of the root of the white pond Lily, makes it available in diarrhea, dysentery, leucorrhea, and other profuse mucus discharges. For these purposes, the decoction may be resorted to; and this is also employed per injection, for dysentery and leucorrhea. It has been employed as a gargle for sores and ulcers of the mouth and throat.

The fresh bruised root in form of poultice, for abcesses, tumors, carbuncles, and glandular swellings.

Pulvis Npmphea—Powdered Root, Grs. xxx to ℥i.

Decoctum Nymphea—The dry Root, bruised, ℥iss to Boiling Water Oi. Boil twenty to thirty minutes, and strain. *Dose*—A wine-glass full.

OCYMUM BASILICUM.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Name.—Sweet Basil.

DESCRIPTION.—Annual. Stem twelve to eighteen inches high. Leaves ovate, glabrous. Calyx ciliate, upper lip orbiculate, lower one four cleft.

History.—This plant is supposed to be a native of India, where its seeds have been used for gonorrhea and kidney affections. It is occasionally cultivated in the gardens of this country.

PROP., &c.—An aromatic stimulant and diaphoretic. The warm infusion of the leaves and flowers may be employed for inflammatory fevers, diarrhea, colic, &c. The leaves are sometimes used for cooking purposes, being among the most agreeable articles for flavoring food.

ONOTHERA BIENNIS.

NAT. ORD.—Onagrea. SEX. SYST.—Octandria Monogynia.

Common Names.—Sun-drop, Tree-primrose, Scabish.

DESCRIPTION.—Biennial. Stem villose, scabrous. Leaves toothed, lance-ovate. Calyx tubular, five cleft, deflected. Petals four. Stigma one, four cleft. Capsule four cells. Flowers in sub-spikes.

History.—An indigenous plant, growing two to five feet high, in most parts of the United States and Canada, along fields and fences. Its flowers appear from June to August. They are fragrant, and Rafinesque says phosphorescent at night.

PROP., &c.—But little is known of the medical properties of this plant. The leaves have been applied to wounds and sores. The infusion has been used for tetter, and other eruptive diseases.

ORIGANUM VULGARE.

NAT. ORD.—Orchidea. SEX. SYST.—Didynamia Gymnospermia.

Common Names.—Origanum, Wild Marjorum.

DESCRIPTION.—Perennial. Stem erect, four-sided, downy, purplish, twelve to eighteen inches high. Leaves opposite, ovate, hirsute, serrate, green above, spotted. Flowers pinkish color, on oblong spikes. Calyx tubular, cone-like, with broad intervening bracts. Corolla divided, upper lip erect, lower three-parted. Stamens four, didynamous, two short and two long. Stigma bifid. Pericarp one celled.

History.—The wild Marjorum is an indigenous plant found in most sections of the United States, along road-sides and skirts of woods, flowering in July, August, and September. The *O. marjorum*, sweet Marjorum, is a native of Europe, introduced into this country, and cultivated in gardens for culinary purposes. This one is superior to the first for medical purposes, containing more of the aromatic volatile principle, upon which its properties depend.

PROP., &c.—Stimulant, diaphoretic, and mild emmenagogue. The infusion used for eruptive fevers, colds, and suppressed menstruation. The oil of Origanum is often employed in perfumery. In liniments, it is valuable as an irritant, as well as to cover the smell of unpleasant articles.

OROBANCHE AMERICANA.

NAT. ORD.–Pediculares. SEX. SYST.–Didynamia Angiospermia.

Common Names.—Beech-drops, Broom-rape, Cancer-root.

DESCRIPTION.—Stem simple, six to eight inches high, covered with small scales. Flowers yellowish-brown, in terminal spikes. Calyx four to five cleft. Corolla re-curved, ringent. Capsule ovate, cone cell. Seeds numerous.

History.—This plant is found in many parts of the country, on the roots of Beech trees, hence considered a parasite. The *O. uniflora* is another species of this genus, found in the Northern and Middle States, and the *O. ludoviciana* and *O. fasciculata* are peculiar to the Southern States, which are all similar in appearance and properties.

PROP., &c.—Astringent and anti-syphilitic. With some, the Beech drops have been highly praised for the cure of *cancer*, and in some parts of the West formerly asserted to be a specific for syphilis and gonorrhea, which is now a doubtful remedy to rely upon. For these diseases, and for dysentery, diarrhea, erysipelas, the infusion is employed. Externally, it is used for erysipelas, cancers, ulcers, tetter, &c. Per injection, it is employed for leucorrhea. When carefully dried and powdered, it may be used in eight to twelve-grain doses.

ORYZA SATIVA.

NAT. ORD.—Graminea. SEX. SYST.—Hexandria Digynia.

Common Name.—Rice.

DESCRIPTION.—Stem or culm jointed. Leaves clasping. Calyx glume, two valved. Corolla two valved, which adheres to the fruit in terminal panicles.

History.—Rice is probably a native of Asia, and is cultivated in all sections of the world as an article of food. There are about forty varieties of this genus, some of which have awns or *beards*, and some *beardless*. It grows in warm climates, and makes an important article in commerce.

PROP., &c.—Medicinally, rice is employed as a nutritious food for the sick, for diarrhea, inflammatory conditions of the stomach and intestines, fevers, and general debility. The forms are rice-water, boiled rice, rice-milk, rice-pudding, rice-cakes, &c. *Rice-water* is frequently acceptable to the stomach when most other agents fail.

OSMORRHIZA CLAYTONI.

NAT. ORD.—Umbellifera. SEX. SYST.—Pentandria Digynia.

Common Name.—Sweet Cicily.

DESCRIPTION.—Root perennial, thick, fleshy. Stem two or three feet in height, branching. Leaves large, compound, hairy, gashed, and some divided into leaflets. Flowers white, on terminal umbels. Petals oblong. Style erect. Fruit oblong, angled, blackish. Capsules five.

History.—Nuttall classes this plant under the genus *Uraspermum*. It is found in most of our States, in damp ground, along streams, the borders of meadows and woods, flowering from May to July. The whole plant has a sweetish, aromatic taste and smell, from a volatile principle which it contains. The root is officinal, and yields its properties to water, and partially to alcohol.

There are several other species—the *O. hirsutum*, *O. procumbens*, and *O. Canadense*.

PROP., &c.—Carminative, expectorant, and demulcent. It has been employed for colds, flatulence, coughs, pulmonary affections, and general debility. An infusion of the root, which may be drank freely, is thus far its mode of use.

OSMUNDA REGALIS.

NAT. ORD.—Filices. SEX. SYST.—Cryptogamia Filices.

Common Names.—Buckhorn Brake, Flowering Fern.

DESCRIPTION.—Root or rhijoma large, hard, branching, covered with brown scales, numerous fibres. Fronds several, starting from one root, beautifully curved and folded, gradually rising three feet high, with bi-pinnated leaflets expanding, which are ribbed with transverse veins.

History.—The Buckhorn Brake is found in the Northern and Middle States, in low meadows, in woods, along streams. In rich ground it grows four feet high, putting forth its *spores* or pollen in June and July. Its leaves are tonic and astringent, but the root is officinal, and yields its properties to water and diluted alcohol.

The *O. Virginica* was deemed by the Indians a specific for the bite of rattlesnakes. The *O. spectabilis*, when boiled in milk, forms a mucilage similiar to Arrowroot, and the *O. cinnamomea* has been employed for the removal of worms.

PROP., &c.—Astringent, mucilaginous, tonic, and by some considered styptic. The decoction is deemed effectual in diarrhea and dysentery, and as a tonic and nutriment in low conditions of the system. For leucorrhea, the decoction per vagina is efficient to contract the mucus surface. The bruised root, boiled, is employed upon indurated joints and ulcers. For internal use, Cinnamon and other aromatics may be added.

OXALIS ACETOSELLA.

NAT. ORD.—Gerania. SEX. SYST.—Decandria Pentagynia.

Common Name.—Wood Sorrel.

DESCRIPTION.—Roots perennial, creeping, white, juicy, with some little fleshy knobs. Leaves nearly radical, on long slender filiform hairy petioles, three folioles, subsessile, more or less pilose, ciliated, obcordate, broad, lobed, glaucous beneath. Scapes similar and equal to the petioles, with two small adpressed bracts on the middle, one terminal flower, yellow, with purple veins. The five longest stamina equal to the styles. Calyx five, parted. Corolla five, petals yellow. Stamens ten, five alternate, short. Styles five. Stigmas five. Scape longer than petioles; bearing yellow flowers.

History.—The Wood Sorrel is a perennial herbaceous plant, indigenous to this country and Europe. It is found in woods, along fences, and in gardens. There are five species peculiar to the Northern States and Canada, and four of the Middle and Southern States. All are said to have similar medical properties, acid being predominant. *Oxalic Acid*, or Salt of Sorrel of the shops, may be obtained from the Wood Sorrel, though it is usually prepared by the action of nitric acid on sugar. This acid is an active poison.

PROP., &c.—Diuretic, refrigerant and irritant. A mild infusion may be employed in febrile diseases, urinary and scorbutic affections; yet caution is to be observed. The bruised herb or the inspissated juice, may be applied to carbuncles, ulcers, cancers and tumors. It is a very efficient agent, that should not be forgotten by the profession, especially in the treatment of nevus maturnus (mother's mark). Before its application to any tumor, if the surface or skin is not broken, a scarrifier, mustard cataplasm or nitrate of potash should be applied, so as to break the cuticle over the tumor, when the Sorrel should be applied. If the tumor be large and hard, it may be necessary to apply the stick of potash to aid and hasten the sloughing process. Should the Sorrel give great pain and

inflammation, it will be necessary to remove it and apply a poultice of slippery elm mixed with bread or grated crackers. Thus, if necessary, alternating every day until the diseased part has disappeared, when a simple salve of poke leaves, yarrow, and celandine, four ounces each, boiled a few minutes in one pound of lard, should be used for dressing.

Both the Wood Sorrel and the common field Sorrel (Rumex Acetosa), nitrate of potash, chromic acid and arsenic, are known to be the chief agents of the numerous *cancer doctors* who roam about the country, plundering everybody they can. The arsenic is very likely to be disguised with some coloring matter, with morphia added, with a view to allay pain.

OXYCOCA MACROCARPA.

NAT. ORD.—Ericæ. SEX. SYST.—Octandria Monogynia.

Common Name.—Cranberry, Sour-berry.

DESCRIPTION.—A small woody, creeping shrub, with erect branches. Leaves oval, obtuse, spreading, petiolate, glaucous beneath. Flowers red, axilary. Calyx four toothed. Corolla four, parted. Stamens eight. Filaments connivant. Style one. Stigma obtuse. Berries reddish, one celled, many seeded.

History.—The Cranberry is a small evergreen shrub, one to three feet in length, found in the Northern and Middle States. The *O. vulgaris* or low Cranberry, is found in the same localities, and probably only a variety of the first. They are very plentiful in the swamps and damp ground of the pine regions of New Jersey, where many people give attention to their growth and collection, as the berries frequently command two to four dollars per bushel in our large markets.

PROP., &c.—Refrigerant, diuretic, antiseptic, laxative and mild astringent. The expressed juice of the berries, diluted and sweetened, forms a pleasant acidulous drink, allaying thirst in febrile diseases, exciting the kidneys to renewed secretions, which is always of the greatest importance in all fevers. Its action in this way makes it available in dropsical effusions. When properly cooked, the cranberries compose one of the best dishes of the table. The berries, bruised, give us a valuable poultice for local inflammation, as well as to prevent mortification and gangrene.

OXYRIA RENIFORMIS.

NAT. ORD.—Polygonia. SEX. SYST.—Diandria Digynia.

Common Names.—Mountain Sorrel, Round Leaf Sorrel, Boreal Sourdock.

DESCRIPTION.—The root is perennial. Stem eight to twelve inches high, slender, with alternate branches. Leaves thick, obtuse, kidney shape, waved margins, on long petioles. Flowers reddish, in terminal naked racemes. Calyx four leaved. Corolla none. Stamens two to six. Styles two. Stigmas plumose. Nut compressed, with a broad winged margin.

History.—This plant was the *Rumex Digymus* of Linneus, lately made a peculiar genus by R. Brown, and very properly. It grows in the north of Europe, and the boreal part of America, in Greenland, Labrador and Canada. It blossoms in the spring. The whole plant has a sour austere taste, like Sheep Sorrel or *Rumex Acetosella*, so common in the United States, and the same medical properties.

PROP., &c.—Refrigerant, antiseptic, anti-scorbutic, discutient, diuretic, &c. They contain oxalate of lime, and owe their properties to it; also to a little sulphur. They are useful in scurvy, sores, and ulcers, cutaneous eruptions, diarrhea, putrid and inflammatory disorders, &c. They have also been used in itch, wens, ring-worms, and even cancer. The juice or decoction is used externally and internally. Chiefly good in scorbutic affections, and equivalent of *Oxalis* in other respects.

PANAX QUINQUEFOLIA.

NAT. ORD.—Araliacea. SEX. SYST.—Pentandria Digynia.

Common Names.—Ginseng, Five Fingers.

DESCRIPTION.—A perennial plant. Root yellowish, fleshy, cuticle transversely wrinkled, forked or divided in two and sometimes three spindle shaped roots. Stem ten to fifteen inches, simple, erect, divided into three petioles at the top. Leaves three to five on each petiole, oblong, acuminate, serrate. Flowers yellowish-white. Calyx five toothed. Corolla in five petals. Stamens five. Styles two. Fruit red berries, in one cluster, two to three celled each.

History.—This plant, when its fruits is ripe, presenting a cluster of crimson berries supported on a peduncle about two inches high, contrasting with the spreading deep green leaves, compels the beholder to view it with admiration. It is found in the heavy woods of Canada, the Eastern, Northern and Western States; it is also a native of Asia.

Rafinesque informs us that it was known to the Jesuits in Tartary, and afterwards by them found in Canada. He also infers that for two thousand years it has been employed by the Chinese, who have written several volumes upon its medical virtues, asserting its great powers over almost all diseases. At different times, for over thirty years, it has been collected in this country for the China markets, where it is said to be worth its weight in gold. It is said to be of very slow growth, which requires the root to be several years old before it puts forth its blossoms and fruit.

The *P. trifolia*, or dwarf ground-nut, is a species of this genus, though but little known to the profession.

PROP., &c.—A mild stimulant, gently tonic, and peculiar aromatic, sweetish, pungent taste. The Ginseng contains sugar, mucilage, volatile oil, resin, and Rafinesque designates a peculiar principle, which he calls *Panacine*, having a camphorous, pungent taste; soluble in alcohol and water. It has been employed in this country in a limited extent for indigestion, general debility, and nervous affections, in substance, tincture and infusion.

The Chinese people are said to attach miraculous powers to this plant, suspending it around their necks as an amulet, a charm, to prevent the attack of disease. Our own species, which is said to be similar to or identical with that found in China, is so mild in its action that a whole root may be eaten without producing any marked effect.

PAPAVER SOMNIFERUM.

NAT. ORD.—Papaveracea. SEX. SYST.—Polyandria Monogynia.

Common Names.—Poppy, Opium.

DESCRIPTION.—An annual plant. Root whitish, tapering, branching. Stem round, erect, glaucous, branching, two to three feet high. Leaves large, ovate, broad, dentate, incised. Flowers large, terminal, variegated with light, dark, purplish colors. Calyx smooth, divided into two sepals, which fall off when the flower expands. Petals large, four, forming the corolla. Stamens numerous. Capsule large, oval, smooth, upon its top a disk surrounded with stellate stigmas. Seeds numerous.

History.—The term Papava is derived from the Celtic *papa*, because its juice was given to infants to induce sleep. The plant is supposed to be a native of Persia. For centuries it has been cultivated for the Opium it yields, in Asia, Persia, Hindostan and Egypt. In Europe it is cultivated for the capsules, employed for medicinal purposes, and the oil of the seeds that is used in painting. In the United States, the Poppy is often seen in gardens as an ornamental plant, the heads of which are sometimes employed in infusion for pains and colic of children. No doubt we could cultivate it to advantage for the oil contained in the seeds.

Opium is collected from the poppy heads when they are about half ripe, by making an incision on the outer covering, when the white milky juice exudes out, and after twenty-four hours, with suitable knives it is scraped off and collected in vessels. Each head furnishes only a few grains. After this process, the seeds ripen for sowing the next year. This juice contains more or less of the cuticle that is scraped off from the poppy head, supposed to add about one-fourth of its weight to the Opium as found in market, hence we seldom or never see pure Opium. In some countries much labor and care is requisite in the production of Opium, as it is regulated by law, so that the producers of it must sell it only for its real value. Yet in different or perhaps all commercial markets, Opium is found adulterated with sugar, sand, mud, cow-dung, the bruised poppy heads and seeds, stone, &c. I remember a few years since, to have purchased in Philadelphia a pound ball of Opium, which contained a stone weighing full one ounce. Impositions are said to be practised with Opium, by extracting a portion of morphia and selling it in market as a pure article. Good Opium is of uniform consistence, dark red or yellowish color, free from foreign substances, of strong

color, peculiar to itself, and bitterish taste. That is not desirable which is very soft, sticky, and blackish color, or mouldy in appearance. Such is the state of our markets, that it often requires some experience and caution to avoid imposition. It is generally found in balls, and sometimes in oval flattened pieces or cakes, often covered with the appearance of broken leaves, weighing from one half to two pounds, and of a dark brown or grayish color externally.

In commerce, most of it is designated as Indian, Hindostan, Persia, Turkey, Egyptian, and Smyrna Opium. The Turkey Opium is generally supposed to be superior to other descriptions, but with us little reliance can be placed upon this opinion, so that those who purchase should be able to judge for themselves.

Opium has been analyzed by several eminent chemists. That by Mulder is—Morphia, narcotina, codeia, narceine, meconine, meconic acid, caoutchouc, gummy extractive, gum, mucus, and water. Others find salts, a volatile principle, alumina, lime, phosphate of lime, magnesia, brown acid, and some other principles.

The Poppy plant was employed in medicine about four hundred years before the Christian era, by Hippocrates, and afterwards by Diagoras and Dioscorides. It may be presumed that it has been to a greater or less extent, used in all succeeding ages. Within the last two centuries, it has greatly increased in importance both as a commercial and medical agent. It has been the constant companion of calomel and the lancet, often failing to aid the restoration of health, and often subduing anguish and pain, hastening thousands silently and quietly into the arms of death.

The only system of medicine that gained any position and stability in America which excluded its use, was the Thomsonian practice, extensively known from 1820 to 1850. Although the Homeopathic authorities place it in their Materia Medica, yet according to their principles of diminished doses, Opium could never produce any fatal or even dangerous results.

In this country, thousands of people are secretly using Opium both for its exciting and sedative effects, and from habits which have been induced by following the physician's prescription. The Eclectic profession avoid the use of this drug as far as possible, which is quite readily done by our principles of practice, and the new and various means at command.

PROP., &c.—Opium is a narcotic, anti-spasmodic, sedative, stimulant, diaphoretic. The marked physiological effects of Opium may be seen upon the *brain*, producing various symp-

toms of excitement or depression; upon the *nervous* system by loss of motion and insensibility to pain; upon the *vascular* system by the increased or lessened action of the heart and arteries; upon the *cutaneous* system by a prickling or itching sensation, with sometimes gentle diaphoresis; upon the *urinary* organs by lessening the contractibility of the bladder and ureters; upon the *sexual* organs its action is not clearly determined, though some suppose it increases congestion of the parts and excites venereal desires.

Opum has been employed in many diseased conditions of the system, and whilst its effects have a wide range of variations, its repeated exhibitions are always sure to bring the system under its narcotic influence, and very readily produces a sleep which has no awakening.

In general *febrile* diseases it is not indicated, unless accompanied with Ipecac, Capsicum, or some other stimulant and diaphoretic agent. For *gastritis* and *enteritis*, for *dysentery* and *diarrhea*, it is administered with a view simply to allay pain, and to produce its secondary astringent or sedative action, and should be accompanied with the agents above referred to. For the intense pain produced by the obstructions or spasmodic action of the gall ducts or ureters, the opium in substance may be given in one grain doses, repeated if necessary.

In cerebral diseases, Opium is not indicated, except, perhaps, in *delirium tremens*, when other safer relaxants are not at hand. In *neuralgia* and *rheumatism*, it is employed more as a temporary relief than for a permanent cure. For established mucus discharges of the bronchial vessels, it lessens sensibility and cough.

Externally, Opium is employed in form of plaster for neuralgia, rheumatism, carbuncles, &c. The tincture is also used for local inflammation, and by injection for dysentery. The powder is sometimes, to a good advantage, applied to cancers, ulcers, and sores.

The use of this drug should be avoided so long as other suitable means will perform the desired work of relief, because its chief action is to deprive the healthy organs of their natural secretions, as well as to institute habits of its continuous use, which are often difficult to obviate. In acute, severe, as well as troublesome lingering pains, the physician's mind readily turns to this all-powerful agent, and too frequently to the exclusion of others more suitable. With the Old School, the great trio of medical agents has been Opium, Calomel, and the lancet, whilst with the New School these are utterly insignificant compared with the single article of Lobelia. Still Opium is often of great value in the treatment of disease, for

conditions of the patient and surrounding circumstances demand its use.

The effects of Opium are more varied than any other known medical agent. In moderate doses, its first effects are to raise the pulse above the natural standard, excite the brain, enliven the imagination; free talking, laughing, and general animation, soon followed by a feeling of quiet repose, the pulse falling to its natural action. With some, the brain is so susceptible that the eighth part of a grain produces unpleasant impressions of both body and mind. In large doses, its stimulating and exciting effects are of shorter duration, the brain being brought under its influence, producing drowziness, stupor, and sleep for a number of hours, until its soporific effects begin to subside, when the patient gradually recovers with unpleasant feelings, which requires several hours before the system is free from its effects.

When Opium is taken sufficient to destroy life, its stage of excitement is very short, or may not be noticed at all, and the brain, nervous, and muscular systems are immediately subdued, showing drowziness, insensibibility, and deep heavy sleep, with hard, laborious breathing; a full, slow pulse, face suffused or congested with purplish, lethargic appearance. After a few hours the countenance becomes more pallid, the extremities becomes cold, skin moist and clammy, pulse slow, feeble, thread-like, breathing slow, interrupted and gasping; and thus the patient expires, utterly insensible from its first full impressions to its last and fatal effects.

When Opium has been taken into the stomach by accident or design, so as to threaten life, the most prompt and efficient aid is necessary. In this emergency, active emetics become the most available, and with a view to induce free perspiration; and for this Lobelia is the most reliable, or the common emetic of Lobelia, Blood-root, and Ipecac. This should be accompanied by large draughts of diluent drinks. Vegetable acids, such as diluted vinegar and lemonade, are believed by some to neutralize the narcotic properties more readily than any other known agents. The stomach-pump has been employed, though of little use if the Opium is taken in substance. Cold water should be dashed upon the head, back, and stomach. Friction, irritation, and exercise are all of importance, to keep the fluids circulating, and restore the mind to consciousness as much as possible, with a view to retain vitality until the narcotic influence has passed from the brain.

With some individuals, Opium, even in small doses, cannot be retained in the stomach, and in others it produces restlessness, wakefulness, delirium, and headache, so that its use is inadmissable. There are many people in our country habitu-

ally using Opium either in substance or in tincture, which in most cases has been established during protracted dysentery, diarrhea, and other diseases. It is far more difficult for such unfortunates to extricate themselves from this dilemma than for the inebriate to set aside the intoxicating glass. The Opium eater is truly an object of sympathy, though when under its effects as happy as if in possession of the whole world; yet when its power dies away, he becomes weak, trembling, pale, ghastly; and, filled with horror and anguish, he repeats the dose that he would rejoice to avoid. In such cases there is no reliable substitute, unless accompanied with the most determined energy of the victim; and to this end, the best agent that we can recommend is equal parts of compound tincture Myrrh (Thomson's Number Six), with laudanum, slowly and gradually diminishing the last and increasing the first, until the laudanum is left entirely from the dose. In this country, hundreds of pounds are annaully consumed, and thousands of dollars expended in this lamentable practice. Those who thus use Opium without spirituous liquors may be noticed as presenting a dull, sallow complexion, lividity of lips, dullness of eyes, and languid appearance, downcast looks, forgetfulness, and general debility.

The inordinate use of Opium is followed in many countries, India, Persia, Turkey, and China. The Chinese are known as Opium smokers, having pipes specially adapted for holding a piece the size of a pea or pill; and after drawing in one mouthful of the smoke, they pass it, if possible, through the ears and nose. This generally makes them talkative, sociable, and happy for a short time, when they fall into a sleep or repose. With some, however, it makes them quarrelsome and uncontrollable.

In substance, Opium may be given in powder or pills, when the dose should be varied to meet the condition of the disease and the peculiarities of the system. One grain is the medium dose of an adult, which may be increased to three or diminished to one-fourth, as indicated. It should always be remembered that some are far more susceptible, and sometimes to unpleasant impressions, than are others. When it is offered in severe, acute and painful affections, a full dose is generally advisable, so as to bring the patient directly under its influence. Of the many combinations and preparations of Opium, we shall only introduce a few, such as are in most general use.

In this country the poppy heads are not often employed by the profession, but occasionally the infusion is used in domestic practice to allay pain and colic of children, which needs no special formula.

Decoctum Papaveris.—Decoction or fomentation of poppy

heads. The heads, bruised, ℥ii; Water, Oii. Boil ten minutes. When hot, cloths may be saturated with it, and applied for abdominal inflammation. When cold, for sore and abraided surfaces, for sore eyes, painful sores, cancers, &c. For irritable conditions of the vagina and uterus use by injection.

Pilula Opii.—The pure soft Opium, or the powder formed into pills. *Dose*—Gr. i. Some patients can bear no more than one-fourth, and others may take three grains.

Tinctura Opii.—Tincture of Opium, or Laudanum. Take Opium, ℥iii; pure Alcohol, Oi; Water, Oi. Digest twelve days and filter. *Dose*—Gtts. xxx, which is about equal to one grain of Opium. For infants the dose should be started at one drop. The impressions of Opium are sooner obtained in this form than in substance, being already in a soluble state, and quicker taken up by the absorbents. Again, alcohol being a stimulant, one grain in this form will not produce so powerful narcotic effects as one grain in substance. Laudanum, as in substance, sometimes is rejected by the stomach, and liable to produce other unpleasant symptoms.

Morphia.—This term is said to have been derived from *Morpheus*, the god of sleep. Pareira informs us that the *magistery* of *Opium*, noticed in the old works of near two centuries past (Ludwig, 1678), may have been Morphia.

It may be obtained by taking Opium, lb. ss, macerated in pure Water, Oiii, and filter; then add Alcohol, Oii, and solution of Ammonia, fl℥iss, mixed with Alcohol, ℥iv. Allow this to stand a few days, and the Morphia falls at the bottom.

Morphia Sulphas.—Sulphate of Morphia. Take of Morphia ℥ss; Water, Oss. Mix together, and gradually pour in a little diluted sulphuric acid, until all are well mixed together; then by water-bath evaporate until the water and the acid are thrown off, and crystals form when cooling. These crystals should be spread on white printing paper until dry. The sulphate of Morphia is soluble in cold water. It has a feathery, fine white appearance. *Dose*—One-eighth to one-fourth of a grain, and usually mixed with a teaspoonful of cold water or made into pills.

This concentrated preparation of Opium has been employed for many years by the Old School profession, and is the most convenient form of using this powerful and dangerous drug. It is a common substitute for the Opium pill, yet in some cases the Opium in substance is preferable, as in nephritis, uterine, and some other local inflammatory conditions. This salt is sometimes sprinkled on painful sores, ulcers, &c., and by cancer doctors added to arsenic, and other powerful and destructive agents, to allay pain.

There are several other preparations, as the acetate and muriate of morphia, solutions, &c., though not necessary to notice here.

PARIETARIA PENNSYLVANICA.

NAT. ORD.—Urticea. SEX. SYST.—Monœcia Tetrandria.

Common Name.—Pellitory.

DESCRIPTION. — Stem erect, simple, pubescent, striated. Leaves linear-lance, alternate, pubescent, having opaque dots. Flowers in axilary compact clusters. Perianthe persistent, oblong, enclosing the seed.

History.—This plant grows twelve to eighteen inches high, blossoming in May and June, and found in the Southern States, about walls of old ruins and buildings. But little known to the profession.

PROP., &c.—The Pellitory is known to have diuretic, diaphoretic, stimulant, and emmenagogue properties. The decoction has been employed for nephritis, gravel, and suppressed menstruation.

PHYSALIS VISCOSA.

NAT. ORD.—Solanacea. SEX. SYST. —Pentandria Monogynia.

Common Name.—Ground Cherry.

DESCRIPTION.—Stem erect, herbaceous, the young branches pubescent and viscid. Leaves alternate, lanceolate, dentate, and on long petioles. Flowers yellow, axilary. Calyx five cleft, large, inflated. Corolla campanulate, twice as long as the calyx. Fruit a large, dark, yellowish berry, enclosed in the calyx.

History.—The ground Cherry is found in most all sections of this country, in and along the borders of cultivated fields, roads, &c. It grows about one foot high, bearing yellow flowers in June and July. Its fruit is partly enclosed in the calyx and sepals, the size of large Cherries, and when ripe may be eaten. There are several other species.

PROP., &c.—The fruit has emulcent and laxative properties. Has been used for nephritis, gravel, and believed to have sedative influence. The plant is but little used by the profession, and deserves more attention.

PHYTOLACCA DECANDRA.

NAT. ORD.—Atriplices. SEX. SYST.—Decandria Decagynia.

Common Names.—Poke, Garget, Scoke, Pigeon Berries.

DESCRIPTION.—An indigenous plant. The root is perennial, large, branched, fleshy, easily cut when fresh, hard and fibrous when dry. Stem large, branching, three to six feet high, of green and purple color. Leaves large, scattered, ovate, oblong, acute, entire, ribbed beneath, of deep green color. Flowers greenish-white, small, numerous, in simple racemes. Calyx whitish, cleft in five. Stamens ten, supported on two-lobed anthers. Ovary green. Styles ten. Berries superior, ten celled, dark purple.

History.—This plant is a native of this country, though seldom found in the Eastern States and Canada. It flourishes best in dry soil, and found in uncultivated grounds, along fences and skirts of woods. Early in the spring the young shoots are largely collected and boiled for pot-herbs. The roots, leaves and berries, are valuable medical agents. The large stems contain potassa, so that the burnt ashes may be applied as an escartic to fungus growths and cancers. The roots should be collected in the spring or late in the fall, cut into thin slices, and carefully dried, when they should be ground into powder, and kept from the air. The berries should be prepared in tincture, or the juice expressed out and evaporated in the sun's heat to a thick extract. The Phytolacca has for the last twenty years been highly esteemed by the reformed profession of this country.

PROP., &c.—Alterative, detergent, discutient, anti-syphilitic, diuretic, anti-hepatic, emetic, and cathartic. It contains alkaline principle, resin, starch, gum, lignin, and some other principles. This plant stands among our valuable alterative agents, producing marked impressions on the glandular system, and for this reason it becomes efficient in scrofula, syphilitic, and mercurial diseases; for hepatic and glandular affections. Its effects are also noticed in the excretions of the system, stimulating the liver, spleen, and cutaneous vessels; hence its value for enlargement of the liver and spleen, and for cutaneous diseases.

The root may be used in substance when powdered, or in extract, and continued for some days or weeks, when desired to remove chronic diseases. The root partly roasted and bruised, is a powerful discussive agent for the early stages of felons, and for glandular swellings, elephantiasis, contracted ligaments, and indurated joints, &c.

A strong decoction of the fresh root, applied to tetter and saltrheum, will in some cases excite a large flow of watery matter from the part affected. The juice of the ripe Poke berries, as well as the extract, have been considerably employed and highly extolled for rheumatic affections. From the fresh leaves an ointment is readily made that becomes of service in some forms of skin diseases, piles, ulcers, and sores.

Internally this plant is seldom used, except for alterative purposes. In large doses it produces purging and vomiting, affects the eyes and brain, with great prostration and sometimes convulsions.

Pulvis Phytolacca.—The root carefully dried and powdered. *Dose*—Grs. v to xv, in syrup or pills.

Extractum Phytolacca.—Take of leaves carefully dried, lb.i; Alcohol, Oiss; Water, Oiss. Digest ten days and filter. By water-bath distil off the alcohol, and the remainder place over a gentle fire, not allowing it to boil, until reduced to the consistence of cream. In three grain pills; give one three or four times daily, as indicated. Extract from the dried root may be prepared as above.

Inspissatus Phytolacca.—Take of clean, fresh, ripe Poke berries any quantity; bruise, and strain through coarse linen, or press out under a screw-press. The juice should be put in flat earthen vessels, and allowed to evaporate in the sun's heat, or placed in a warm room, until reduced to proper consistence. *Dose*—Grs. iii to ix, at discretion.

Tinctura Phytolacca.—Poke berries, bruised, fl℥vi; Holland Gin, Oii. Digest six days and filter. *Dose*—fl℥ss to i. For rheumatism, dropsy, and urinary affections.

Uuguentum Phytolacca.—Take clean, fresh Poke leaves, lb.ii; Lard, lb.ii. Bruise the leaves, add the lard, and simmer gently for half an hour. For summer use it is advisable to add four ounces of beeswax. Some of the essential oils may be added to give it fragrance. This ointment may be used at discretion for ulcers, sores, and cutaneous diseases.

PINUS PALUSTRIS.

NAT. ORD.—Pinacea. SEX. SYST.—Monœcia Monadelphia.

Common Names.—Long Leaved Pine, Yellow Pine, Pitch Pine.

DESCRIPTION.—Its trunk rises sixty to ninety feet; its base one to three feet in diameter. Bark rough, dark ash color. Leaves long, in threes, clustered at the end of the branches, handsome green color. Its sheathes pinnatifid, scaly and persistent. Cones sub-cylindrical, sharp recurved edges, six to ten inches long, large.

History.—In this country are found several species of Pine trees, most of which are small, and not essential here.

The *Pinus Strobus* is a large tree of sixty to ninety feet (quite similar to the *Palustris* of the Southern States), found in the North-eastern States and Canada. The pines of Canada and Nova Scotia yield a large amount of lumber for Great Britain. In former years, Maine chiefly supplied our markets. Of late years the northern forests have been so far depleted that lumbermen have turned their attention to North Carolina for the large yellow *Palustris.* The Pine tree yields—

White Turpentine of commerce, whitish semi-liquid, and when submitted to the process of distillation in water, the *oil* or *spirits* of Turpentine floats on the surface, and the resinous substance falls to the bottom.

As a remedial agent, it is extensively employed in this country. Pareira classes it among the first for destroying the *tape-worm*, and may be given in one half to one ounce doses, either mixed with or followed by castor oil, in four hours. It may be combined with marsh-mallow or elm mucilage.

In *Nephritic* affections, as ulceration and hydatids of the kidneys. Gtts. x to xxx, repeated.

Dropsy.—In its chronic forms, as a stimulating diuretic.

Blenorrhaga.—To arrest profuse mucus discharges.

Gonorrhea.—Increasing the secretions of the kidneys, relieving pains. Gtts. xx to xxx.

Sciatic and *Neuralgic affections.*—Used externally.

Puerperal Fever.—Dr. Brenan, of Dublin, considered it a specific. *Dose*—A tablespoonful every three or four hours, and applying soaked flannels to the abdomen. Considerably employed by the Alopathic doctors of this country, though of very doubtful utility, since the system becomes thoroughly saturated by the process of absorption, relaxing and paralyzing the muscular and nervous systems. These symptoms have occurred to those in its manufacture. A powerful relaxant, and should be used with caution. *Dose*—fℨi, on sugar.

In *Liniments*, extensively employed.

Tar.—The roots, green limbs and leaves, cut in small pieces, are put into a conical form, covered over with tufts of earth, fired, and submitted to a slow combustion, when the tar falls to the bottom, and is received into suitable vessels.

Tar is nearly black, viscid, semi-liquid. It is soluble in fixed and volatile oils, alcohol, and ether. By distillation it produces the *oil* of tar, and *pyroligneous acid.* In this process the residue falls to the bottom, yielding *Pitch.*

Black Pitch, or *Pix Nigra* of commerce. Occasionally used as medicine. It is solid, brittle, of brilliant black color.

Used in form of ointment, for scalp and other cutaneous diseases.

Oil of Tar is a reddish fluid, and passing through the still several times, becomes colorless. Occasionally employed for affections of the scalp.

Pyroligneous Acid.—A transparent liquid of brownish color, with smell of smoke and taste of tar. It is stimulant, and antiseptic. Employed as a wash for ulcers, abcesses, sore nipples, diseases of the scalp, cancers, and sore throat. Used to prevent mortification and gangrene. Applied in the cure of beef and hams to impart a smoky flavor.

Resin.—A product in the distillation of the spirits of Turpentine from the gum of the Pine tree. It is solid, brittle, shining, light color, yellowish, bitterish taste, and electric by rubbing. Internally, astringent and irritating. Seldom used. Externally, the powder is used to check hemorrhages, and extensively employed in salves and plasters.

Pix Bugundica.—Burgunda Pitch may be prepared from the Turpentine gum of this country, though our markets are supplied from Europe, produced from the gum of *Pinus Excelsia.* It is composed of resinous and volatile principles. Hard, brittle, yellowish, bitterish taste, and softens under pressure of the hand. It is used externally in form of plaster, as a mild excitant, stimulant, supporting and strengthening the parts, for rheumatism, lumbago, pains in the back and chest.

PINCKNEYA PUBENS.

NAT. ORD.—Rubiacea. SEX. SYST.—Pentandria Monogynia.

Common Names.—Georgia Bark, Florida Bark, Fever Tree.

DESCRIPTION.—Large shrub, with many stems, from fifteen to twenty-five feet high. Leaves opposite, with stipules and petioles, oval, four or five inches long, acute at both ends. Flowers terminal, cymose, rather large, one or two inches long. Calyx pubescent, colored of yellow or red. Corolla white, spotted with red; five long stamens, filaments filiform, erect, white, anthers brown. Pistil yellow. Capsule round, compressed, thin, cartilaginous. Seeds round, flat, and winged.

History.—Discovered by Bartram, in Georgia and Florida, called by him *Mussenda Bracteata.* Michaux established the genus, dedicated to General Pinckney, a botanist, philosopher and statesman; it is intermediate between Cinchona and Mussenda. Only one species is known, found from Carolina to Louisiana, along the sea-coast, in cool, shady groves and

swamps, on the banks of rivers, &c. It blossoms in June and July, and is very ornamental. The genus *Cinchona*, producing the Peruvian bark, extends no further north than the West Indies; this shrub appears to be the representative and substitute of it on the north continent, by its near organization and qualities.

PROP., &c.—Tonic, anti-periodic, and mild stimulant. The bark of this small tree is officinal. It has long been known to the people of Georgia and Florida, and used with success in the cure of intermittent fevers, and Rafinesque relates that six cases in every seven are said to have been cured with it. It may be employed in all cases where the Peruvian barks are indicated. *Dose*—Grs. xx to lx, in powder. It may be exhibited in decoction, infusion, and wine tincture. Our Southern physicians should give special attention to this article.

PLANTAGO MAJOR.

NAT. ORD.—Plantaginacea. SEX. SYST.—Tetandria Monogynia.

Common Name.—Plantain.

DESCRIPTION.—Root fibrous, whitish. Leaves broad, ovate, seven nerved, glabrous, remotely toothed, on channeled peti-

oles. Flowers whitish, dense, on cylindrical spikes one or two inches long, supported on its scape, several inches in length. Seeds numerous.

History.—Found in all sections of this country, along roadsides, in fields and gardens. There are many species of Plantago. The *P. Virginia*, dwarf Plantain, has spatulate, lanceolate, pubescent leaves. The *P. lanceolata*, snake Plaintain, Ripple-grass, has long, tapering, lanceolate leaves.

PROP., &c.—The use of Plantain has been chiefly confined in domestic practice, by applying the leaves to inflammatory surfaces, carbuncles, boils, felons, and excoriated surfaces, and for bites of spiders and snakes. It is recommended for various internal affections — for hemorrhoids, bloody urinary discharges, dysentery, and leucorrhea, in the simple decoction or boiled in milk. The expressed juice of the green leaves may be reduced by gentle heat to an extract, and given in pills.

PODOPHYLLUM PELTATUM.

NAT. ORD.—Podophyllea. SEX. SYST.—Polyandria Monogynia.

Common Names.—Mandrake, May-apple, Wild Lemon.

DESCRIPTION.—Root perennial, dark yellow, size of the little finger, horizontal, creeping, jointed, with yellowish fibres at each joint. Stem naked, eight to twelve inches high, divided at the top. Leaves two, one on each division or petioles of the stem. The leaves are large, hanging, five to seven lobed, palmate, cuneate, dentate. Flowers white, large, axilary. Sepals three. Petals six to nine. Stamens twelve to eighteen. Stigma large, peltate. Fruit large, pulpy, yellowish when ripe, in shape similar to a small pear, of sweetish, mawkish taste. Seeds many.

History.—Found in most all sections of this country, in heavy soil, in and along the skirts of heavy-timbered woods. Its flowers appear from May to July, and the fruit ripens in September. Rafinesque described two other species—the *P. montanum*, with stem elongated, deeply furrowed. Leaves palmate, not peltate, sinusses acute, segments unequal, ends acutely bifid, with many unequal teeth. Petals oblong, obtuse, six to seven. Stamina seven to nine. Berry oblong, yellowish. In the Alleghany mountains, from New York to Virginia. *P. calicarpum*—Stem short, equal to the petioles. Leaves peltate, palmate, six segments, obovate, bifid, with unequal teeth. Petals six, round, concave. Stamina ten. Berry oblong, white and rose colored. In Louisiana and Texas. Flowers large, smelling like Orange-flowers. Berry small.

For many diseased conditions, the Podophyllum stands unrivalled by any other article in the Materia Medica. It was brought into use by the early reformers of our country. As far back as 1836–7, it was employed by Drs. Thomas Cooke, P. F. Sweet, and others of Philadelphia, in the form of the powdered root, with equal parts of cream of tartar. A few years later, the above gentlemen employed it in the form of compound alcoholic extract, pulverized with sugar, thus avoiding the large and nauseating doses of the crude article.

The root of the Mandrake is officinal, and twelve to eighteen inches in length, which should be collected in October, when the fruit is ripe, and the leaves yellowish and falling. The whole plant is peculiar and attractive when presenting its two large, palmate leaves, large whitish flowers, adorned with yellow centres, or followed by its pendulous fruit. It is one of nature's most powerful and efficient combinations of medicinal principles, having gum, starch, albumen, lignin, extractive matter, gallic acid, small portions of fixed and volatile oils, salts of lime and potash, alkaloid and neutral principles, with two and probably more resins. Thus it will be seen that both alcohol and water are employed to obtain all its active principles.

About 1842, this article attracted the notice of Dr. Hodgson, of Philadelphia, who obtained its resinous principle, calling it *podophylline*; but neither the plant or this preparation received any attention from the Old School profession. So far as we know, W. S. Merrell and F. D. Hill & Co., of Cincinnati, may claim the merit of introducing the resinoids or concentrated principles of this and many other plants to the Eclectic profession. In this connection, we must notice the long and favorably known chemical laboratory of B. Keith & Co., of New York city, where a large number of concentrated agents peculiar to our practice are produced. The profession at large are greatly indebted to the above named gentlemen for their extensive productions in this department of medical science.

PROP., &c.—The root of this plant possesses cathartic, emetic, hydragogue, cholagogue, sialagogue, alterative, and anthelmintic powers. For efficiency, it can be relied upon with more confidence than most other agents, except where the stomach has become weak and irritated, when it is liable to be rejected. When the stomach and bowels have become engorged, or in severe attacks of almost any type of fever, it can be made to perform the double office of vomiting and purging, effectually cleansing the entire canal. Then its first and secondary effects are upon the liver, exciting both its secretions and excretions, stimulating the salivary glands and the spleen. Its taste is

unpleasant to any worms in the canal, and by the large amount of secretions induced, together with its powerful action, they are swept out in the alvine discharges. It is the best anthelmintic in the Materia Medica, especially if the patient can bear its full impressions.

If the kidneys fail in secretions, or if, by inflammation of the neck of the bladder, or any portion of the urethra or ureters, there is scanty and painful passages of urine, a full dose of this agent is almost sure to open and flood the gates of this important outlet of the system. In gonorrhea, it is effectual, which of course should be followed with mild diuretics and astringents.

In venereal, scrofulous, and mercurial diseases, when the absorbents and glandular system are always involved, a full dose of the Podophyllum is specially indicated.

For inflammatory rheumatism, its universal effect is to relax the tension, excite the secretions, and lessen arterial excitement. In chronic rheumatism, induration, and stiffness of the joints, enlargement of the liver and spleen, testicles and mammary glands, it may be advanced in a large dose for its full impressions, or given daily in small doses.

This being a powerful agent, the physician should always, as far as possible, regulate the dose according to circumstances, for the patient may be weak and prostrated, or have a weak and inflamed condition of the stomach. In such cases, it is well to avoid its use, employing milder and less nauseating agents.

It is seldom exhibited in decoction, infusion or tincture. *Dose* of powder, Grs. xv to xxx, with equal parts of bi-tartrate of potassa—not often used.

Extractum Podophylli Compositum—Take of dried Root, coarsely powdered, ℥xv; of dried Blood-root (Sanguinaria Canadensis), coarse powder, ℥v; Alcohol, Oii. Digest ten days, pass off the tincture by displacement, and gradually pass through a half pint more of alcohol. Reduce this tincture by water-bath to consistence of cream. Add to the powder two pints of water, let stand twenty-four hours, and pass through by displacement; gradually pass through one pint more of water. Raise this infusion to boiling heat, and strain through coarse linen or flannel; then by gentle simmering, reduce to the consistence of thin cream, and while hot unite the two extracts.

This extract should be thoroughly triturated, in a wedgewood mortar, with one pound of dry white sugar, one drachm of saleratus, and sometimes thirty drops of croton oil is added. To make a fine, dry powder, more sugar may be necessary. It is advisable to spread the powder on large earthen plates, in a

warm, dry place, which aids in bringing it by trituration to fine powder. *Dose*—℥ss to i, in one or two tablespoonfuls of cold water.

This preparation contains most all of the medical properties of the Mandrake and Blood-root. The object of the alkali is to correct any acidity of the stomach. The croton oil (when added) makes it a more active purgative, and lessens the bulk of the dose. A thorough trituration with the sugar divides the active principles, which in this way may be nearly all suspended in water, acting evenly on the walls of the stomach. For these reasons, and from many years of experience, I prefer this preparation to the *podophyllin*. When vomiting is desired in connection with cathartic effect, warm water should be used in place of the cold.

N. B.—Those who desire to add an aromatic taste to this most useful and reliable preparation, may combine in preparing the powder, a few drops of the oil of Cinnamon, Cloves, or Peppermint.

Podophyllin—The preparation of B. Keith & Co., New York, contains the resinoid, alkaloid, and neutral principles, an admirable article, if well triturated with sugar. *Dose*—Gr. ss to i, as an alterative, and Grs. iij to v, as an active emetico-cathartic. In some cases, the large doses are liable to produce inflammation, hard vomiting, and hemorrhage; and in inexperienced hands, serious consequences have ensued. The above firm has published a valuable volume on the application of this and many other concentrated agents, but keep their mode of preparation a profound secret.

The Eclectic Dispensatory, by John King, M. D., of Cincinnati, gives the process of F. D. Hill & Co., for obtaining the resins of the plant.

POLANISIA GRAVEOLENS.

NAT. ORD.—Capparides. SEX. SYST.—Dodecandria Monogynia.

Common Names.—Clammy-weed, Worm-weed, False Mustard.

DESCRIPTION.—Root perennial, white, branched. Stem erect' simple, or branched, one to three feet high, pubescent, viscose' terete. Leaves alternate, petiolate, with three sessile, oblong' acute, unequal and entire folioles, viscid like the stems. Flowers in terminal racemes, lengthening by degrees, rather crowded by leaves, becoming very small above, each flower axilary and solitary, on a long peduncle. Calyx colored, of white and rose, with four unequal folioles, two narrow, acute,

two broader, unequal. Petals white. Stamina eight to fifteen, some longer and some shorter than the petals, fastigiate, filiform, red. Anthers round. Pistils and siliques as above.

History.—Rafinesque, in his Medical Flora, 1830, describes this plant as a new genus of his own, from whom Gray quotes

as authority in his Manual of 1858. Comstock also gives it as a species of the *Cleome*. It is not mentioned in any of our late medical authorities; and without any definite knowledge of its practical utility, I quote from Rafinesque: "Indicated in 1807, established in 1817, and confirmed by Decandolle. It contains many species blended by Linneus under the name of *Cleome Dodecandra*, native of Asia, the tropics, &c., while this is peculiar to North America, and is found all over it, from Canada to Louisiana, on the sandy and gravelly banks of rivers and lakes. It is one of the most common plants on the banks of the Ohio. It blossoms in summer, from June to August. The generic name means *many unequalities*; the specific applies to its strong smell, similar to the *Erigeron graveolens* of Europe.

"PROP., &c.—Very few authors have noticed this plant, except Schoepf, who first stated the root to be anthelmintic. The fact is, that the whole plant is such, even the seeds; and its

effects are similar to those of *chenopodium anthelminticum.* The decoction, powder, or confection, may be used in the same doses. An active oil may be distilled from it, but it is not yet in use. It is a popular remedy in some parts of Ohio and Canada; but I am not prepared to state whether it may be equally sure as the Worm-seed. We want experiments on it. I do not believe that it is narcotic, except in a very harmless degree, although W. Barton states that it is a deleterious, active plant. His observations have never been published. By its smell, it appears to have similar properties with the *Erigeron graveolens* of Europe, and thus it may be diuretic and anti-spasmodic."

POLYGALA INCARNATA.

NAT. ORD.—Polygalacea. SEX. SYST.—Diadelphia Octandria.

Common Name.—Milkwort.

DESCRIPTION.—The stem is erect, simple, slender, slightly angled, twelve to eighteen inches high. Leaves scattered, alternate, sulate, linear. Flowers in long spike form, having oval wings, colored at the margin. Corolla tubular. Seeds oval.

History.—The *P. incarnata* is a slender and delicate little plant, bearing purplish flowers, quite common in Georgia and other Southern States. It receives its common name because when its fresh root is broken, it emits a milky juice.

Under the genus Polygala, botanists enumerate about seventeen species that are spread out in all of our States. The *P. rubella* has received some notice as a medical agent, and the *P. pancifolia* is specially noticed in Rafinesque's Medical Flora. The *P. senega*, however, is the one best known, and officinal.

POLEMONIUM REPTANS.

NAT. ORD.—Polemonea. SEX. SYST.—Pentandria Monogynia.

Common Names.—Jacob's Ladder, Blue Bells, Greek Valerian.

DESCRIPTION.—The stem is erect, slender, branched, twelve to eighteen inches high. Leaves pinnate, in acute lanceolate leaflets. Flowers blue, nodding. Calyx five cleft, campanu-

late. Corolla rotate, five parted. Stamens five. Capsule three celled.

History.—Found in New York, the Western and South-western States, in woods, along streams and shaded places. A plant not well known to the profession generally, and requires further investigation.

PROP., &c.—The Eclectic Dispensatory ascribes alterative, diaphoretic and astringent properties to this plant.

POLYGALA SENEGA.

NAT. ORD.—Polygalacea. SEX. SYST.—Diadelphia Octandria.

Common Name.—Seneka Snake-root.

DESCRIPTION.—Root perennial, branching, contorted, yellowish, large. Stem erect, branching. Flowers in dense crowded spikes, with orbicular concave wings, whitish. Leaves alternate, lanceolate, sometimes broad. Calyx five cleft. Corolla small, divided in two. Capsules two. Seeds two, hirsute, with hairs.

History.—The Senega is a native of this country, most abundant in the Middle and South-western States. The root is officinal, being crooked, uneven in size, of a yellowish color. Its corticle or external part is thick; internally, a white, woody substance. Several chemists have analyzed the plant, and Pareira gives that of Dulong as follows: Volatile oil in traces, acrid extractive, yellow extractive, a substance reddened by sulphuric acid, pectic acid, wax, resin, gum, woody fibre, malates of potash and iron, mineral salts and iron. Polygalic acid has also been obtained, consisting of carbon, hydrogen, and oxygen, which Gehlen called *senegin*. Alcohol, ether, and water, are used to obtain its properties.

PROP., &c.—Expectorant, diuretic, diaphoretic, and stimulant. In large doses it is acrid, causing irritation of the throat and fauces, increased flow of saliva; produces a burning in the stomach, vomiting and purging. It excites the secretions of the bronchial vessels, kidneys, uterus, and skin. The syrup is extensively employed for affections of the lungs, to excite mucus secretions in catarrh, asthma, and croup. Emmenagogue powers are ascribed to this plant, though seldom employed for this purpose. It has been used for rheumatism, and in dropsy, to excite the secretions of the kidneys and skin. Its common name, *Snake-root*, is derived from its supposed power over the virus of snakes and other venomous reptiles. *Dose* of powder, Grs. x to xv.

Infusum Senega—Of the dried root, bruised, ℥ss; boiling water, Oss. Digest a few hours, covered, and give one or two ounces three or four times daily, sweetened.

Syrupus Senega—Bruised Root, ℥iv; Water, Oi; Alcohol, fl℥iv. Digest twenty-four hours, then boil to one half and strain. Add one pound of white sugar, apply gentle heat a few minutes, taking off the impurities that may rise at the top, and set aside to cool. *Dose*—fl℥ss to one, according to age and condition.

This syrup is quite acceptable to children, of good service in all affections of the throat, bronchial vessels, and convenient for combining with other agents, and decidedly the best form in which the Senega can be used.

POLYGONUM AVICULARE.

NAT. ORD.—Polygonacea. SEX. SYST.—Octandria Trigynia.

Common Names.—Knot-weed, Goose-grass, Door-weed.

DESCRIPTION.—A well known annual plant, very variable, procumbent or erect, diffuse, with many slender branches. Leaves narrow, lanceolate, sessile, acute at both ends, with nervose and membranaceous stipules. One to three axilary flowers on short peduncles, white or reddish. Perigone persistent, with five unequal obtuse segments, &c.

History.—This species of the Polygonum, with a large number of others, is found in most all parts of this country, in fields, along roadsides, and garden fences. Included by some authors, is *P. fagopyrum*, the Buckwheat, so extensively cultivated in this country.

PROP., &c.—The infusion and decoction have been the chief forms of using this article, as an astringent, diuretic and tonic. Employed for dropsical effusions, for hemorrhage of the stomach, bowels and kidneys, and to give tone and strength to the whole system.

POLYPODIUM VULGARE.

NAT. ORD.—Filices. SEX. SYST.—Cryptogamia Filices.

Common Names.—Polypody, Brake Fern, Rock Brake.

DESCRIPTION.—Root perennial, creeping, irregular, brown, with chaffy scales extending to the caudex or base of the stipe. Frond six to twelve inches high, distiched as usual in ferns, deeply cut in approximated segments; oblong or lanceolate, obtuse, smooth, crenulate, upper ones gradually coherent and smaller.

History.—This little fern-like plant is found on rocky ground, in woods, throughout most sections of this country. Its root is employed in the form of decoction. It has a brown-reddish color, having a peculiar taste, slightly bitter and mucilaginous.

PROP., &c.—The Polypody is demulcent, purgative, and anthelmintic. Both in syrup and decoction it has been administered for pulmonary affections, coughs, rheumatism, and for rickets. It has been recommended as a substitute for the Male Fern in removing the tape and other worms from the alimentary canal. In full and repeated doses it purges the bowels.

Decoctum Polypodium—Bruised Root, ℥i; Water, Oi. Reduce one half by boiling; strain while hot. *Dose*—fl℥i to ii, repeating two or three times daily.

POLYGONUM BISTORTA.

NAT. ORD.—Polygonacea. SEX. SYST.—Octandria Trigynia.

Common Names.—Asmart, Smart-weed.

DESCRIPTION.—The root of this species is perennial. Stem simple, jointed, twelve to eighteen inches long. Leaves broad, acute, nerved, partially waving, on long petioles. Flowers in large terminal spikes, of a pale rose color when fresh, turning to a dusky appearance.

History.—Found in the Northern and Middle States. It is found along fences of gardens and cultivated fields.

PROP., &c.—Astringent, tonic, diaphoretic. The whole plant employed, containing tannin, gallic acid, starch, and some other properties. The infusion is used in domestic practice, for colds and inflammatory fevers, and when taken warm, and in large doses, greatly facilitates the office of free perspiration. Useful in leucorrhea and hemorrhage.

POLYGONUM PERSICARIA.

NAT. ORD.—Polygonacea. SEX. SYST.—Octandria Trigynia.

Common Names.—Smart-weed, Lady's Thumb.

DESCRIPTION.—Stem smooth, one to two feet high. Leaves lanceolate, acute, veined, and often a dark purplish spot near the centre of the upper side. Flowers purplish, tinged with green, in dense, oblong spikes.

History.—This species is found in Canada, the Eastern, and most parts of the United States. It is quite common about old buildings, along fences, in fields and moist places.

PROP., &c.—Astringent, diaphoretic, and tonic. It is often used as a substitute for the *P. bistorta*, in the form of infusion and decoction, for fevers, colds, diarrhea, &c. None of these plants have received any special attention from the profession.

POLYTRICHUM JUNIPERINUM.

NAT. ORD.—Musci. SEX. SYST.—Cryptogamia.

Common Names.—Hair-cap Moss, Ground Moss, Robin's Rye.

DESCRIPTION.—Stem erect, simple, sometimes divided, three to six inches high. Leaves lanceolate, pointed, awned, edges turned. Capsules four sided, acute.

History.—This species of the Mosses is peculiar in appearance, often found in patches, with its leaves so thick as to cover the ground, with simple erect stems, supporting the capsules, that are covered with whitish, yellowish hairs. Its reddish, greenish colors give it a variegated appearance. Found in open woods, in uncultivated fields, on sandy soil, and in the Northern and Middle States.

PROP., &c.—Diuretic and alterative. As a remedial agent it is but little known, although highly recommended in the Eclectic Dispensatory as among the best of diuretics. In the

spring of 1855, this plant was brought before a Reform Convention in New York city, and, we believe, by a physician from the interior of New York or Connecticut. It may be used in decoction or infusion.

POPULUS BALSAMIFERA.

NAT. ORD.—Salicacea. SEX. SYST.—Diœcia Octandria.

Common Names.—Balsam Poplar, Tacmahac.

DESCRIPTION. — Trunk erect, but few branches, forty to seventy feet high. Leaves ovate, pointed, tapering, serrate, smooth on both sides, veined beneath, on long petioles.

History—This species of the Populus is found most abundant in Canada, our Eastern and Northern States. Its leaves, while yet in bud, are covered with a balsamic, resinous substance, of pleasant odor and bitterish taste. Under pressure, a balsamic juice may be collected, which is sometimes known as *tacamahac.* Alcohol takes up the properties of the leaf-buds. Water and alcohol are employed as a solvent for the bark, which is possessed of medical properties.

PROP., &c.—Diuretic, tonic, and expectorant. In tincture, it has been employed in pulmonary and nephritic diseases; for colds and pains in the chest, and for rheumatic affections. The fresh buds boiled in lard, form a pleasant salve or ointment for indolent ulcers and sores. Rafinesque speaks of the bark as emetic and cathartic.

POPULUS CANDICANS.

NAT. ORD.—Salicacea. SEX. SYST.—Diœcia Octandria.

Common Name.—Balm of Gilead.

DESCRIPTION.—A tree twenty to thirty feet in height, erect, numerous limbs. Leaves broad, partially heart-shaped, pointed and acute, silvery color, veined. Petioles covered with white hairs.

History.—This tree is not plentiful, yet found in Canada and Maine, ranging west and north, occasionally as far south as New Jersey. It is seen along the skirts of woods, and sometimes in gardens with ornamental trees. The buds, before the leaves expand from them, are fragrant with their balsamic odor, containing a resinous balsam. They are collected for market, and found in many of the Eclectic stores. They are officinal.

PROP., &c.—Diuretic, stimulant, discutient. The tincture of the buds has been used in half-teaspoonful doses, for colics, pains in the chest, colds, coughs, &c. The bruised buds have been simmered in lard, butter, suet, &c., for a salve upon indurated and indolent ulcers.

POPULUS TREMULOIDES.

NAT. ORD.—Salicacea. SEX. SYST.—Diœcia Octandria.

Common Names.—Aspen, American Poplar, Trembling Poplar.

DESCRIPTION.—A tree twenty to forty feet high, erect, numerous limbs starting from the trunk. Leaves ovate, some partially heart-shape, pointed, serrate, of a whitish, silvery appearance, with slender, flattened petioles.

Aspen

Hstory.—This tree is found in the light-timbered woods of Canada, the Eastern and Middle States, along roads, fields, and skirts of woods. It is called trembling Poplar, because the slightest breath of air keeps its leaves in motion.

This genus derived its name from the Latin *populus*, the people. It was common along the walks of Rome as a shade, and called the people's tree.

The *P. alba*, the white Poplar, is a middle-sized tree of Europe, introduced into this country, and sometimes designated as the *Liriodendron alba*. Its leaves are tri-lobed, ovate, veined, serrate. Scarce.

White Poplar

The *P. dilatata*, or Lombardy Poplar, is a tree of considerable size, introduced into this country from Europe.

PROP., &c.—Tonic, alterative, vermifuge, and diaphoretic. It is employed to strengthen the digestive organs, and thought useful to arrest periodic fevers. As a remedy in the treatment for worms, affections of the kidneys; for diarrhea, gonorrhea, and gleet, it is recommended by our profession. The bark of the *P. tremuloides* is officinal. Water

and alcohol are both used to obtain its properties. Some of our early reformers esteem this article valuable in hysteria. Powdered bark, ʒss to i, in water.

Populin—Resinoid and neutral properties. *Dose*—Grs. iii, two or three times daily.

PORCELIA TRILOBA.

NAT. ORD.—Annonæ. SEX. SYST.—Polyandria Polygynia.

Common Names.—Custard Apple, Papaw.

DESCRIPTION. — Leaves obovate, lanceolate, acute, thin. Petals six, purplish color. Pistils one or more. Fruit oblong, yellowish, pulpy, sweetish, and may be eaten in autumn.

History.—A shrub fifteen to twenty feet high, found in the Middle States, on rich soil, along the banks of streams. Its flowers appear with the leaves, in April and May.

This shrub, with several of its species, is classed as the *Asimina* by several authors.

PROP., &c.—Sedative and laxative. The fruit and leaves may be employed in diarrhea.

PORTULACA OLERACEA.

NAT. ORD.—Portulacea. SEX. SYST.—Polyandria Monogynia.

Common Name.—Purslane.

DESCRIPTION.—Stem prostrate, branching, fleshy. Leaves fleshy, wedge-form, obovate. Flowers pale yellow, opening in pleasant, sunny mornings. Sepals keeled. Petals six. Stamens seven to twelve. Flower-buds flat.

History.—A low, spreading plant, sometimes called *Parsley*; often found in gardens and corn-fields, along fences, on rich grounds. Some boil it with other pot-herbs for the table. It derives its name from the Latin words *porto*, to carry, and *lac*, milk, because it was believed to increase the milk of animals.

PROP., &c.—Emollient, diuretic, alterative. It is indicated in nephritis, bloody discharges from the ureters, bladder, and urethra, stranguary, gonorrhea, and gravel. It is considered an anti-scorbutic and anti-syphilitic agent. The whole plant, bruised, forms an excellent poultice for chancres, ulcers, carbuncles, boils, and cancers.

The fresh, clean leaves boiled gently in thin cream, is useful for chapped hands and sore lips.

PRENANTHES FRASERI.

NAT. ORD.—Cichoracea. SEX. SYST.—Syngenesia Polygamia.

Common Names.—Lion's Foot, Gall of the Earth.

DESCRIPTION.—Stem two to four feet high. Leaves on slender petioles, three to five lobed, roughish; the upper oblong, lanceolate. Flowers yellowish, in corymb, panicle form at the summit of the stem.

History.—This plant is found in light, sandy soil of the Middle States. It is the *Nabalus* of several authors. This genus includes the *P. alba*, *P. serpentaria*, and several other species.

PROP., &c.—Astringent. Employed in the form of infusion, for diarrhea, and for relaxed and debilitated conditions of the stomach and bowels.

PRIMULA VERIS.

NAT. ORD.—Lysimachæ, SEX. SYST.—Pentandria Monogynia.

Common Name.—Cowslip Primrose.

DESCRIPTION.—Leavs radical, obovate, serrate, veined, rugose, pale green. Flower-stem erect, five to eight inches high. Flowers in umbel form of peduncles. Calyx tubular, five cleft. Corolla salver-shape, five cleft.

History.—The *P. veris* is said to have been naturalized from Europe; sometimes cultivated in our gardens, and found along the fences of uncultivated gardens, fields, and moist places.

Some authors have classed the Primulas (of which there are several species) with the *Caltha*, which includes the *Cowslip* of the meadows and marshes, and extensively used in the early spring for pot-herbs.

PROP., &c.—The root of this plant has stimulating and somewhat acrid properties. When bruised fresh, it may be applied as a counter-irritant.

PRINOS VERTICILLATUS.

NAT. ORD.—Rhamni. SEX. SYST.—Hexandria Monogynia.

Common Names.—Black Alder, Winter-berry.

DESCRIPTION.—A shrub rising six to ten feet high, branching, with bluish-gray colored bark. Leaves ovate, serrate, acute at base and apex, veined, smooth, shining above, pubescent beneath. Flowers white, in clusters, on short peduncles. Calyx small, six cleft. Corolla speading, in six segments. Stamens six, erect. Ovary green, roundish. Fruit in scarlet red berries, the size of a pea.

History.—The Black Alder is found in Canada, the Eastern, Northern, Southern and Western States. Generally in clusters, and along the borders of wet ground, fields, and skirts of woods. Although this shrub has white flowers, and scarlet red berries, which easily distinguishes it in summer and late in the fall, it is often confounded with *Tag Alder* (Alnus Serrulata), that is found in the same localities.

The bark of the Black Alder is officinal. The berries are considered of value by some authors, but they exhibit but little therapeutical action. Water is the best menstruum for the bark, and alcohol is its solvent to some extent.

PROP., &c.—The bark contains alterative, cathartic, tonic, and astringent properties. It is one of our best alterative agents for scrofula, mercurial, and syphilitic taints. Its gentle action as a cathartic adds to its great value in many delicate constitutions subject to constipation, especially when the stomach is irritable, rejecting more active purgatives. Its tonic properties avail much in some forms of indigestion and erysapelatous conditions.

Its infusion and decoction are not unpleasant forms of exhibition. The watery extract may be used in five to twenty grain doses. Both the simple and compound syrup of the bark may be employed to good advantage.

A strong decoction is useful as a wash for cutaneous affections, cancers, ulcers, sores, &c.

Pulvis Prinos—Dose—℈i. Seldom used.

Decoctum Pinos—Bark, dry and fresh, ℈ii; Water, Oiss. Reduce by boiling to one pint, and strain. *Dose*—fl℈i, three to four times daily.

PRUNUS VIRGINIANA.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Monogynia.

Common Name.—Wild Cherry.

DESCRIPTION.—The trunk of this tree sometimes attains eighteen inches in diameter, and sixty feet high, branching.

Bark gray, roughish. Leaves oblong, lanceolate, serrate, acute, veined, deep shining green above, pale beneath. Flowers white, small, on oblong racemes. Fruit pendulous, dark red when ripe, size of a pea.

History.—This tree is found as far north as the Canadas, and extending to our Western and Southern States. Some of these trees are large, extending twenty feet, without limbs, which are valuable trees for lumber. The wood is hard, compact, and admits a fine polish, and a good substitute for mahogany as furniture.

This tree is often found along skirts of woods, fences, in meadows and pastures, when its growth is less, spreading its branches, and twenty to thirty feet high, when the bark is smooth and grayish.

There are a large number of species in this family of trees, including the *choke* Cherry, *red* Cherry, *black* Cherry, and a number of our indigenous *plumb* trees.

PROP., &c.—Tonic, alterative, astringent, and sedative. The analysis of Proctor exhibits a number of important constituent properties, tannin, gallic acid, lignin, fatty and coloring matters, starch, iron, a small proportion of volatile oil and hydrocyanic acid, salts of lime and potassa.

The Wild Cherry has for a number of years held a high reputation as a popular remedy in the cure of pulmonary diseases, yet the profession seldom resort to it. In phthisis and low fevers its tonic and astringent effects are favorable, exercising some control over the arterial system, modifying the heart's action, condensing the relaxed muscular fibres, and strengthening the digestive functions. With good effect it may be employed in dysentery and diarrhea. In most all forms its action is slow, requiring several days to observe its good impressions.

The volatile oil of Wild Cherry is seldom employed; it has a light straw color, the taste of bitter almond oil.

[*Hydrocyanic Acid* is obtained from the volatile oil of the Wild Cherry, from the kernels of bitter almonds, peaches, and plumbs. It is known by its more common name of *prussic acid.* It is an active poison, producing most powerful narcotic symptoms.

This acid has been employed for neuralgia and diseases of the heart, internally. Externally, as a wash; two drachms in a pint of rose-water, to allay painful skin diseases.

Dose of hydrocyanic acid, M. i to ii, in one ounce of some thin emulsion.

Antidotes.—Over doses of this acid become so fatal and speedy in action, that antidotes, so far as known, are of but little avail. Cold bathing, a column of cold water on the head

and spine, inhaling of ammonia, a weak solution of the carbonate of potash, followed by a solution of the sulphate of iron, has been resorted to.]

The decoction of Wild Cherry bark is deprived of its volatile principles in the process of boiling, yet this form does very well as a tonic and mild astringent. But to obtain all of its active principles, it is usually prepared in form of cold infusion and syrup.

Infusum Prunus Virginiana—Coarse powdered Bark, ℥i; Water, Oss. Macerate forty-eight hours, and strain. *Dose*—fl℥i to ii.

Syrupus Prunus Virginiana—Coarse powdered Bark, ℥iv. Macerate forty-eight hours in cold Water, Oss. Filter by the percolator or displacement apparatus, and pass through another half pint of water. To the infusion add two pounds of white sugar, with gentle heat agitate occasionally until dissolved. *Dose*—fl℥i to ii.

Prunin—Resinoid, neutral, and amygdalin. *Dose*—Grs. ii to v. This preparation is recommended for coughs, incipient phthisis, dyspepsia, hectic fevers, debility, and scrofula.

PRUNUS SEROTINA.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Monogynia.

Common Name.—Choke-cherry.

DESCRIPTION.—A shrub, ten to twenty feet high, branching. Leaves oval, oblong, pointed abruptly, sharply serrate. Petiole with two glands. Flowers in racemes. Petals white.

History.—The Choke-cherry is usually found in clusters, sometimes single, extending twenty feet high, along streams, damp and moist ground. The fruit, when unripe, is red, of powerful astringent properties; when ripe, of a dark purple. This species is noticed by some authors as the *P. virginiana;* also, *Cerasus virginiana.*

PROP., &c.—The properties and therapeutical action of the Choke-cherry are not thoroughly understood. It possesses tonic, astringent, and anti-periodic properties, and should be employed in form of decoction, syrup, or the active principles of the bark. It is probable that further investigations will prove this article to be a greater remedial agent than Wild Cherry.

Cerasein has lately been obtained from the Choke-cherry by B. Keith & Co., and highly recommended. *Dose*—Grs. v to x.

PTELEA TRIFOLIATA.

NAT. ORD.—Terebintacea. SEX. SYST.—Tetrandria Monogynia.

Common Names.—Wing-seed, Shrubby Trefoil.

DESCRIPTION.—Leaves trifoliate, ovate, acute. Flowers panicle form, greenish-white, unpleasant odor. Stamens three to five. Fruit two celled.

History.—A shrub of six to eight feet high; in open woods, moist and rocky ground, in Pennsylvania, Ohio, and South-western States. It flowers in May and June. The bark is considered officinal; when taken off it rolls into quill form. It has lately been introduced into the Eclectic practice; and quite an interesting notice of it is given in the Eclectic Dispensatory of Cincinnati.

PROP., &c.—Tonic. Though not yet much employed, some of our profession in the West have resorted to the infusion and tincture of the bark as an anti-periodic, both for intermittent and remittent fevers.

W. S. Merrell, of Cincinnati, from the saturated tincture of the bark, has obtained an oleo-resinous principle called *ptelein*, which has been employed with some success in dyspepsia, and other debilitated conditions of the system.

PTERIS AQUILINA.

NAT. ORD.—Filices. SEX. SYST..—Cryptogamia Filices.

Common Name.—Brake.

DESCRIPTION.—The leaf-stalks start directly from the roots, extending two to four feet high, bearing opposite, notched and lanceolate, pinnated leaflets. The stalk or frond starts from the root in a curved form, rising and expanding its leaflets until it attains its full height. The root has a hard, knotty caudex, covered in scaly form with the remains of old leaf-stalks. It contains some woody fibres, which make it hard, tough and leathery.

History.—The Brake is found most plentiful in the Northern States and Canada, in open woods, thickets, along streams, on rocky grounds.

PROP., &c.—Astringent and anthelmintic. The decoction of the roots can be given to a good advantage for diarrhea, dysentery, hemorrhage of the stomach, lungs and kidneys. By injection it should be employed for leucorrhea, relaxed condition of the vagina and uterine appendages, and prolapsed uterus. The green roots boiled, bruised, and mixed with bran, form a good poultice for indolent, painful, and bleediug sores and ulcers.

PTEROSPORA ANDROMEDA.

NAT. ORD.—Ericacea. SEX. SYST.—Decandria Monogynia.

Common Names.—Crawley, Fever-root, Scaly Dragon's Claw.

DESCRIPTION.—The root is composed of many whitish, fleshy tubercles, compared to the claws of some animals. Stem or scape twelve to thirty inches high, simple, straight, covered with short brown viscid hairs, cylindrical, without leaves, but some small scattered and subulate scales. Flowers in a long terminal raceme; scattered, some fasciculated, axilary to linear bracts; color reddish-white; peduncle curved, nodding. Calyx with five ovate ciliate segments. Corolla resembling *Andromeda*, marcescent, ovate, with five reflexed oval obtuse teeth. Ten stamina inclosed; filaments subulate, flat, arising from below the pistils. Anthers singular, semi-adnate, semi-peltate, two cells, opening transversely inside. Pistil free; style columnar; stigma capitate, nearly five lobed. Capsule globose, five celled, semi-five valved, valves septiferous, receptacle central, five lobed. Seeds minute, obovate, with a terminal wing, membranaceous and reticulated.

History.—This rare plant was noticed by Dr. James, in 1816, near Albany, N. Y. It is found as far north as Canada, and also in the south part of New Jersey. It is a scarce plant, having its peculiar localities, in dry, hard, sandy soil generally, in open woods, beneath the shade of large trees, from the roots of which it is supposed by some to be a parasite, but this is probably a mistake. The stem, when cut green, soon turn from its whitish wax-like appearance to a blackish color. The whole plant, when in blossom, is used in medicines, but the roots are considered officinal.

This plant is so hard to obtain, that its price ranges from fifty cents to one dollar per ounce in some sections; hence but little used by the profession.

[*Monotropa*—Several authors place the Crawley under the natural order of Monotropa, which includes the

M. uniflora—Indian Pipe, Corpse-plant.

M. hypopitys—Pine-sap, False Beech-drops.]

PROP., &c.—Diaphoretic and sedative. For a number of years, writers of reform medicine have bestowed the utmost praise upon the Crawley-root, because of its real or imaginary power to induce perspiration and control febrile action. It is highly recommended for typhus and bilious fevers of low and nervous grades; also for pleurisy, flatulency, cramps, night-sweats, and the hectic flush; for dysmenorrhea, after-pains, suppressed lochia, coughs, and pains in the breast. By some it has been known as the "*fever-powders.*"

No doubt many of these encomiums are of a doubtful character. I have used the powder and tincture to some extent, also the fluid-extract, yet have not been able to obtain the great benefits spoken of by several writers. My limited experience should not deter others from giving the article a full share of attention, for if it can really perform all that has been ascribed to it, there are but few agents more valuable.

Dose—The powdered root, Grs. xv to xxx, in warm sweetened water.

The powder should be kept in a well-corked bottle, excluded from the light. Exposed to the air, it soon loses its strength.

PULMONARIA VIRGINICA.

NAT. ORD.—Boraginacea. SEX. SYST.—Pentandria Monogynia.

Common Names.—Lung-wort, Virginia Cowslip.

DESCRIPTION.—Stem erect, eight to twelve inches high. Leaves radical, obovate, oblong, obtuse, upper leaves lanceolate, acute. Flowers whitish-blue, in clusters. Calyx five toothed. Corolla funnel-shape.

History.—The Lung-wort is found in the Middle, Western, and some of the Southern States. It is found in fields, on hillsides, and banks. There are several species of this plant. The *P. officinalis* (Lung-wort) is also found in Europe, where the whole plant has a roughish appearance.

PROP., &c.—Expectorant. The infusion has been used for coughs, whooping-cough, influenza, and affections of the lungs. Rafinesque states that the Indians smoke the dried leaves as Tobacco.

PUNICA GRANATUM.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Monogynia.

Common Name.—Pomegranate.

DESCRIPTION.—Leaves on short petioles, smooth, ovate, three inches long. Flowers scarlet, few, in clusters. Calyx red, fleshy, thick. Petals scarlet. Stamens numerous. Anthers yellow. Fruit larger than the Orange, with thick rind. Cells several. Seeds large, numerous.

History.—The Pomegranate tree is small and shrubby. A native of Africa, China, and Persia. It has been naturalized in Europe, the West Indies, and cultivated in hot-houses of our Southern States.

PROP., &c.—The bark of the root was noticed by Dioscorides, Celsus, and other ancient writers in medicine, as an anthelmintic. It is bitter and astringent, containing gallic acid, tannin, resin, starch, wax, and some other principles.

The rind of the fruit, in decoction and infusion, for sore throat, and by injection for leucorrhea. The ripe fruit is refrigerant, cooling, and mildly astringent, excellent to allay thirst in febrile diseases.

PYCNANTHEMUM MONTANUM.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Monogynia.

Common Names.—Mountain Mint, Basil.

DESCRIPTION.—Stem perennial, upright, one to three feet high. Leaves obovate, serrate, glabrous, whitish. Calyx tubular. Corolla short, two-lipped.

History.—Under this genus, about ten species are included, all belonging to the Mint family. This, the *P. montanum*, is found in New Jersey, Ohio, Virginia, west and south, in uncultivated fields, the borders of woods and streams. The *P. incanum* ranges from New England to Michigan. Some or all of these species are found in all States of the Union.

PROP., &c.—Diaphoretic, sedative, tonic. It depends chiefly upon its volatile principle for its therapeutical action. Large draughts of the warm infusion may be used in colds and inflammatory fevers, to induce free perspiration, and to allay nervous excitement.

PYROLA ROTUNDIFOLIA.

NAT. ORD.—Ericacea. SEX. SYST.—Decandria Monogynia.

Common Name.—Round-leafed Pyrola.

DESCRIPTION.—The leaves are nearly round, thick, smooth, shining, veined. Flowers many, white, fragrant, drooping, supported on a scape eight to twelve inches in height. Calyx five parted. Petals five. Stamens ten.

History.—This is a perennial herb, with running roots, evergreen leaves, and puts forth a scape or flower-stem, bearing a raceme of numerous white flowers. It is found most abundant in the woods of Eastern, Northern, and Western States.

Other species—*P. elliptica*, Shin-leaf; *P. chlorantha*, small Pyrola; *P. secunda*, one-sided Pyrola; *P. minor*, lesser Pyrola.

PROP., &c.—Diuretic, tonic, astringent. This plant is not known to the profession generally; and the most extended notice of its medical propertics is found in King's Eclectic Dispensatory. The decoction has been used in uterine and nephritic affections, for sore mouth and throat.

PYRUS MALUS.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Pentagynia.

Common Name.—Apple Tree.

DESCRIPTION.—A tree ten to twenty feet high, branching. Leaves ovate, oblong, serrate, acute, glabrous. Flowers white, tinged with rose color, in clusters. Calyx urn-shape, five cleft. Petals five, obovate, roundish. Stamens numerous. Styles two to five.

History.—There are a number of the species, and a great many varieties of *Pyrus*, including both the Apple and the Pear trees. The *Crab-apple tree*, by cultivation, is said to have produced the Apple trees so extensively grown in this country.

PROP., &c.—Tonic, anti-periodic, diuretic, and purgative. The bark of the root in decoction and infusion, is useful to impart tone and strength to the digestive functions, where the system has become prostrated in febrile diseases. It has gained some reputation for the relief of intermittent fevers. A decoction of the leaves may be employed, though not so efficient as the bark.

The ripe fruit is gently laxative and diuretic.

Cider, when new and fresh from the still, is quite an active purgative and diuretic. When ripe, and passed the fermenting stage, the acid it contains makes it cooling and refrigerant, and becomes useful in febrile diseases. A very efficient formula in dropsical diseases.

Pure cider one quart, inner bark of the Elder three ounces. Boil ten minutes, and set aside to cool. *Dose*—A wine-glassful every two hours. This becomes a diuretic and hydragogue-cathartic, which often proves of great service in dropsy.

QUERCUS ALBA.

NAT. ORD.—Amentacea. SEX. SYST.—Monœcia Polyandria.

Common Name.—White Oak.

DESCRIPTION.—A large forest tree. Leaves pale green, and pubescent beneath, deep green above, three to five lobed, oblong, obtuse, narrow at the base. Flowers in clusters, drooping. The fertile flowers have a scaly, bud-like involucre, which becomes the base of the oblong acorn.

History.—It is noticed in history that the Oak tree was held sacred by the Greeks, Romans, Gauls, and Britons. Ages ago, it was cultivated in Britian as a fruit tree, and a failure of an acorn crop was accounted a cause of famine. At a later period, the Saxons depended largely upon the acorns of the Oak to feed their large herds of swine.

Of the Oaks of this country, there are a large number on species. *Q. alba* is a large forest tree, one to three feet ie diameter, and seventy to eighty feet high, making valuable lumber for shipping, carriages, and mechanical purposes. It is most abundant in the Northern, Middle, and Western States.

The *Q. rubra*, or red Oak, is a lofty, spreading tree of the Middle States, having porous and coarse-grained wood, that is of but little value for lumber. Its bark contains more tannin than other Oaks, and is preferable for tanning purposes.

The *Q. virens* is the live Oak of the Southern States. It grows forty to fifty feet high, and the most valuable tree for ship-building.

The *Q. prinoides*, the Chinquapin, or dwarf-chestnut Oak. This is a small, shrubby bush, from six to eight feet high, found in open woods of the Middle States.

The *Q. infectoria* is a small, shrubby bush, found in Asia Minor, and furnishes the nut-galls of our shops.

The *white*, *red*, and *black* Oak barks are all employed in medicine. The first is generally noticed as officinal. The last, having more coloring matter, are extensively used for tanning leather, and sometimes silks and other fabrics.

PROP., &c.—The bark is astringent and tonic. It contains gallic acid, tannin, and small proportions of tannates of magnesia, lime, and potash. Alcohol is a solvent to the bark, but water is usually employed.

The decoction is the best form of exhibition, and indicated for diarrhea, hemorrhages, and general weakness of the stomach and intestines.

It is also useful as a wash and gargle for sore mouth and throat. The injection per vagina for leucorrhea and prolapsed uterus, is its principal mode of employment. There are numerous other astringents more active than the Oak barks.

Decoctum Quercus.—Inner bark of white, black or red Oak, ℥ii; Water, Oiss. Reduce by boiling to Oi, and strain while hot. *Dose*—fl℥ss to ii.

Extractum Quercus.—Make a strong decoction, strain and evaporate to consistence of cream. This may be used in pills or solution. It may be combined in pile ointment.

RANUNCULUS ACRIS.

NAT. ORD.—Ranunculacea. SEX. SYST.—Polyandria Polygynia.

Common Names.—Crow-foot, Butter-cups, Blister-weed.

DESCRIPTION.—Root fibrose, fasciculate, perennial. Stem, one to two feet high, with many branches and flowers, terete-pubescent, erect. Leaves alternate, petiolate. Flowers corymbose, large and yellow, peduncles unequal, not furrowed. Calyx with five spreading folioles, hairy, oval, obtuse. Petals rounded, entire. Seeds in a globose head.

History.—The Crow-foot is a native of Europe; and Culpepper, an English author of a century past, speaks of it in this way: "This fiery and hot spirited herb of Mars (for he supposed that all plants and trees were under the influence of the planets), is no way fit to be given inwardly, but an ointment of the leaves and flowers will draw a blister, and may be so fitly applied to the nape of the neck to draw back rheum from the eyes. The herb being bruised and mixed with a little mustard, draws a blister as well and as perfectly as cantharides, and with far less danger to the vessels of the urine, which cantharides naturally delights to wrong."

PROP., &c.—The Crow-foot, or *Butter-cup*, as it is generally known, is seldom employed. It is an acrid stimulant, and when the green leaves and fresh roots are bruised and applied to the surface, it becomes an active counter-irritant. When the plant has been dried, it looses most of its acrid properties.

RHAMUS CATHARTICUS.

NAT. ORD.—Rhamni. SEX. SYST.—Pentandria Monogynia.

Common Name.—Buckthorn.

DESCRIPTION.—A small spreading bush with thorny branches. Leaves ovate, finely serrate, smooth, entire, deep green. Flowers greenish, numerous, small. Calyx four cleft. Petals small, notched at the end. Fruit dark blue berries, about the size of a pea, pulpy, containing four seeds.

History.—The Buckthorn is cultivated for hedges by many farmers of this country and Europe. In the Middle States it grows spontaneous, six to ten feet high. It flowers in May, and the fruit ripens in October. The fruit, leaves and bark contain medicinal properties.

PROP., &c.—Hydragogue, cathartic, diuretic, stimulant. The berries are considered officinal, and mentioned as applicable in rheumatism, gout, and dropsy. They contain, green coloring matter and a bitter principle. But seldom used by the profession or in domestic practice.

RHIZOPHORA MANGLE.

NAT. ORD.—Salicariæ. SEX. SYST.—Polyandria Digynia.

Common Name.—Mangrove Tree.

DESCRIPTION.—A tree. Leaves oblong, ovate, serrate, opposite ribs. Flowers yellow, on axilary peduncles. Calyx tubular. Petals oblong, emanginate, coriaceous. Fruit ovate, adhering to the calyx.

History.—The Mangrove tree is found is Louisiana and other Southern States. Its name is derived from the Greek, *riza*, root, and *phero*, to carry, having numerous roots from which many trees arise.

PROP., &c.—Astringent. A substitute for the oaks. The bark may be used in decoction, externally, for piles, ulcers, &c.

RHODODENDRON MAXIMUM.

NAT. ORD.—Rhododendra. SEX. SYST.—Decandria Monogynia.

Common Names.—Mountain Laurel, Wild Rosebay.

DESCRIPTION.—A bush, uneven, branching. Leaves oblong, acute, pale beneath, deep green above, thick, ferruginous. Flowers whitish, pinkish-rose, in thick clusters. Calyx five, parted. Corolla uneven border, funnel shape. Stamens ten, style one.

History—The *R. maximum* is a bush that rises sometimes 10 to 15 feet. It is found in uneven ground, the base of hills, or mountains, along streams, and plentiful on the high banks of the Delaware River. Many people suppose the leaves and bark possess poisonous properties. Bigelow states that it has astringent, but no narcotic action. It is said the leaves are poisonous to cattle. The Laurel flowers are large, showy, and attract attention.

The *R. punctatum* and the *R. catawbiense* are species peculiar to the Southern States, both small shrubs, three to six feet high.

The *R. crysanthum* is an evergreen shrub of the mountains of Siberia.

PROP., &c.—Astringent and stimulant; generally believed to have narcotic properties. The bark and leaves contain resin and tannin. It has been employed internally for rheumatism and gout, by the Indians. It is said to stimulate the brain and arterial action. The profession has but little reliable information of the Laurel.

RHUS GLABRA.

NAT. ORD.—Terebintacea. SEX. SYST.—Pentandria Trigynia.

Common Name.—Sumac.

DESCRIPTION..—A large shrub, young branches tinged with reddish purple. Leaves pinnate, on long petioles, in pairs of thirteen to thirty-one, oblong, acutely serrate. Flowers greenish, tinged with red, in thyrsa or dense panicles. Sepals five. Petals five. Fruit in clusters of crimson berries, covered with hairs, and acid taste.

History.—The Sumac is a shrubby tree, varying from six to twelve feet high. Its branches are uneven. Leaves numerous, large, and paired on long leaf-stems. It is not a plentiful tree, though most abundant in the Middle States, and found along road-sides, borders of cultivated fields, and skirts of woods, on dry and gravelly soil.

There are several species of the genus *Rhus*, including the *R. glabra*, the *R. radicans*, and the *R. toxicodendron*.

The *R. radicans*, Poison-vine—A long, twining vine, spreading upon trees and fences. Its stem is woody, and near its base is sometimes three and four inches in diameter. Its leaves are ovate, acute, entire. The flowers are yellowish. Fruit white, small. The flowers impart an acrid volatile principle to the air, which attacks the cutaneous surfaces of some people, producing swelling and itching, with sometimes small vesicles, that is troublesome for several days. Such persons who handle and rub the leaves and cut the stems, experience the same difficulty.

The antidote for this poisoning is a cooling purge of epsom salts, or cream of tartar and magnesia. Wash the surface with a weak solution of table-salt; and some recommend a weak solution of sugar of lead.

R. toxicodendron, Poison-sumac, Poison-oak—A small shrub or bush, eight to twelve feet high. It is found in low, wet, uncultivated ground, with other small trees. Leaves tri-foliate, oval, or rhomboidal, Flowers white, in axilary racemes. Fruit oval, white, poisonous. This species also imparts to the air its acrid principle, which affects some people.

A few years since I was riding with my friend, Charles Lippincott, of Burlington, New Jersey, in a neighborhood where he was well acquainted. It was a beautiful sun shining morning; a gentle rain the previous night had laid the dust, and the trees, herbage, and flowers filled the atmosphere with an invigorating and delightful breath. Presently we came in view of a low ground where ran a small, clear stream, at which we had thought to water his horses and quench our thirst. But he remarked that "this low ground is filled with Poison-sumac;" and I replied, "This is a first-rate morning to receive its poisonous effects," when he immediately loosened the reins of his horses, and away we dashed, over the stream and through the vale, to the high land. His fears were realized in about three days after, when he sent for me to witness and relieve his enormously swelled face and the intensely itching and painful surface of body, arms, and hands. This attack also affected the mucous membrane of the air passages, which induced troublesome respiration. It also sensibly affected the urinary passage. These two species of the *Rhus* produce identical symptoms, and the treatment for relief should be antiseptic and cooling agents.

I have collected the large stems of the Poison-vine, cut them in pieces and burnt them to charcoal, without taking their deleterious effects. This charcoal I have formed into salve with fresh butter, and applied for cutaneous diseases.

PROP., &c.—The bark and berries of the Rhus Glabra are officinal. Its bark is astringent and tonic, and the berries are diuretic, refrigerant, and antiseptic. The inner bark of the root, dried, is preferable, and may be administered in form of infusion, decoction, and syrup. It is adapted to weakened conditions of the alimentary canal, in dysentery, diarrhea, cholera morbus. The decoction, by injection per vagina, is valuable in leucorrhea, for its tonic, astringent, and antiseptic action. An infusion of the berries is valuable for ulceration of the mouth and putrid sore throat, being astringent, refrigerant, and antiseptic. The strong decoction of bark and berries makes an excellent wash for cancers and indolent ulcers.

Rhusin—Resinoid and neutral principles. *Dose*—Grs. ii, every two hours.

RIBES RUBRUM.

NAT. ORD.—Cacti. SEX. SYST.—Pentandria Monogynia.

Common Name.—Red Currant.

DESCRIPTION.—The stems branching, cragling, three to four feet high. Leaves partially heart-shape, three to five obtuse lobes, serrate, smooth above, pubescent beneath. Flowers greenish, in drooping racemes. Calyx flattened, five lobed. Petals five. Stamens five. Fruit globular, red, smooth, one-celled; many seeds.

History.—By some authors, the red Currant is a native of Europe, yet found in the wild and wet woods and bogs of our Northern States. It is extensively cultivated in our gardens for table use; for preserves, jelly, and domestic wine.

The *R. nigrum*, or black Currant, is found in open woods and damp places of our Northern and Middle States; sometimes cultivated. It is a shrub larger than the red Currant, with less fruit.

Both the berries and bark of the black Currant are said to possess diuretic and diaphoretic properties, though but little used in medicine.

Under the genus Ribes are classed a large number of the *Gooseberry* species.

The *R. triflorum*, or wild Gooseberry; the *R. cynosbati*, or prickly Gooseberry; the *R. lacustris*, the swamp Gooseberry; the *R. glossutaria*, the English Gooseberry, and other species. They grow wild in the country, and improve by cultivation.

PROP., &c.—The unripe currants contain a large amount of acid, and when ripe, a sufficient amount to make them a pleasant and useful refrigerant in febrile diseases; for inflammation of the throat, stomach, and bowels.

RICINUS COMMUNIS.

NAT. ORD.—Euphorbiacea. SEX. SYST.—Monœcia Monadelphia.

Common Name.—Castor Plant.

DESCRIPTION.—An annual plant. Stem four to eight feet high, thick, jointed, hollow, purplish-green color, the upper part and branches reddish-purple. Leaves palmate, peltate, divided into seven lobes, which are long, serrate, acute. Flowers in terminal panicles; the upper flowers female, the lower male. Calyx five, parted. Petals none. Stamens numerous. Capsules hanging, covered with prickles. Seeds oval on one side, flattened on the other, oblong, rounded, of a light gray marble color.

History.—The Castor Oil plant is a native of India, and was known as a medical agent in the early ages of the world. Hippocrates, born about 460 years before Christ, employed the root of this plant in medicine. The Romans called it *ricinus*, because the seeds resembled *tick*, which troubled dogs and other animals.

Pareira and other authors state there are several species found in India. Some of these are shrubs and small trees, having hard, woody stems. Cultivated in the United States, it is an annual plant, and five to seven feet in height; in England it is annual, and three to four feet high; in Spain, the size of a small tree, woody, living several years.

The East Indies supply a large proportion of Castor oil for all parts of the world. It is also produced in the West Indies, in England, Russia, and many other countries. In this country, the State of Ohio supplies the largest amount of oil; and the chief process of its extraction is by thoroughly removing the capsules of the seeds, and freeing them from all dust; then placing them in shallow iron vessels and applying a little heat, so as to soften the seeds, when they are placed in a common screw-press, standing in a warm temperature, and the oily substance thus obtained is received into suitable vessels below the press. It is now transferred into large iron boilers containing a quantity of water. This is submitted to gentle boiling, and the impurities skimmed off which rise to the surface. The oil being separated from the water, albumen and starch, it is again boiled in a small proportion of pure water, which finally gives it a clear and uniform appearance. In some countries the mode of extracting the oil is to bruise the seeds, and boil them in water, and separating the impurities.

Some years past, the East India oil sustained the best reputation in the drug markets; but now the cold expressed oil of this country is considered equal to any other.

The analysis of Geiger exhibits the following constituents of this oil: Resin and extractive matter, brown gum, gum, albumen, ligneous fibre, and fatty oil. This is one of the *fixed* oils.

Cases are related where death has ensued by eating a few of the seeds; and also where severe griping and purging has followed from swallowing but one. It is the acrid, volatile and resinous principles contained in the seeds, which induces irritation and inflammation of the membranes of the stomach and bowels, followed by severe griping and purging.

Fresh and pure Castor oil should be sufficiently limpid as to run pretty free from the mouth of the bottle. It should look clean, clear, and have little or none of the yellowish tinge. If it be exposed to light or air, it will gradually become yellowish, viscid or thick. By long standing, a whitish substance precipitates to the bottom.

Castor oil is sometimes adulterated with other fixed oils, when it looses its peculiar, clear, transparent appearance, and does not, like the pure oil, dissolve in alcohol.

PROP., &c.—Castor oil is a moderate cathartic, without materially reducing the vital powers. Not unfrequently it excites griping pains, nausea, and sometimes vomiting, especially if it contains any impurities, or has become rancid by exposure.

Although this article is of almost universal use in families, it has really but few indications, the chief of which are: Inflammation of the alimentary canal, obstructions of the bowels, swallowing of indigestable substances, as buttons, coins, &c.; for dysentery it shields the abraided surface of the canal, and greatly aids in relief.

It is the most useful adjunct in enemas, for constipation of the lower part of the bowels, affections of the rectum, piles, strictures, &c.

To most people this oil is nauseating and unpleasant in taste. To palliate this difficulty, almost any of the essences, brandy or porter may be placed at the bottom and top of the dose.

The most acceptable form in which I have ever used it for dysentery is: Pure oil, one ounce, the white of an egg, and two tablespoonfuls of white sugar, flavored with a few drops of essence of winterberry or cinnamon. Beat all well together, and give in two doses, one or two hours apart.

Dose—Castor oil may be given from one teaspoonful to one ounce.

ROSA MUSCOSA.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Polygynia.

Common Names.—Moss Rose.

DESCRIPTION.—A shrub, two to four feet high. Leaves oval, acute at the apex, serrate, deep green. Peduncles long, covered with prickles. Calyx urn-shape, covered with green, mossy, villous hairs. Sepals five, long, covered with green villous hairs, longer than the full grown buds on the petals when expanded. Petals numerous, oval, large, reddish and pink color.

History.—The Moss Rose is one of the naturalized species of this genus, but its native place is unknown. It is occasionally found in the hot-houses and gardens of the Middle States, and by its green mossy sepals, partially covering the petals as they begin to expand, it may justly be said to excel in beauty all other species of the rose.

PROP., &c.—The scarcity of the Moss Rose would preclude any experiments, either of properties or therapeutical action; but there is no doubt but its action would be found similar to that of others of its species.

ROBINIA PSEUDO-ACASIA.

NAT. ORD.—Leguminosea. SEX. SYST.—Diadelphia Decandria.

Common Names.—Locust Tree, Black Locust.

DESCRIPTION.—A tree. Bark gray and rough on those of large growth. Leaves in eight to twelve pairs of leaflets, one

terminal, ovate, oblong, smooth, entire. Flowers in long axilary racemes, white and fragrant. Calyx short, five toothed, two lipped. Corolla, or vexillum, broad, turned back. Stamens (diadelphous) united in two sets. Lequmes or pods compressed, two to three inches long, containing several flat seeds.

History.—The Locust tree is found in the forests of Western Pennsylvania, the Southern and Western States. It is cultivated as a shade-tree in many of the older towns of New Jersey, Pennsylvania, and other Middle States. The trunk of the tree is some twelve or eighteen inches in diameter, with rough gray bark, and thirty to forty feet high, branching. Its flowers, in May, fill the air with fragrant perfume. The wood is light, and admits of fine polish.

The *R. viscosa*, or Clammy Locust, is a small tree, found in the Southern States, bearing an oblong racceme of rose-colored flowers.

The *R. hispida*, bristly rose Acacia, is a shrub, three to five feet high, bearing rose-colored flowers, also found in the Southern States. Several varieties of this species, sometimes cultivated.

PROP., &c.—Emetic, cathartic, and expectorant. The inner bark is employed, and of the root preferred. It is but little used by the profession, and its therapeutical indication not well understood. It may be administered in decoction, syrup, or extract.

ROSA CENTIFOLIA.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Polygynia.

Common Names.—Hundred Leaved Rose, Cabbage Rose.

DESCRIPTION.—This shrub is three to five feet high, with stems and branches armed with prickles. Leaves composed of five to seven ovate leaflets, which are ovate, broad, pointed, firmly serrate. Calyx urn-shape, on peduncles one to two inches long, beset with short, soft hairy prickles. Sepals long, pointed, winged. Petals numerous, large, broad, ovate, red and pinkish color, fragrant.

History.—It is said that Theophrastus noticed this species, which he found at Philippi; and also that Heroditus speaks of one similar to it in Macedonia. Asia is said to be its native place.

In all ages, the Rose has justly been esteemed as the queen of flowers. It is the principal flower in wreaths for public festivals, and to decorate the bridal brow at the marriage ceremonies, and especially as an emblem of purity for the young when about to be laid in their graves.

There are many species of cultivated Roses. The *R. gallica* is the red or French Rose, which is extensively cultivated in France and Germany as yielding more perfume than any other. It contains tannin, gallic acid, volatile oil, fatty and coloring matter, albumen, and small traces of potash, silica, and iron. This species of the Rose is most common in this country; and when full blown, hundreds of bushels of the large petals are gathered for the manufacturers of perfume in our large cities.

The *R. flava* is the yellow Rose, a rare and beautiful species, occasionally seen in the gardens of the Middle States. It is three to five feet high, armed with prickers. Leaves quite small, ovate, serrate, in pairs of three and four, terminal. Flowers not large, numerous. Petals oval, of beautiful yellow straw color, opening in the centre with numerous reddish-yellow stamens.

The *R. alba* is the white Rose. This is also a rare and handsome species, cultivated in gardens.

Our native Roses are seldom cultivated, but are found wild in different parts of the country. Of these are found the *R. Carolina*, or dwarf Rose; the *R. setigera*, or climbing prairie Rose; the *R. lucida*, dwarf wild Rose, and some other species.

In France, Germany, the Indies, and other countries, the Rose is largely cultivated for its volatile oil, the *ottar* or *otto* of Roses. For this purpose, it is said the *R. centifolia* and the *R. gallica* are preferred.

PROP., &c.—The petals of the red Rose are recognized as officinal, yet possessing a small amount of medicinal properties. They are mildly astringent, tonic, and perhaps a little laxative, and seem to control mild cases of hemorrhage and diarrhea. The infusion is used as a wash for opthalmic affections. The confection of Roses is sometimes employed as a mild laxative, and occasionally in combination with other agents.

For the benefit of the curious student, I will introduce a few lines from Culpepper's English Physician, published in London, 1787: "The red Roses do strengthen the heart, the stomach, and the liver, and the retentive faculty. They mitigate the pains that arise from heat, assuage inflammation, procure rest and sleep, stay both whites and reds in women, the gonorrhea or running of the reins, and fluxus of the belly."

Aqua Rosa—Rose petals, fresh, lb. i; Deodorized Alcohol, ℥iv; Water, Cong. iss. Digest forty-eight hours, and filter through paper. This may be used as a wash for sore eyes, and combined with more active washes where its odor is desirable.

Infusum Rosa Compositum—Dried Rose-petals, ℥iijss; Boiling Water, Oi. When the infusion is cold, add diluted

sulphuric acid, fℨi. Strain, and add sugar ℨvi. This infusion may be employed as an astringent wash for abraided surfaces, and as a gargle for sore throat.

Confectio Rosa—Conserve of Roses. Take the petals of fresh red Roses, lb. i; White Sugar, lbs. ii. Bruise the petals to a pulp in a Wedgewood or stone mortar, then gradually add the sugar until well mixed.

This is gently tonic and astringent, and sometimes used in phthisis and slight hemorrhages. It is combined in pills with more active agents.

Oleum Rosa—In some of the Eastern countries, the *oil* or *ottar* of Roses is obtained by distilling the Roses with water, and when allowed to cool, the oil floats on the surface of the water. Another mode is to digest the petals in water, exposed to the sun, when the oil floats on the top.

The oil is sometimes incorporated as a flavor and perfume to medicinal agents, pills, mixtures, and ointments, yet its chief channel is in perfumery.

ROSMARINUS OFFICINALIS.

NAT. ORD.—Labiatea. SEX. SYST.—Diandria Monogynia.

Common Name.—Rosemary.

DESCRIPTION.—A small shrub, two to three feet high, branching. Leaves numerous, obtuse, sessile, with margins rolled or revolute; green above, whitish or hoary beneath. Flowers axilary, opposite, pale purplish-blue.

History.—A native of Asia and Europe, and cultivated in this country. The leaves and flowering tops are officinal, and are distilled for the volatile oil they contain, which possesses a peculiar odor, employed in perfumery.

PROP., &c.—Oil of Rosemary is stimulant and carminative, given in five to ten drops on sugar. It is also employed as a rubefacient, combined with other agents, for bathing.

The warm infusion of the flowers for colds, colic, and nervous conditions. The Rosemary is not often resorted to as a medical agent.

RUBIA TINCTORIA.

NAT. ORD.—Rubiacea. SEX. SYST.—Tetrandria Monogynia.

Common Name.—Madder.

DESCRIPTION.—Root perennial, horizontal, reddish-brown color. Stem prickly, procumbent, sometimes climbing, jointed,

quadrangular, branching. Leaves in whorls of sixes, two to three inches long, acuminate. Flowers yellow, small, somewhat panicle form.

History.—A native of, and cultivated in some countries of Europe, Turkey, and Smyrna, furnishing a large portion for commerce. It is somewhat cultivated in Ohio and other States for coloring matter. Its root is the part used. When powdered, it is sometimes adulterated with brick-dust, ochre, sand, saw-dust, &c. In the shops it is kept powdered, and of a reddish-brown color, and used principally by dyers; hence a common name is *dyer's Madder.*

PROP., &c.—Seldom used as medicine. It is reputed to possess diuretic and emmenagogue properties; has been employed for jaundice and uterine affections. *Dose*—℥ss to i.

RUBUS STRIGOSUS.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Polygynia.

Common Name.—Red Raspberry.

DESCRIPTION.—A shrub two to four feet high, with many stiff hairs. Leaves in two and three-paired leaflets, ovate, obtuse at base, acute at apex, serrate, veined. Flowers white, in clusters. Calyx five-parted. Petals five. Fruit hemispherical, red. Seeds many.

History.—The red Raspberry grows spontaneously in the pastures, open woods, along roads, fences, and thickets in Canada, the New England, Northern, and Western States. In these sections, its fruit ripens in August and September. Profusely scattered over the country, and extensively used on the table as an article of luxury and food by the farmers. It is cultivated by many farmers of the Middle States for marketing in the large cities. The leaves are officinal. The seeds of the fruit are astringent.

PROP., &c.—Simple astringent. The decoction of the leaves becomes available in diarrhea, dysentery, and hemorrhage of the stomach and bowels. Having no unpleasant taste or nauseating properties, it is almost always acceptable to the stomach; and for children and delicate females, it deserves more attention by the profession. This form is also valuable per injection for leucorrhea, and a wash for piles, bleeding ulcers, cancers, &c.

This was a favorite remedy with Dr. S. Thomson in parturition, and on the approach of labor-pains, from its real or supposed favorable impression on the uterine organs. Our early

botanic reformers were also partial to this agent. The impression is that it has a special influence upon the uterus, exciting its contractions, hastening on the labor and expulsion of the child.

Decoctum Rubus Strigosus—Red Raspberry Leaves dried, ℥i; Water, Oiss. Boil twenty minutes and strain.

RUBUS VILLOSUS.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Polygynia.

Common Name.—Blackberry Briers.

DESCRIPTION.—This shrub is armed with many sharp prickers, and three to six feet high. Stem reddish or brown color, furrowed, angular, branching. Leaves in three to five leaflets, ovate, acuminate, serrate, with petioles armed with short recurved prickers. Flowers white, in racemes. Calyx five-parted. Petals five. Fruit oval, oblong, black. Seeds many.

History.—The Blackberry bush grows spontaneously in Canada, the Eastern, Northern, and Western States; in open woods, fallen timber, on hill-sides, along roads and skirts of woods. Its fruit is much eaten, and preferred to the Red Raspberry. Some of the cultivated varieties yield large and delicious fruit. The roots are officinal.

There are several species of the Blackberry, one of which is the *B. canadensis*, or Dewberry, a low bushy brier, found in old pastures, fields, and road-sides of most sections of the country. The berries of this species are extensively used on the table, and the roots employed in medicine.

PROP., &c.—The roots of the Black and Dewberry bushes are astringent, and contain tannin, extractive and coloring matter. The infusion and decoction are employed for dysentery and diarrhea.

The fruit of the Blackberries are astringent and refrigerant; the seeds containing tannin, and the juice citric acid. In the form of syrup, it is always acceptable to the stomach, and frequently effectually in the relief of dysentery and diarrhea.

The prepared jelly from these berries retains the acid, which being diluted with water, forms a cooling and agreeable drink in all febrile diseases.

RUDBECKIA LACINIATA.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Frustranea.

Common Names.—Thimble-weed, Cone Flower.

DESCRIPTION.—A perennial plant. Stem five to ten feet high, round, glabrous, branching at the top. Leaves in five to seven leaflets, which are lobed. Flowers large, numerous, in panicle form, pendulous. Rays yellow, long, spreading. Achenia or pericarp containing the seeds, four sided, smooth, flat at the top.

History.—The Thimble-weed is a native plant, found in many parts of this country, on the borders of ditches, thickets, and swamps. It blossoms in July and August. Its constituent properties not well ascertained, containing some resin, extractive matter, and volatile principle.

Under this genus are found a large number of species, many of which are peculiar to the Southern States. It was named in honor of Rudbeck, a botanist before Linneus.

PROP., &c.—This plant is only partially understood by the profession; but the Eclectic Dispensatory recommends it as a valuable remedy for Bright's disease, stranguary and other affections of the urinary organs. The whole plant has been employed. It yields its properties to water and alcohol.

RUMEX ACETOCELLA.

NAT. ORD.—Polygonea. SEX. SYST.—Hexandria Trigynia.

Common Names.—Sorrel, Field Sorrel, Sheep Sorrel.

DESCRIPTION.—Stem erect, branching. Leaves hastate, lanceolate, one inch to one and a half long. Flowers reddish color, small, on faciculate racemes.

History.—This species of Sorrel is most common in this country, found along road-sides, and sometimes thickly scattered over dry and worn-out fields, flowering through the summer.

The leaves and young stems are used in medicine, containing binoxalate of potassa, and some tartaric acid.

PROP., &c.—Refrigerant, diuretic and irritant. It has been employed for scorbutic diseases, and the infusion as an acidulous drink in fevers. The inspissated juice and the fresh leaves bruised are available to remove tumors and cancers. For more extended remarks on this subject, see OXALIS.

Succus Spissatus Acetocellus.—Inspissated Extract of the Sorrel. Take fresh leaves and stems, bruise, and place them in a screw-press under gradual pressure; or place the bruised leaves in a course linen cloth, and squeeze the juice well out. This fluid is then placed in earthen plates, and allowed to stand in the sun through the day, and in a warm room at night, until reduced to a soft extract. The action of the *oxalis acetocella* and the *R. acetocella* are similar. I have employed both with success in the extraction of tumors and cancers. They are valuable agents.

RUMEX CRISPUS.

NAT. ORD.—Polygonacea. SEX. SYST.—Hexandria Trigynia.

Common Names.—Yellow Dock, Narrow-Leaf Dock.

DESCRIPTION.—Its root is yellow, tapering, five to ten inches long, but few branches or fibres. Stem two to three feet high, angular, furrowed. Leaves deep green, long, waving or crisped edges, alternating along the stem. Flowers pale green, disposed in wand-like racemes, appearing in June and July.

History.—There are eight or more species of the Rumex genus, including the *R. sanguineous* or bloody-veined Dock; the *R. aquaticus*, great water Dock; the *R. britannica*, water Dock; and the *R. obtusifolius*, or blunt-leaved Dock. The four here mentioned are believed to possess similar properties as the *R. crispus*, which is the one chiefly employed in medicine.

The Yellow Dock is a native of Europe, and found in most parts of our country, along the borders of gardens and in fields.

PROP., &c.—Alterative, detergent, and mild cathartic. It requires several days to exhibit its favorable action on the system. For hepatic, nephritic, syphilitic and scrofulous diseases, it is a favorite remedy with the Eclectic profession. It is known to be useful in cutaneous diseases.

The root of the Dock is officinal. It should be gathered in fall or spring, washed and cut in short pieces, and dried in the shade. It has been used in form of decoction, syrup, and in combination with other agents.

Rumin is the concentrated principle of the Dock root now in use by the Eclectic profession. The dose is three grains. It is well to combine it with more active agents, Podophyllin, Leptandrin, and also with other alteratives.

RUTA GRAVEOLENS.

NAT. ORD.—Rutacea. SEX. SYST.—Decandria Monogynia.

Common Name.—Rue.

DESCRIPTION.—Root perennial. Stem shrubby at the base, two to three feet high, branched, terete. Leaves alternate, smooth, glaucous, decompound or bipinnated and tripinnated, folioles sessile, unequal, oblong, obtuse, and entire, the last foliole larger, obovate. Flowers yellow, in a terminal cynose and dichotome panide. Petals large, rounded, entire, concave. Stamens equal; only one central flower, the first unfolded has five petals and ten stamens; the others have four petals and eight stamens.

History.—A shrubby plant, from one to three feet high. It is a native of Europe, and cultivated in the gardens of this country for domestic use, and to supply the demands of our markets. It should be gathered when in blossom.

By analysis, Rue has been found to contain volatile oil, bitter extractive, mallic acid, gum, albumen, starch, and chlorophylle.

PROP., &c.—A stimulant, emmenagogue, and anti-spasmodic. The fresh bruised leaves will powerfully irritate the skin. Applied moderately, in form of poultice, it aids to prevent mortification and gangrene. A mild infusion of the leaves has been employed to allay nervous action. The Oil of Rue is a powerful excitant, which is sometimes employed in form of lotions. A few drops on sugar is said to have induced sufficient action on the uterus to produce a miscarriage. In the early days of Hippocrates the Rue was employed to relieve obstructed menstruation.

The oil, in most cases, is preferred to the syrup or extract. *Dose*—Gtts. iii to viii, on sugar.

SABBATIA ANGULARIS.

NAT. ORD.—Gentianea. SEX. SYST.—Pentandria Monogynia.

Common Name.—American Centaury.

DESCRIPTION.—Root annual, fibrous, and yellow. Stem one or two feet high, with opposite branches, forming a corymb, smooth, square, with small wings on the angles. Leaves opposite, quite sessile, sub-cordate, and clasping, very smooth, nerved, ovate, acute, very entire. Flowers terminal, handsome, inodorous, forming a large corymb. Calyx base pentagone, fine lanceolate segments. Corolla with obovate spreading segments, twice as long as the calyx, of a fine rose color. Stamens five, erect, filaments short filiform, anthers oblong, revolute after the anthesis. Pistil ovate, style terete, two linear styles twisted together. Capsule with many seeds, inserted on the two valves.

History.—This genus includes eight known species. The *S. angularis* is the only one known for its medical properties, and resembles the *Chironia Centaurium* of Europe, which received its name from a Roman botanist.

The Centaury plant is found in the Middle and Southern States, in old fields, along the borders of damp ground. Its flowers appear in July and August, in clusters, or corymb form, and handsome purple blossoms. The stems, leaves and flowers are officinal.

PROP., &c.—Tonic and anti-periodic. Its use is more frequent in domestic practice than with the profession. The infusion of the plant is a mild bitter tonic, not unpleasant to the taste, and aids the digestive functions, giving tone to the general system. It should be drank freely between the paroxysms of intermittent fevers. It has been employed in nervous, typhus and yellow fever.

The extract is convenient in form of pills. The decoction and tincture have also been employed, but the simple infusion is preferable.

Infusum Sabbatia—The dried herbs, ℥i; boiling Water, Oi. When cool, give in one half to one wine-glassful.

SACCHARUM OFFICINARUM.

NAT. ORD.—Graminacea. SEX. SYST.—Triandria Digynia.

Common Name.—Sugar-cane.

DESCRIPTION.—The stem rises eight to twelve feet high; is jointed, solid, and yellowish, and varying in color externally, with a whitish and juicy pith. Leaves flat, one to two inches wide, and one to three feet long.

History.—Pareira asserts that Sugar-cane was known to the ancient Greeks and Romans. For many centuries known in China, India, and Egypt. This plant is extensively cultivated in our Southern States, in the East and West Indies, yielding large amounts of sugar for commerce.

The process of extracting sugar from the cane somewhat varies in different countries. Usually the stem is cut near the ground, the leaves are stripped off, when it is cut and ground in mills. The juice is then pressed out, to which is added a small proportion of lime, to neutralize the acid, when it is submitted to heat. The clear liquid is passed off, and submitted to gentle evaporation until granulations appear. It is now allowed to remain in large casks, when the sugar falls to the bottom, and the molasses passes off. This *raw* or *Muscovada* sugar is partially dried, and ready for the commerce of the world. From this the *refined* or *loaf* sugar is prepared, by adding water to form a solution, passing it through animal charcoal, followed with gentle evaporation and drying.

Sugar is also produced in France from the Beet and Mangel-wurzel. In the Northern portions of this Continent, large amounts of sugar are produced from the Maple tree.

PROP., &c.—Sugar is demulcent, nutrient, and dietetic. When eaten, it contributes in the formation of fat, and supplies lactic acid, and is said to supply heat by excitation. It disagrees with some individuals by causing an excess of lactic acid. As an article of diet for several days in succession, it substitutes its own elements for unhealthy deposits in the system, as in diabetes. Both molasses and sugar exercise a mild cathartic effect, especially in infants.

Simple syrup and molasses has demulcent and soothing effects, by allaying tickling and irritation of the faucus and throat, and should be more frequently employed in these cases. Sugar is among the most useful antiseptics, having the power to prevent vegetable substances from falling into decomposition; and to some extent, it exercises this influence on animal tissue.

Sugar and syrup are among the most useful adjuncts in the preparation and exhibition of medical agents, by incorporating with extracts and concentrated medicines; with compound syrups, pills, and lozenges.

Syrupus Simplex—Simple Syrup. Sugar, lbs. iij; Water, Oi. Dissolve the sugar by gradual heat. Should any scum arise, skim off. Pure white sugar and clear spring or river water are best.

SALICORNIA HERBACEA.

NAT. ORD.—Atriplices. SEX. SYST.—Monandria Monogynia.

Common Names.—Samphire, Glass-wort.

DESCRIPTION.—The stem is herbaceous, jointed, erect, branching, six to twelve inches high. Flowers in cylindrical spikes, tapering.

History.—This peculiar plant is found along the sea-coast, and about the saline springs of New York. Two other species.

PROP., &c.—But little is known of the properties and uses of the Samphire. It contains soda and iodine. Has been employed as an anti-scorbutic, for scrofula, tumors, swellings, goitres, and abcesses, in the forms of decoction and poultices.

SALIX ALBA.

NAT. ORD.—Salicacea. SEX. SYST.—Diœcia Diandria.

Common Name.—White Willow [Osier].

DESCRIPTION.—A small tree, about twenty feet high. Bark of the young branches greenish, that on the trunk brown or grayish color. Leaves elliptic, lanceolate, toothed, acute; white soft hairs beneath. The ament or spike is cylindrical, bearing the flowers and scales.

History.—The white Willow is said to have been introduced from Europe, where it is officinal. It is common in our Middle States, found along the borders of woods and damp ground. The bark is officinal—easily collected in the spring and summer, when in blossom. The bark may be ringed, or cut by a circle round the tree, and when stripped off, it rolls upon itself.

This bark was analyzed by Pelletier, and found to contain resin, gum, green fatty matter, wax, lignin, and a large proportion of tannin. *Salicin*, a peculiar white cyrstalline principle, was obtained from it in 1825 by Fontana, and by others

since that year. The salicin contains oxygen, hydrogen, and carbon. This principle has also been found in the Populus.

There are a large number of species included in the genus Salix. The *S. nigra* is the black or *pussy Willow;* the *S. babylonica* is the weeping Willow; *S. viminalis*, basket Willow, basket Osier.

Carbo Ligni—Wood Charcoal. The Willows of this country and Europe are burned into *charcoal* for the manufacturing of *gunpowder.* The large and small limbs of the trees are so arranged over a furnace, as, by the application of fire, to be deprived of all their elements except the carbon, when it is ready for the process of making gunpowder.

Wood charcoal is believed to be entirely inert, although Hahneman, the father of Homeopathy, relates that one millionth part of a grain produced a large number of symptoms.

As an antiseptic agent, it is employed upon gangrenous ulcers and sores, in poultices, or in powder sprinkled on the parts. It absorbs the gas or fetor resulting from decomposed animal tissues. From this fact it is valuable as a tooth-powder, to cleanse the mouth, for spongy gums and decaying teeth.

PROP., &c.—The Willow has tonic and astringent properties. It is therefore adapted to those cases of indigestion following a weak and relaxed condition of the stomach and intestines. As an anti-periodic, it has some claims for consideration, although not often employed.

An old Dispensatory says of the Willow: "The leaves and bark stop all manner of fluxes, *spitting* and *pissing* of blood. Their decoction in a bath helps tabid or consumptive members, and taken inwardly, quenches lust wonderfully."

Dose—The bark, powdered (seldom used), ℥ss to i.

Decoctum Salix—Bark, ℥i; Water, Oi. Boil ten minutes, and strain. *Dose*—fl℥i to ii. The action of alkalies upon this decoction is to produce precipitates of the bitter and astringent principles.

Salicin.—Dose—Grs. vi to x. It may be triturated with sugar or incorporated with simple syrup, and if desirable, a few drops of tincture of Cinnamon, or other aromatics added. The salicin is employed as a substitute for quinine, though not so efficient in action, yet without the unpleasant effects on the brain. It has some reputation as an anthelmintic.

SALSOLA KALI.

NAT. ORD.—Atriplices. SEX. SYST.—Pentandria Digynia.

Common Name.—Salt-wort.

DESCRIPTION.—An annual branching plant. Leaves channeled, oval shape, alternate, prickly, pointed. Flowers rose colored. Calyx margined, axilary.

History.—The Salt-wort is an herbaceous plant. Its name is derived from the Latin word *salsus*, because it produces a large proportion of alkaline salts. It abounds in sandy soil, near the sea-shore. Some varieties are bushy and prickly.

PROP., &c.—Anti-acid, diuretic, and stimulant.

SALVIA OFFICINALIS.

NAT. ORD.—Labiatea. SEX. SYST.—Diandria Monogynia.

Common Name.—Sage.

DESCRIPTION.—The Sage is perennial, branching, shrubby and pubescent. Leaves ovate lanceolate, crenate or notched edges, light greenish color, tinged with purple. Flowers blue, on spikes, arranged in whorls.

History.—This is the garden Sage, introduced from Europe. It is cultivated in this country for medicinal, but more especially for culinary purposes. New Jersey produces large quantities for the markets.

Of the native species, we have the *S. lyrata*, or lyre-leaved Sage, and the *S. urticifolia*, the nettle-leaved Sage.

PROP., &c.—Sage is diaphoretic, tonic, astringent, and expectorant. It contains a fragrant, aromatic ordor, and yields its properties to boiling water and alcohol. The chief medicinal use made of Sage is, for apthea, or sore mouths of children, combined with loaf-sugar or honey. The infusion has been employed for hectic fever and night-sweats. It has also been recommended to allay venereal desires. The Sage yields a volatile oil, a few drops of which on sugar acts as a carminative, and externally, is a stimulant and rubefacient.

SAMBUCUS CANADENSIS.

NAT. ORD.—Caprifolia. SEX. SYST.—Pentandria Trigynia.

Common Name.—Elder.

DESCRIPTION.—Stem six to ten feet high, branching, covered with grayish bark, sometimes five or six inches in circum-

ference at the base, woody, containing a large pith. Leaves on leaflets of three to four pairs, one terminal, obovate, serrate, smooth above, midrib pubescent beneath. Flowers white, small, numerous, disposed in large cymes. Calyx five-cleft. Corolla five-lobed. Stamens five. Stigmas three. Berries black or dark purple when ripe, fleshy. Seeds three to four.

History.—The common Elder is indigenous, and found in most parts of the United States and Canada, in moist ground, along skirts of woods, gardens and fields. It blossoms in June and July. The Elder is also a native of Europe and other countries. Known to the early Greeks, and noticed by Dioscorides.

The *S. pubens*, red-berried Elder, is a native, six to twelve feet high, has a watery or blistering bark, in damp ground, woods and mountains. Flowers white, berries red. Properties similar to *S. canadensis*.

PROP., &c.—The bark, pith and flowers are employed as therapeutical agents. The berries are officinal in England, but in this country little use is made of them. They contain mallic and citric acid, sugar, and coloring matter, and may be employed as a cooling diuretic.

The flowers, by the analysis of Eliason, contain volatile oil, tannic acid, resin, coloring matter, glutinous matter, albumen, and traces of potash, lime and sulphur. The infusion is employed as a wash for erysipelas, hives, shingles and excoriated surfaces. The cold infusion of the pith is used for the chaffing of children, and inflammatory sore eyes. The inner bark is diuretic and cathartic. It has some reputation as a hydragogue cathartic.

Decoctum Sambuci—Inner bark of stems and roots, ℥ii; good Cider, Oii. Boil ten or fifteen minutes and strain. *Dose*—fl℥ii, every hour, until it produces free action on the bowels and urine.

Unguentum Sambuci—Take inner Bark, ℥iii; Lard, lb. i. Simmer gently for fifteen minutes, and strain through flannel or muslin. This is a cooling and discussive agent, for inflammatory ulcers, sores and cutaneous affections. In this formula the flowers may be substituted or used in conjunction with the bark.

The fresh green leaves have properties similar to the bark, although not employed.

SANGUINARIA CANADENSIS.

NAT. ORD.—Papaveracea. SEX. SYST.—Polyandria Monogynia.

Common Names.—Bloodroot, Puccoon.

DESCRIPTION.—Root perennial, horizontal, fleshy and thick, knobby, with some fibres, brownish-red outside, pale within,

emitting a bright orange juice; end truncate or obtuse, many buds, sending off leaves and scapes. Leaves erect, on long, channeled petioles, cordate or sub-reniform, very smooth, sinuated into many rounded repand lobes, obtuse as well as the sinusses. Scapes erect, terete, unfolded by the young leaves, one terminal flower. Calyx with two ovate, obtuse, and concave folioles, falling as soon as the corolla expands. Corolla spreading, commonly with eight white petals, oblong obtuse,

four alternate internal ones, a little shorter. Stamens many and short; anthers oblong, yellow. Pistil oblong, compressed. No style. Stigma thick, sessile, nearly bilobe. Capsule oblong, both ends acute, two valves. Seeds many, round, red, base with a white vermicular arilla.

History.—This is the only species in this genus, although Rafinesque has described six varieties. It is found in Canada, the Eastern, Northern and South-western States; on rich ground, in open woods, and blossoms from March till June.

For many years it has been known to the aborigines of this country, who use the reddish coloring matter for painting their faces, clothing, and implements of war. The amount of coloring matter which the root contains, depends much upon the soil of its growth. Thus it will be noticed that some of the roots are dark reddish-brown, others are a lighter red color. Its name is derived from the Latin *sanguis*, blood, the color of the fresh juice. Puccoon is the Indian name.

The Bloodroot is not only abundant in growth, but an early, delicate and beautiful herbaceous plant. Its medical properties were noticed as early as 1803, by Dr. Downey, of Maryland. It was known to the medical reformers of our country some thirty-five or forty years past, and for the last twenty years esteemed by the Eclectic profession as one of the most valuable and officinal agents in the Materia Medica, who then used it in Philadelphia, combined with mandrake root and cream of tartar.

PROP., &c.—There are but few agents that will fulfil so many therapeutical indications as the Bloodroot. It is an emetic, relaxant, expectorant, diaphoretic, alterative, tonic, excitant, detergent, and errhine. Externally, the powder is employed upon cancers, ill-conditioned ulcers, and fungus growths; a mild escoratic, which destroys and disengages the unhealthy accumulations, allowing healthy granulations to obtain cicatization.

Because of its powerful impressions on the system, it is seldom exhibited alone; but in severe cases of croup it may be used, by infusion, tincture, extract, or concentrated form, beginning with small doses, gradually increasing until emesis follows. It seems to exert a special influence upon the mucous membrane of the trachea and broncial tubes, both by arresting and disengaging the mucus secretions. It is the most reliable agent known in the cure of *Croup;* and useful in whooping-cough, catarrh, and pulmonary affections. It is well adapted to the treatment of these diseased conditions, because of its favorable action on the mucus surfaces, by its detergent, tonic, and expectorant influence. In these diseases the acetated syrup is advisable.

It is valuable for jaundice, for torpid and indurated, and enlarged conditions of the liver. For pluritis, typhoid pneumonia, rheumatism, and gonorrhea.

The powdered root, used as snuff, will often remove polypus of the nose. It is also available in coryza or colds in the head

and nose, when combined with powdered Bayberry and common snuff.

As an emetic, it is seldom if ever employed alone, and the profession generally combine it with powdered lobelia and ipecac. (See Lobelia).

Powdered Root. *Dose*—Grs. x to xv, as an emetic. Alterative, Grs. iii to v, in simple syrup, molasses, or water.

Tinctura Sanguinaria—Bloodroot, bruised, ℥i; diluted Alcohol, Oi. Digest ten days. *Dose*—fl℥ss, in a wine-glass of water, for vomiting, repeated if necessary, in attacks of croup or other emergencies. As an alterative, Gtts. x to vx, diluted in water or syrup. The physician should bear in mind that this and other forms of the Bloodroot may be combined with other agents, according to his judgment, for the treatment of diseases where it is indicated.

Extractum Sanguinaria — Hydro-alcoholic. Blood-root, bruised, lb. i; Alcohol, Cong. i. Digest fifteen days, and filter through white printing-paper. Add to the drug, Water Oiv. Digest and agitate ten days, and filter. Reduce this by gentle boiling to half a pint. By vapor-bath reduce the tincture to one pint; then add the first, and reduce the whole by the bath to the consistence of cream; turn into an earthen jar, and when cold it will be about a proper consistence for use. *Dose*—Grs. ss to iij.

This form, although not much in use, obtains all the virtues of the plant, and may be conveniently exhibited in pills, combined with other agents, to suit the views of the physician.

Syrupus Sanguinaria Acetata — Blood-root, bruised, ℥iv; Alcohol, fl℥iv; Water, Oss. Digest five days in a warm place, and filter. To the drugs, add Acetic Acid fl℥i (or pure Vinegar, fl℥iv); Water, Oi. Digest ten days, and filter. Add together the liquids, and by gentle heat dissolve three pounds of white sugar. Simmer for a few minutes, skim off the impurities, and bottle for use. *Dose*—Gtts. x to lx. If desired to vomit, repeat a teaspoonful every ten minutes. This is a most desirable and available form for children with croup, whooping-cough, asthma, catarrh, and colds, and is worthy special attention.

Sanguinarin—Active principles, resin, resinoid, alkaloid, and neutral. *Dose*—One-eighth to one-fourth of a grain. To avoid its local action, it should, like other concentrated agents, be well triturated with sugar, powdered gum Arabic, or simple syrup. A very convenient preparation.

SANICULA MARILANDICA.

NAT. ORD.—Apiacea. SEX. SYST.—Pentandria Digynia.

Common Name.—Sanicle.

DESCRIPTION.—An indigenous, perennial herb. Stem one to two feet high. Leaves parted, lobed, or palmate, serrate, most

of them radical, on long petioles. Flowers whitish, many sterile. Calyx toothed, persistent. Fruit globular, covered with hooked prickles.

History.—The Sanicle is found in most parts of the United States, in low thickets and open woods, flowering in May and June. Its roots are fibrous and fleshy, the part used in medicine. The *S. Canadensis* is another species, sometimes used for the Marilandica. The name is derived from the Latin *sano*, to heal.

PROP., &c.—Tonic and nervine, with mild astringent and anodyne properties. The diseases for which it has been employed are hysteria, and other nervous affections; for chorea, dysentery, gonorrhea, syphilis, and leucorrhea. It contains a volatile and slightly aromatic principle, obtained by Alcohol. The infusion has often been employed in domestic practice for diarrhea, nervous affections, and general debility. The oil has been obtained, and given in Gtts. v to viij. The powdered root in ℥ss, mixed with syrup.

SAPONARIA OFFICINALIS.

NAT. ORD.—Caryophyllea. SEX. SYST.—Decandria Digynia.

Common Names.—Soap-wort, Bouncing Bet.

DESCRIPTION.—Herbaceous, perennial. Stem one to two feet high. Leaves opposite, ovate, lanceolate, three-nerved, glabrous. Flowers white, often tinged with red, in clustered panicles. Calyx tubular, five toothed. Petals five. Styles two. Stamens ten. Capsule one celled.

History.—Bouncing Bet has a thick stem, often not more than a foot high, quite common along road-sides, in fields, and waste places. The other species is the *S. vaccaria*, field Soap-wort, and by some authors *Vaccaria Vulgaris.*

The *S. officinalis* has received but little attention from the profession. It contains gum, resin, lignin, and a principle called saponin. The roots and leaves are officinal, and when macerated in water, present the appearance of soap-suds. Alcohol also extracts a portion of its properties.

PROP., &c.—In the year 1828, Rafinesque noticed the Soap-wort as being tonic, diaphoretic, and hepatic; also an emmenagogue and vermifuge, and useful in jaundice, gout, rheumatism, syphilis, hepatic diseases, dropsy, scrofula, and venereal diseases. The bruised roots and leaves, fresh, are valuable for ulcers, scrofulous and venereal sores.

The Soap-wort may be administered in form of decoction, extract, and inspissated juice. The *saponin* has been employed.

SARRACENIA PURPUREA.

NAT. ORD.—Sarracenia. SEX. SYST.—Polyandria Monogynia.

Common Names.—Side-saddle Flower, Pitcher-plant, Huntsman's Cup.

DESCRIPTION.—An indigenous, perennial plant. Leaves radical, large, tubular, swelling base and middle, contracted at the top, which is partially covered by a winged appendage, thus resembling a pitcher. Scape naked, eight to twelve inches long, bearing a large, nodding, purple flower.

History.—The Pitcher-plant is found in marshes, swamps, and woods of Canada, the Eastern and Western States, flowering in June and July. There are five or six species of this plant. The *S. flava*, found in the Southern States, has large and somewhat funnel-shaped leaves, yellow flowers, long and drooping petals. Found in Virginia and farther south.

PROP., &c.—We have no personal knowledge of the virtues of the Pitcher-plant. It is thought to be stimulant, tonic, diuretic, and laxative. The Eclectic Dispensatory quotes largely of the experiments of Dr. F. P. Porcher, of South Carolina. The plant requires further investigation by the profession, for although the reformers of this country have made great advances in this field of medicine, producing a revolution in practice within the last twenty-five years, still there are hundreds of our indigenous plants courting investigation.

SATUREJA HORTENSIS.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Names.—Summer Savory.

DESCRIPTION.—Its stem is bushy, twelve to twenty inches high. Leaves small, entire, narrow, acute, in axil clusters. Flowers pink or purplish, on short axilary peduncles. Calyx bell-shape. Corolla two-lipped.

History—Supposed to have been introduced from Europe, although found in the wild prairies of Illinois. It is cultivated in many of our gardens, and sold for flavoring soups and other dishes of food.

PROP., &c.—The Summer Savory is a carminative, stimulant, with mild emmenagogue powers. In domestic practice, the infusion is frequently used by females for colds and suppressed menstruation. In this way it will relieve colic and flatulence of children. It yields a volatile oil, which is aromatic, stimulant, and sedative, and introduced into the cavity of a tooth, relieves pain. A few drops may be given on sugar, or diluted with alcohol.

SAURURUS CERNUUS.

NAT. ORD.—Urticea. SEX. SYST.—Heptandria Tetragynia.

Common Names.—Lizard's Tail, Breast-weed.

DESCRIPTION.—A perennial herb. Stem angular. Leaves alternate, oblong, acuminate, somewhat heart-shape. Flowers white, small, in terminal spike-form.

History.—This plant is found in Canada, New York, and the Western States, in wet, marshy ground, and along the margins of ponds. It rises one to two feet, and receives one of its

common names from the supposed resemblance of its flower-spike to a lizard's tail. Its leaves aromatic, fragrant.

PROP., &c.—Emollient and discutient. The roots, when boiled, are useful to discuss tumors and boils, to relieve lumbago, swelled breasts, and sore nipples. Leaves cooling and discutient.

SCROFULARIA MARILANDICA.

NAT. ORD.—Scrofulariacea. SEX. SYST.—Didynamia Angiospermia.

Common Names.—Figwort, Heal-all, Square Stalk.

DESCRIPTION.—Stem two to four feet high, angular or square, erect, branching, glabrous. Leaves opposite, ovate, lanceolate, serrate, cordate. Flowers greenish-purple. Calyx campanulate, five cleft. Corolla tubular, border five parted. Stamens four. Pods two celled. Seeds many.

History.—The Figwort is found in most parts of this country, in rich soils or damp ground, along hedges, fields and woods, flowering in June and July. There are two or three native species. The plant receives its name from its reputed powers to cure *scrofula* or king's evil.

The *S. nodosa* is a native of Europe, naturalized in this country, and considered officinal by some authors. Either one may be employed as a substitute for the other. The plants have a dark-green or rank appearance, and unpleasant smell. They contain gum, starch, resin, extractive matter, benzoic and mallic acid, green fecula, and other principles.

PROP., &c.—Stimulant, anodyne, diuretic, alterative. Its properties are taken up by water and alcohol. The decoction and syrup are suitable forms for painful affections of the kidneys, to excite secretions of the liver, and for enlargement of the spleen. The leaves boiled and applied as a poultice, are excellent to discuss painful swellings.

The whole plant (both the *S. marilandica* and the *S. nodosa*) possess active principles.

SCUTELLARIA LATERIFLORA.

NAT. ORD.—Labiate. SEX. SYST.—Didynamia Gymnospermia.

Common Names.—Scull-cap, Hoodwort, Blue Pimpernell.

DESCRIPTION.—Root perennial, fibrous, yellow. Stem erect, one to three feet high, much branched, diffuse, smooth, quadrangular; branches opposite, divaricate. Leaves on long

petioles, thin or nearly membranaceous, opposite distichal. Flowers pale blue, on long lateral axilary racemes, bracteated by bracts ovate, acute, entire, subsessile, each flower axilary to one bract, and pedunculated, bracts distichal, flowers unilateral. Calyx scutellate. Seeds oval, verrucose.

History.—A remarkable natural genus, with many species, easily known by the calyx. This species is found all over the United States, in woods, meadows, near waters, &c.; it blossoms in summer. The juice of the plant is a little colored of red. It has hardly any smell, and the taste is vapid bitterish.

There are a large number of species of this genus found in the United States and Canada, five or six of which are pecu-

liar to the Southern States. Among the more prominent of the species, besides the *Lateriflóra*, are the *S. hysopifolia*, growing in wet lands, and flowering in July and August. The *S. galericulata*, a native of Europe and America, having large blue flowers in June. The *S. integrifolia*, growing in damp grounds, and bearing blue flowers in June and July.

Nearly one century ago, the Scull-cap was held in high repute in this country, as a successful remedy in hydrophobia, although as with numerous other indigenous plants, we believe that too much importance was attached to its value.

As a matter of history, giving the medical powers of this plant, we quote from Professor Rafinesque:

"This property was discovered by Dr. Vandesveer, towards 1772, who has used it with the utmost success, and is said to have, till 1815, period of his death, prevented four hundred persons and one thousand cattle from becoming dydrophobous, after being bitten by mad dogs. His son is stated to have thus relieved or cured forty persons in three years, in New York and New Jersey. Many empirics, and some enlightened physicians, have employed it also successfully; but several skeptical physicians have since denied altogether these facts, and pronounced the plant totally inert, because it has no strong action on the system, and has failed in their hands. Dr. W. Barton and Dr. Tully have strenously asserted this, but without analyzing the plant, and denying instead of proving. This plant has since been carefully analyzed by Cadet, in Paris, and found to contain many powerful chemical principles, which evince active properties."

PROP., &c.—The Scull-cap possesses tonic and nervine powers. By analysis, it is found to contain volatile and fixed oils, bitter and astringent principles, albumen, mucus, chloride of soda, and some other less important elements. Both water and alcohol are emplyed to obtain its properties. The warm infusion may be employed in febrile diseases to allay irritation and nervousness; for delirium tremens, and other diseased nervous action. The cold infusion should be employed as a tonic in erysipelas, intermittent, and other forms of fevers. If this agent does really possess any power over hydrophobia, it must be by some antiseptic or disinfecting agency yet unknown to the profession. Undoubtedly Lobelia is more reliable in this terrible form of disease, for which both of these articles should be combined in equal parts.

Pulvis Scutellaria—Dose of powdered Leaves, Grs. xv to ℥i, in one or two ounces of warm or cold sweetened water.

Infusum Scutellaria—Of the dried Leaves, ℥ss; Boiling Water, Oi. *Dose*—fl℥i to iij, cold or warm, as desired.

Tinctura Scutellaria—Leaves and Blossoms of Scull-cap, ℥iss; Alcohol, Oi. Digest ten days, and filter. *Dose*—fl℥i to iij. This may be employed for nervous, debilitated cases, accompanied with indigestion, or in compound anti-dyspeptic bitters.

Extractum Scutellaria—Leaves of Scull-cap, lb. iss; Water, Ovi. Boil two hours, and strain; then evaporate the decoction by gentle heat to proper consistence, place in glazed earthen or porcelain jars, and exclude it from the atmosphere. *Dose*—Grs. v to x, in form of pills.

Scutellarin—Active principles, resin, resinoid, and neutral. *Dose*—Grs. ii to v.

SECALE CEREALE.

NAT. ORD.—Graminacea. SEX. SYST.—Triandria Digynia.

Common Name.—Rye.

DESCRIPTION.—The root consists of many fleshy fibres. Stem two to four feet high, bearing spikelets two to four inches in length, with two rows of flowers, succeeded by its fruit or Rye grains. Racris bearded. Glumes two, keeled, opposite. Palea or bracts two, the lower one keeled and awned at the point.

History.—The most ancient medical authorities, as well as the writings of the Old Testament, notice the Rye, or perhaps the *Wheat*, which is similar in growth and appearance. Its native place is not known, but cultivated in many parts of Europe and America, where it is considerably used for bread. In this country, much of it is employed for manufacturing whisky. The bread from some of the Northern winter Rye is nearly equal to that of Wheat, being more laxative in its action upon the alimentary canal. In one hundred parts of Rye is found sixty-one of starch, eleven of gum, nine of gluten, with small portions of albumen, saccharine, and fatty matter.

PROP., &c.—Demulcent and nutritive. It is employed both dietetically and medicinally, in debilitated patients suffering from fevers, diarrhea, weakened and inflammatory conditions of the stomach and bowels. In such cases, *Rye gruel* is the ordinary form. ℞—Flour four tablespoonfuls, Salt one teaspoonful, White Sugar two tablespoonfuls, Boiling Water one pint, given warm, in divided doses.

SECALE CORNUTUM.

Common Name.—Ergot, Spurred Rye.

DESCRIPTION.—Ergota is a false growth found in Rye-heads, varying from one-fourth to an inch in length, and one-half to three lines in thickness. Its form is cylindrical, partially triangular, obtuse angles, tapering and curved so as to be compared to the spur of a cock; hence the common name of *Spurred Rye.* Its color is dark brown and purplish, exhibiting a delicate covering of white filaments; internally, of light color, varying in shades of reddish, white, and violet.

History.—America, Germany, and France supply the demand for Ergot. Of the particular causes of its growth, there is some difference of opinion with scientific experimenters. Some advance the opinion that it depends upon moisture and heat acting on the kernel as it begins to form; others, that it is a diseased condition of the ovary of the kernel, produced from the soil around the roots; others, that it is from the attack of insects; others, that it is a *parasitic fungus* growth, which is most generally conceded. Numerous authors have given it attention.

The bad effects of Ergot, when eaten in Rye-bread, is said to have been noticed as far back as the tenth and eleventh centuries. Galen mentions that it produced a disease similar to dry gangrene. Its bad effects are said to have become epidemic in Silesia, in 1096, and again in 1588. Its deleterious effects have been observed in France and Germany, where it has been ground with the Rye for bread. The farmers of this country are generally careful to exclude it.

Dr. Stearns, of New York, has received the credit of first introducing the Ergot for its special powers of contraction on the uterus. In England, it was first recognized by the profession in 1824.

Thomson's Materia Medica, published in London, states that for upwards of two centuries, Ergot has been known to aid the efforts of parturition. Camerarius published an account of its influence in this respect in 1668; but its employment by the profession was not general until 1747.

PROP., &c.—Motory powers. When Ergot is taken in large doses, by either sex in ordinary health, the following physiological effects have been noticed: A feeling of formication or creeping in the feet, followed by contraction of the limbs, pain in the head, vertigo, delirium, contractions of the muscles of the loins and back, which force the body into a curve backwards, so that the occiput approaches to the hips. It

evidently, therefore, acts through the medium of the motor nerves, and chiefly on the extensor muscles.

Pareira and other authors mention its action on the brain as producing pain and a heavy feeling in the head, stupor, giddiness, delirium, and dilitation of the pupil. These symptoms are noticed after full and repeated doses of one drachm every hour.

The effects of Ergot on the heart and arteries have been to produce free perspiration, flushed face, full and frequent pulse; yet its action has generally been quite different, by lessening the pulsations of the heart, accompanied with paleness of the countenance. Dr. Cusack, of the Dublin Hospital, relates that by the action of Ergot, the pulse was reduced from 120 to 90 beats per minute.

Of the poisonous effects of Ergot there is much variance of opinion; some contending that it is a poison, and others that it is harmless. However, it is pretty clearly established, when long continued, either in bread or as medicine, it will so change the circulating fluids as to cause death. Repeated experiments have proved that it has caused the death of flies, birds, sheep, rabbits, cats, and dogs; yet cases are related when half a pound has been given to sheep, followed for several days in succession, and in this way a pound per day has been given to cows without injurious effects. Yet in both of these animals its effects have been noticed upon the uterus when impregnated. Percy relates that the decoction injected into the veins of a cow has caused speedy delivery of the calf; and Combes, that in this way it has caused the delivery of a bitch.

Of its effects upon both the uterus and fetus there is some difference of opinion. Some contend that its bad effects are transmitted through the mother to the fetus; yet others, by long and repeated administration, deny this position. Dr. Hamilton and some few others aver that it has no other effect upon the uterus than upon the imagination of the patient. But the best of authors and most experienced physicians concur that it possesses a special and contracting influence upon this organ. On this point cases are related where it is believed that its powers of contraction have been so great as not only to impede and stop the fetal circulation, thus destroying the child, but that it has caused a rupture of the uterus.

Professor Joseph Sites, of the Eclectic Medical College of Pennsylvania, one of the most successful accoucheurs of Philadelphia, is very partial to the use of the Ergot as the most efficient, safe, and reliable agent to aid the efforts of nature in expelling the child from the uterus. Among other numerous authorities, Dr. Chapman extols the use of the Ergot, and says, "that no one here believes in the alleged deleterious influence

of the article on the fetus." He also says that it never fails in a short time to produce abortion. And yet F. H. Ramsbotham intimates that its poisonous effects may be passed from the mother to the child; and to induce premature labor, the puncturing of the membranes is far safer to the child than is the use of Ergot.

Notwithstanding the objections raised against the use of Ergot, it is resorted to by most physicians to induce contractions of the womb. After the delivery of the child, it is employed to expel the placenta as well as coagula of blood, when retained in the uterus, and also to expel fungus growths or hydatids, sometimes found in this organ. From its known contracting powers, it has been used to induce abortion, and also, when this work has been commenced, to hasten it along. Many are of the opinion that when administered during labor the *flow* is generally less; and from its powers of contraction on the uterus, it is available to close up the ruptured blood-vessels, checking hemorrhage.

When the object is simply to increase the contractions of the uterus, for the purpose of expelling the child, it should not be employed until after the membranes are ruptured, or the *os uteri* at least partially dilated and in a relaxed and yielding condition. These conditions being right, the position of the fetus should be observed, and if presenting by head, breach, knees, or feet, it may be administered. But if the child be in a position (as a shoulder presenting) which requires turning, then the attending difficulties will be greatly increased by giving the Ergot, because of the almost constant contraction of the womb when under its influence. These things should always be remembered by the physician, because, by good authority, cases are related where this article has so stimulated the muscular action of the uterus as to produce a rupture; and this calamity may occur even in a natural presentation, when the pelvic cavity is too small to admit the passage of the child.

The Ergot should not be used when the natural contractions of the uterus are competent to perform the work. But should the pains fail, yet all other conditions right, then its use is indicated. If after delivery there should be much flooding, or the placenta, retained, or the uterus distended with coagula, it may be given.

By analysis, Ergot has been found to contain two coloring principles, one a fawn color, soluble in alcohol, the other violet, but insoluble in alcohol; a sweetish oleaginous matter; a free acid, probably the phosphoric; free ammonia; a vegeto-animal matter strongly disposed to putridity.

Physicians should bear in mind that Ergot is deteriorated by long standing, and that it is safer to renew by every year's

growth, and kept in perfectly tight bottles, reducing it to powder when needed for use.

Should Ergot be taken in over doses, so as to produce its poisonous or dangerous symptoms, as before described, large draughts of emollient drinks, followed with emetics, and then carthartics, should be resorted to.

Pulvis Ergota.—Dose—Ergot, powdered, Grs. xv to xx, in a little sweetened water or simple syrup, or in a wine-glass of any good wine. If necessary, repeat every hour for two or three times.

Infusum Ergota—Powdered Ergot, ℥ii; boiling water, Oss. Allow it to stand half an hour or more, turn off or strain. A little nutmeg or cinnamon, wine or brandy may be added as a flavor. *Dose*—A wine-glassful every half hour.

Vinum Ergota—Ergot, bruised, ℥iss; Port Wine, Oi. Digest ten days, with occasional agitation. *Dose*—fl℥i to ii. This form is generally used as a substitute for the tincture.

Oleum Ergota—The oil of Ergota is prepared from the ethereal tincture, and is of a reddish-brown color. Although this has been repeatedly employed as a substitute for the other forms, it is not in much favor with the profession. *Dose*—Gtts. xx to xxx, in warm tea or spirits and water.

SEMPERVIVUM TECTORUM.

NAT. ORD.—Sempervivæ. SEX. SYST.—Polyandria Polygynia.

Common Name.—House-leek.

DESCRIPTION.—The roots numerous, light-brown color. Leaves numerous, radical, ciliate, oblong, acute, pulpy, spreading. Stem arises six or eight inches, erect, downy, bearing a few alternate leaves. Calyx nine or twelve parted. Petals eight to twelve, pale rose color. Stamens twelve to twenty.

History.—This plant is a native of Europe. In this country it is occasionally found on the roofs of old houses, living through our cold winters. To insure its growth, it generally requires some attention, by keeping it in pots or boxes, filled with soft loomy earth. With us it seldom flowers.

PROP., &c.—The leaves officinal. For many years they have been employed in domestic practice as a cooling and discutient application for tumors, ulcers, burns, and other sores. Dr. Brown, of Cincinnati, has recommended a fluid-extract for deafness. His process of preparation was by placing the fresh leaves in a bottle, corked, applying gradual heat, thoroughly softening the leaves until they parted with their fluid portion, then dropping it into the ear. The leaves contain supermallate of lime, with small proportions of acid and astringent principles.

SENECIO AURENS.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Polygamia.

Common Names.—Life Root, Groundsel, Female Rugulator, False Valerian.

DESCRIPTION.—Stem erect, slender, one to three feet high, sometimes pubescent near the base. Its radical leaves serrate, nearly orbicular, supported on long petioles; cauline leaves amplexicaule, embracing the stem, deeply dentate. Flowers yellow, in terminal umbels. Rays eight to twelve. Seeds striate.

History.—This indigenous plant is common in most parts of this country, in woods, marshy and uneven ground. The medical properties of this article seem to have been brought into notice by the Eclectic profession, and the most interesting account of it is found in King's Eclectic Dispensatory.

This genus presents a large number of species; some of which are the *S. balsamita*, balsam Groundsel; *S. elongatus*, long stem Groundsel; *S. lobatus*, butter-weed; *S. gracilis*, female-regulator, and the *S. hieracifolius*, fire-weed. Senecio is derived from the Latin, *senex*, an old man, because of its downy appearance.

PROP., &c.—The *S. aurens* (life root), and the *S. gracilis* (female regulator), are esteemed as possessing similar properties. Said to be expectorant, diuretic, diaphoretic, alterative, and tonic. Employed for pulmonary affections, stranguary, dropsy, dysentery, coughs, colds, dysmenorrhea, and some other diseases.

By some authors the Senecio is considered a specific for stranguary. For this and other diseases in which it is employed, the infusion should be used, combined with some of the aromatics, as peppermint leaves or bark of cinnamon.

These plants, given in any of the crude forms, are very unpleasant in taste, which may be obviated by the use of the *Senecionine* of Wm. S. Merrell, of Cincinnati.

SENECIO HIERACIFOLIUS.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Polygamia.

Common Name.—Fire-weed.

DESCRIPTION.—Annual. Roots many, fleshy, light color. Stems large, partially groved, three to five feet high, bearing panicled flowers. Leaves large, acute, deeply and un-

evenly toothed. Calyx long, large, cylindrical, bristly at the base. Flowers whitish, consisting of pappus, or long, numerous, white, fine rays, silky.

History.—This plant is the *Erechthites* of some authors. It is a ragged looking plant, of a light green color, two to three feet high; its smell rank and unpleasant, owing to its volatile and fixed oils. Most likely to be found in open woods, wet grounds, and especially where the lumber has been fallen and the ground burnt over, hence its common name, *fire-weed.* It abounds in Canada, the Eastern and Northern States; seldom seen as far south as Delaware and Maryland. It puts forth its large, numerous, whitish and silky flowers in August and September.

PROP., &c.—Astringent, tonic, emetic. It contains volatile and fixed oils, gum and mucilage; but not yet fully analyzed. The infusion has been used for diarrhea and dysentery, and may be employed by injecting into the vaginia for leucorrhea. Its nauseating and unpleasant taste and smell precludes its general use. The alcoholic extract has been employed by Dr. Weyth, of Pennsylvania.

The oil of this plant has often been distilled in New York and the Eastern States, and sold as the oil *Erigeron*, or fleabane. Although it has similar smell, taste, and therapeutical action, physicians should be able to detect the difference in these two articles. This may be done by observing that the oil of *Senecio* has a light straw color and limpid appearance, with a rank odor. The oil *Erigeron* has a reddish and yellowish color, and not very limpid; more the appearance of olive oil, and its odor not so strong as the other, and when standing, it becomes thicker and more tenacious than does the other. Its taste is more lasting than the other. See the article on Erigeron.

The oil *Senecio* is employed for hemorrhage of the stomach, lungs, uterus and kidneys, yet it is not so reliable as the *Erigeron* oil. *Dose*—Gtts. v to xii, on sugar or in emulcients.

SESAMUM INDICUM.

NAT. ORD.—Bignonia. SEX. SYST.—Didynamia Angiospermia.

Common Name.—Benne Plant.

DESCRIPTION.—Annual. Stem two to four feet high. Leaves ovate, lanceolate, the upper entire, serrate; the lower three-lobed. Flowers axilary, whitish tinged, purplish. Calyx five-parted. Corolla bell-shape. Petals five. Stigma lanceolate

Capsule four-angled. Cells four. Seeds small, numerous, oval, yellowish.

History.—The *S. indicum* is but little known to the profession of this country, and several of the best English authors do not speak of it. It is cultivated in the hot-beds of our Southern States, and the south part of New Jersey; but to insure its growth, the seeds should be obtained every year from the West Indies. In 1828, C. S. Rafinesque, in his Medical Flora, says: "*Benny, Zezehan; Vangle* in Jamaica; *Semsem* of Arabs; *Jugotine* of French; *Giugiolena* of Italy; cultivated in Asia, 2500 years ago, for oil, yet from Spain and Guinea to China. Oil of seeds preferred to olive oil by Arabs; said to make women fat, skin soft, clean hair. Brought by negroes to Southern States. Seeds eaten with maize; make good cakes with honey; put in bread to flavor it. Emulsion pectoral. Horses, cattle and fowls grow fat on them. Leaves fine emollient, thicken water like sassafrine; very good for diarrhea and dysentery as common drink. Seeds give ninety per cent. of oil; mild, sweet, keeps many years, fit for food and lamps, laxative like castor oil, equivalent and better, not nauseous."

F. Brown, of Philadelphia, has, we learn, cultivated this plant for a number of years to supply his drug store.

PROP., &c.—A demulcent. The leaves yield a large amount of mucilage. It is employed in nephritic affections, for inflammation of the kidneys and painful urination; for inflammation of the bowels, diarrhea and dysentery. Two or three of the fresh leaves may be added to one pint of cold water, and boiling water for the dried leaves.

SICYOS ANGULATA.

NAT. ORD.—Cucurbitacea. SEX. SYST.—Monœcia Monadelphia.

Common Names.—Single-seed Cucumber, Wild Cucumber.

DESCRIPTION.—Annual. Stem or vine pubescent. Leaves alternate, cordate, lobed at base, scabrous, toothed, palmately veined. Tendrils axilary, divided, grasping upon objects to support the vine. Flowers white, sterile, in racemose corymbs. Fruit gourd-like berry, covered with small bristles. Seeds one.

History.—The wild Cucumber flourishes best in the Southern States, though found as far north as Canada; somewhat resembles the garden Cucumber by stems, leaves and tendrils, hence its common name. Seldom employed by the profession.

PROP., &c.—Purgative and diuretic. The roots and seeds used in decoction for dropsical affections.

SIGILLARIA MULTIFLORA.

NAT. ORD.—Liliacæ. SEX. SYST.—Hexandria Monogynia.

Common Names.—Solomon Seal, Seal Root ,Drop Berry.

DESCRIPTION.—Root perennial, horizontal, thick, wrinkled, premorse. Stem simple, erect, one to two feet high, smooth

and round, recurved or bending at the upper third. Leaves alternate, longer than the internodes, oblong, acute, broad or sub-oval, base clasping, entire, multinerve, very smooth. Flowers white, pretty large, nearly one inch long, several on axilary reflexed peduncles; three to five sessile. Berry round, red, dotted.

History.—"Linneus and the Linnean botanists have united half a dozen genera under the name of *Convallaria*, which thus has no characters of its own. It is absurd to consider all these genera as one genus without any collective characters; they are not even sub-genera, since their habit and flowers are widely different.

"The *S. multiflora* is found all over the United States, on hills. It blossoms in June and July. The other American species of *Sigillaria*, such as *S. biflora*, *S. latifolia*, *S. pubescens*, &c., are all called Solomon Seal, and have similar properties."—RAFINESQUE.

Under the order *Convallaria* of many authors, are several species, some of the common names of which are *Giant's Solomon Seal*, *Dwarf Solomon Seal*, *Lily* of the Valley, and *wild Lily* of the Valley.

PROP., &c.—Demulcent, astringent, nervine, tonic. The root is officinal. Its taste is sweetish and mucilaginous, and contains mucilage, sugar, gum. The Indians of America have employed them for food when cooked. The fresh roots, when bruised, are employed to relieve local inflammation, sore eyes, piles, boils, felons, &c.

The decoction may be given for leucorrhea and immoderate flow of the menses. Combined with Comfrey, in decoction or syrup, is recommended for inflammatory conditions of the lungs and breast, as well as for erysipelas, and other cutaneous diseases.

SILONE VIRGINICA.

NAT. ORD.—Caryophillea. SEX. SYST.—Decandria Trigynia.

Common Names.—Pink Catch-fly, Fire-pink.

DESCRIPTION.—Stem erect, few branches, twelve to eighteen inches high. Leaves opposite, lanceolate, waving. Flowers reddish, few. Calyx oblong, cylindrical. Petals five, partially cleft, wedge-shape.

History.—This plant is found in the open woods of the Northern States. There are several species of this genus, which Gray and other authors class in the Pink family.

PROP., &c.—Vermifuge, nervine. The infusion of the roots of this plant may be employed as a substitute for the Spigelia Marilandica, on the second day followed with a purge of Senna or Mandrake. It makes some impression on the nervous system and upon the brain. Not understood by the profession.

SIDA SPINOSA.

NAT. ORD.—Malvacea. SEX. SYST.—Monadelphia Polyandria.

Common Name.—Indian Mallows.

DESCRIPTION.—Stem annual, branching, pubescent. Leaves ovate, lanceolate, serrate, alternate. Flowers yellow, axilary, on short peduncles. Calyx five-cleft, pubescent. Stigma five-cleft. Capsules many, in circular form. Cells one. Seeds one to three.

History.—There are eight or ten species of the Sida—the *S. rhombifolia*, with two or three others, peculiar to the Southern States. Some of these plants are called *Mallows*, *False Mallows*, *Indian Mallows*. Grow on light soils, in pastures and fields.

PROP., &c.—Diuretic and dimulcent. The leaves of the *S. spinosa* and *S. rhombifolia*, in the form of infusion and decoction, employed for urinary and dropsical affections.

SILPHIUM PERFOLIATUM.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Polygamia.

Common Names.—Ragged Cup, Indian Cup-plant.

DESCRIPTION.—Root perennial, long, rough, giving off many fibres. Stem four-sided, herbaceous, four to six feet high, branching near the top. Leaves opposite, perfoliate, deeply serrate, the upper leaves united at their base so as to form a cup-disk. Flowers terminal, oblong, yellow rays, and dark brown disk.

History.—This large, perennial plant is common in the Western States, on rich soil, in woods, and along streams. Some authors enumerate about twenty species of the *Silphium.* ranging in locality from New York, west and south. Rosin-weed, Compass-plant, Prairie-dock, and Cup-plant, are some of their common names. This genus receives its name from the Greek *silphion*, an umbelliferous plant.

PROP., &c.—Diaphoretic, stimulant, and alterative. The root is officinal. It may be employed for coughs and painful affections of the chest, in decoction or infusion, so as to induce perspiration. This plant, with others of the species, by in-

cisions when green, yields a resinous, bitter, amber-colored gum, similar to frankincense. It is stimulant, aromatic, and fragrant. The Indians are said to have employed it to sweeten the breath. The root may be employed in forms of infusion, decoction, and syrup.

SINAPIS ALBA.

NAT. ORD.—Crucifera. SEX. SYST.—Tetradynamia Siliquosa.

Common Name.—Yellow Mustard.

DESCRIPTION.—Annual. Stem two to four feet high, branching. Leaves pinnatifid, irregularly notched, terminal, deep green color. Flowers yellow, arranged in racemes. Siliques or pods bristly, shorter than its curved or sword-shape beak. Seeds in one row, globose, pale yellow color.

History.—The Mustard-plant is supposed to have been introduced into this country from Europe, where it has been known for many centuries. In our country, it is raised in gardens and fields, and found in spontaneous growth about buildings and uncultivated fields.

Cullen employed Mustard-seeds, unground, in tablespoonful doses, and authors of several centuries past have recommended it for old persons to prolong life. The yellow (or white of some authors) seeds are much larger and milder than the *S. nigra*, or black Mustard. The English yellow Mustard is larger than our growth.

PROP., &c.—Stimulant, tonic, mild laxative, and diuretic. Chemists have found in Mustard, acrid volatile oil, fixed, an albuminous principle, sulphur, nitrogen, phosphate and sulphate of lime, with a little silex.

Its chief internal employment is for indigestion, depending upon a weakened condition of the digestive organs. Sometimes in low stages of fever, to abate delirium, increase the urine and general secretions; also for paralysis. For indigestion, the ground seeds are often given in teaspoonful doses, twice daily, observing that it is not followed with pain or an unpleasant aching sensation, as over-doses will produce gastritis. It is employed occasionally as a substitute for emetic agents, by mixing about half an ounce of ground seeds in a pint of warm water, exhibiting in three or four doses, a few minutes apart, until vomiting occurs. The use of the seeds should not be long continued, as they may collect in the *appendix vermiforis*, and, as cases are related, they have been retained in the intestines for seven days.

The most frequent use is in the form of a cataplasm, as a counter-irritant and revulsive agent, and mixed in warm water as a rubefacient. The Eclectic physician employs the cataplasm as a revulsive agent to relieve internal congestion or inflammation of the brain, lungs, stomach, liver, intestines, and kidneys, and as a rubefacient upon the surface to excite capillary action, when the blood fails to fill the vessels of the skin, thus leaving the surface of the extremities cold. A general substitute for the fly-blister.

SINAPIS NIGRA.

NAT. ORD.—Crucifera. SEX. SYST.—Tetradynamia Siliquosa.

Common Name.—Black Mustard.

DESCRIPTION.—Annual. Leaves large, scabrous, lyrate, or unequally pinnate; the upper ones entire, lanceolate. Flowers in yellow racemes. Silique or pods glabrous, adpressed, one-half to one inch long. Seeds in single row, small, purplish-black color.

History.—The black Mustard is supposed to be a native of Europe, and naturalized in this country. It was known by Hippocrates and other ancient physicians. In our country, it grows spontaneously about old buildings, and like the yellow Mustard, is largely cultivated for our markets, where it is ground in mills, and distributed for family use.

PROP., &c.—Stimulant, irritant, emetic, mild diuretic, and excites peristaltic action of the bowels. It yields a *volatile* and *fixed* oil, myronic acid, and synapisine. It contains but little, if any, sulphur that is found in the yellow Mustard. The black Mustard containing more of the acrid and volatile principles, is most reliable for external use, while the yellow or white is generally employed internally. Either one may be substituted for the other; only the black is required in less doses.

When Mustard is applied in form of a cataplasm, care should be had that it is not retained so long as to destroy the skin, and followed by ulceration and sloughing. When its action has fairly reddened the skin, it should be removed, whether pain is felt or not.

The seeds (*semina sinapis nigra*, and *semina sinapis alba*) are officinal. Mustard seeds have been recommended for lethargy, languor, palsies, tinea, scurvy, and nervous diseases.

SMILAX OFFICINALIS.

NAT. ORD.—Smilacea. SEX. SYST.—Diœcia Hexandria.

Common Name.—Sarsaparilla.

DESCRIPTION.—Roots (*radix sarsaparilla officinalis*) several feet long; when fresh, about the size of a goose-quill, when dry, it diminishes in size, the cuticle contracted lengthwise, dark grayish or brown color. Stem quadrangular, smooth, scattered prickles, twining, several feet in length. Leaves scattered, eight to twelve inches long, ovate, oblong, acute, cordate, nerved, smooth. Flowers male and female.

History.—Sarsaparilla was first brought to notice by the Spaniards in the West Indies, and introduced into Europe about 1530. They named it *Zarzaparilla*, because it resembled the *zarza*, a bramble, as well as *parilla*, a vine, both found in Europe; and botanists have classed it as the natural order, *Smilacea;* hence Smilax *Sarsaparilla*, including several species:

S. officinalis, found in New Grenada.
S. medica, on the eastern slope of the Mexican Andes.
S. papyracea, the product of Brazil, in Rio Negro, &c.
S. sypiletica, similar to the last mentioned.
S. sarsaparilla, found in the United States.

The Sarsaparilla found in commerce, is chiefly obtained in the central States of America, and to some extent South America, and from the southern Mexican States.

In the markets it is known as *Jamaica*, *Caraccus*, *Brazillian*, *Lima*, *Vera Cruz*, and *Honduras Sarsaparilla*, indicating the sections of country from which it is obtained. The roots when collected and sufficiently dried, are formed into bundles, varying in size from a few pounds to one hundred in weight. The *Brazillian* and *Honduras* kinds are generally preferred in our markets. Pareira and some other authors notice them as *mealy Sarsaparilla*, possessing a large proportion of *starch* or *meal*, of pale whitish color, seen in the dust that falls when breaking the dried roots. The above author also states that the *mealy* kind is preferred in the south of Europe, whilst in England the non-*mealy*, as the Jamaica, Lima, &c., are in general use.

In the selection of the roots, the color is not to be depended upon, but those having a deep orange tinge are preferred, and having an acrid nauseous taste. Several English writers have asserted that the Jamaica or West India root produces the largest amount of extract. Nearly all of the roots imparts little else than an insipid and mucilaginous taste.

PROP., &c.—Alterative and mucilaginous; by some authors ascribed to be diuretic. It has been employed for rheumatism, scrofulous affections, venereal diseases, gout, cutaneous eruptions, and many other forms of diseases.

Sarsaparilla roots have been analyzed by many eminent chemists. Cannobio found the Honduras roots to contain, of bitter acrid resin, two and one-eighth parts; gummy extractive, five and one-fifth; Starch, 54.2; woody fibre, 27.8, and loss 9.7 parts in one hundred. Other chemists have found a larger number of constituent parts. It is ascertained that its therapeutical action depends chiefly upon the *smilacin*, *starch*, and a small proportion of volatile oil that it contains.

The *starch* is contained in the cortical and medullary parts of the root, which is freely taken up by water in decoction and infusion, and precipitates when poured into alcohol.

The *smilacin* was discovered by Palotta in 1824, which he termed *pariglin*. Smilacin is white, crystalizable, with very little taste; it is soluble in alcohol, ether, and essential oils; and partially soluble in boiling water. Several chemists have found its constituent elements to be carbon, hydrogen and oxygen. That of Henry, for its atomic elements, C. 9; H. 9; O. 3.

The profession generally, have but little confidence in any efficient action of the Sarsaparilla, whilst the American people have consumed enormous amounts designated under its caption, as being adequate for the relief of many diseases. Enormous amounts of money have been expended by the sick, from the flattering advertisements of its venders, who from books, describe symptoms of diseases without any knowledge of its therapeutical action.

To all sensible appearances, this plant is one of the most inert remedies, at least so far as taste, smell, and immediate action can be observed. If any therapeutical action does follow its use, it must have the power to act upon the circulating fluids by disengaging and throwing off morbific elements in a very lengthy and quiet way. And thousands of people who purchase the syrup of Sarsaparilla, expect that it requires a long time, many quart bottles, and many dollars to effect any good result.

It is prescribed as an alterative agent for chronic enlargements of glands and joints, for abscesses and ulcers, diseased bones, pulmonary affections, and general wasting of the system. We often find individuals afflicted with some chronic form of disease, who have spent all their substance in the purchase of Sarsaparilla, Wild Cherry, Cod-Liver Oil, or some other popular nostrum, and then apply to the physician for relief in their last hours of poverty and sickness.

Leaves ovate, lanceolate, five-nerved, cuspidate and glaucous beneath. Flowers whitish, small, on peduncles longer than the petioles.

Pulvis Sarsaparilla—Of the clean dry roots reduce to powder. *Dose*—℥ss to i, in a little cold water or simple syrup.

Decoctum Sarsaparilla—Of the clean roots cut in short pieces, ℥x; Boiling Water, Oviij. Digest five hours, turn off the infusion, bruise the roots, put them back in the infusion, then reduce by boiling to four pints, and strain. *Dose*–fl℥iij to vi.

Decoctum Sarsaparilla Compositum—Compound decoction. Of the decoction of Sarsaparilla, Oiv; Sassafras bark powdered, Guaiacum shavings, Liquorice root bruised, each ℥i; Mazereon bark, ℥iij. Boil fifteen minutes and strain. *Dose*—fl℥i to ii, three times daily.

Syrupus Sarsaparilla—Take of the roots cut in small pieces, lb. i; Boiling Water, Cong. i. Allow this to stand twelve hours in a warm place, then reduce by boiling to two quarts, and strain while hot. Add one pound of Sugar, keeping it nearly to boiling heat for twenty minutes, skimming off the impurities that may rise to the surface; this is for immediate use. If desired to keep on hand in warm weather, more sugar may be necessary.

Another formula is, in place of the water, use diluted alcohol, let stand twelve days, filter and reduce by water-bath to four pints. While it is yet hot, add the sugar and dissolve, then add oils of Gaultheria and Anise, each M. ii.

Extractum Sarsaparilla Fluidum—The roots cut in short pieces, lb. i; Boiling Water, Oviij. Boil one hour and strain; then add ten pints of water, boil and strain as at first. Mix the two liquors, and evaporate by gentle heat to twelve ounces, and when cold add four ounces of brandy. *Dose*—fl℥i to ii, three or four times daily.

Smilacin may be obtained from a concentrated alcoholic tincture of the root, and placing over fire so as to make it hot; set it aside, mix animal charcoal, and cooling it deposits impure silicin, purifying it by repeated solutions of pure water.

Smilicin is prepared in the chemical laboratories of B. Keith & Co., New York, and W. S. Merrell, Cincinnati.

SMILAX SARSAPARILLA.

NAT. ORD.—Smilacea. SEX. SYST.—Diœcia Hexandria.

Common Name.—American Sarsaparilla.

DESCRIPTION.—The roots one to three feet long, horizontal, about the size of a writing quill, few fibres, reddish-brown color. Stem two or three feet, slender, bushy, a few prickers.

History.—The American Sarsaparilla is found in rich soil of the open woods of the Middle States. Its stem is woody, and its flowers appear in July. Under the natural order *Smilacea*, Eaton mentions seventeen different species, eight of which are peculiar to the Southern, the others found in the Northern States and Canada. The *S. rotundifolia*, the green Brier, and the *S. peduncularis*, Jacob's Ladder.

PROP., &c.—Alterative. It is the opinion of some that this article is equally as valuable as the imported species; but as the profession generally make but little use of it, further investigation is necessary. For its preparations and indications, see the article, *Smilax Officinalis.*

SOLANUM DULCAMARA.

NAT. ORD.—Solanacea. SEX. SYST.—Pentandria Monogynia.

Common Names.—Bitter-sweet, Woody Nightshade.

DESCRIPTION.—Woody vine, creeping or climbing to the extent of five or six feet; base woody, end or last shoots herbaceous, flexuose, without thorns, smooth, terete. Leaves alternate, petiolate, ovate, acute, entire; base subcordate, and often with one or two small lobes like auricles at the base, partially halbert-shaped, with obtuse sinusses. Flowers on peduncles, opposed to the leaves, bearing a loose cluster or cymose panicle of many flowers, of a pretty violet color, with yellow anthers. Calyx small, acute. Corolla nearly five-parted; segments acute, ovate, lanceolate, each with two whitish dots or glands at the base, often reflexed. Filaments very short, anthers erect, forming a yellow, conical tube. Pistil oval. Style filiform, exert. Stigma obtuse, simple. Berries oval, of a bright scarlet.

History.—Some authors suppose this plant to have been naturalized from Europe. It is found in most all sections of the United States, on good ground, along fences, about old buildings and uncultivated gardens.

From the common names applied to this article, confusion and mistakes

have arisen, both in its collection and use. To avoid this, see the *celastrus scandens*, or staff-vine, called Bitter-sweet; also the *atropa belladona*, called Deadly Nightshade. The Solanum has a green, *herbaceous* stem, and the celastrus has a reddish, *woody* stem.

The genus Solanum includes a large number of species, some of which are

S. nigrum, garden Nightshade.

S. tuberosum, the Potato, cultivated in all countries.

S. lycopersicum, Tomato, Love-apple, cultivated.

S. melongena, Egg-plant, cultivated.

S. pseudo-capsicum, Jerusalem Cherry.

The *Capsicum annum*, red Pepper, is also classed in the natural order Solanacea, but not in the Dulcamara family.

PROP., &c.—The Bitter-sweet has alterative, diuretic, diaphoretic, and discutient effects. It is occasionally employed by our profession, and justly considered one that requires a little caution in its use. The stems and leaves should be collected when it blossoms, or soon after. Its taste is sweetish-bitter, hence its common name. This plant contains the principles of an acid called *solania*, mucus extractive, and other principles, extracted with water.

This plant has been recommended for a large number of diseases; for chronic rheumatism and gout, syphilis, jaundice, herpes, and other cutaneous diseases; for itch, schirrous swellings, ulcers and cancers.

When given internally, so as to produce slight nausea or vertigo, it should be moderated, for if continued, palpitation, delirium, emesis, and convulsions, may follow.

Pulvis Solanum—Clean dried leaves, powdered. *Dose*—Grs. x to xv.

Decoctum Solanum—Leaves or stems, ℥ss; Water, Oi. Boil and reduce one half and strain. *Dose*—fl℥ss, every three or four hours, lessening the dose when its symptoms are noticed.

The decoction has been its most common form of use; it is also compounded with other alterative agents to suit the views of the physician. The decoction may also be converted into syrup in the ordinary way. The watery extract may be prepared for immediate use.

Unguentum Solanum—Of the green stems and leaves, bruised, ℥iv; lard, lb. i. Raise the heat nearly to boiling for twenty minutes, and strain. Applied to cutaneous diseases, glandular swellings, indurated edges of ulcers and cancers.

The *Uuguentum Compositum*, by adding stramonium, phytolacca, or other discutient agents, frequently employed.

SOLANUM NIGRUM.

NAT. ORD.—Salanacea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Garden Nightshade.

DESCRIPTION.—Stem erect, prickly, one to two feet high, branching. Leaves ovate, edges prickly, partially pinnated, glabrous. Flowers pale violet or whitish, peduncled, nodding, solitary. Berries about the size of a pea, globular and black.

History.—The *S. nigrum* is easily distinguished from the *S. dulcamara*, by its erect stem and blackish fruit. It is found in various parts of the Northern and Middle States, about old buildings and fences, gardens and road-sides. It blossoms in July and August.

PROP., &c.—Narcotic, sedative, and discutient. This plant is but little used by the profession, and in some respects thought to be a substitute for the *dulcamara*. Its effects are very decided upon the brain and circulation, producing giddiness, stupor, insensibility and other dangerous symptoms. The berries are considered poisonous.

For discutient purposes, it is prepared and used the same as the *S. dulcamara.*

SOLIDAGO ODORA.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Superflua.

Common Name.—Sweet-scented Golden-rod.

DESCRIPTION.—The stem is purplish, erect, pubescent, two to three feet high, bending near its top. Leaves rather broad at base, lance-linear, glabrous and rough edges. Flowers deep yellow, in panicles on upper side.

History.—This plant is found in many parts of the United States, upon light soil generally, along fences in open woods and uncultivated fields. It receives its name from the slight aromatic odor found in its leaves, by which it may be distinguished from other species. Of the Solidagos, Eaton mentions fifty-two, and Rafinesque says there are seventy species. All are represented to have yellow flowers. A few of these may be noticed here.

The *S. rigide*, the hard-leaf Golden-rod, grows plentiful in the Western States, and found in most sections of the country, and three to five feet high. Its leaves are employed, and yield its properties to boiling water. It is astringent and tonic. The infusion is employed for hemorrhages, dysentery, and profuse mucus discharges.

S. canadensis, the Canadian Golden-rod. This is found in the open woods and uncultivated fields of Canada, the Eastern and Northern States, where it blossoms late in the fall. Stem three to five feet high. Its leaves have an unpleasant odor, and astringent properties. Its yellow flowers are used for coloring yarn and cloths.

S. giganta, the giant Golden-rod, four to seven feet high.

S. lateriflora, the side-leaf Golden-rod. These and several others are peculiar to the Northern States.

PROP., &c.—The *S. odora* is carminative, stimulant and diaphoretic. Leaves officinal. The infusion is employed for inflammatory fevers, colds, flatulence, and pains in the stomach. This plant yields an essential oil, which may be used in five to ten drops on sugar for chronic affections of the kidneys and other urinary organs; also externally for acute rheumatism and neuralgic affections. The carefully dried leaves of this plant are said to be a good substitute for imported tea.

The *S. rigida* is specially noticed in King's Eclectic Dispensatory, as an astringent and styptic.

This large family of plants has received but very little attention from our profession.

SORGHUM SACHARATUM.

NAT. ORD.—Graminea. SEX. SYST.—Triandria Monogynia.

Common Name.—Broom Corn.

DESCRIPTION.—Stem four to six feet high, branching. Leaves linear, in whorls. Glumes covered with softish hairs. Florets in pairs.

History.—This plant is supposed to have been brought from the East Indies. It grows in the dryish, uncultivated fields of Pennsylvania and other Middle and Southern States. The *S. vulgare* or *Indian Millet*, is another species of this genus, having several varieties cultivated occasionally in this country.

S. nutans, called *Indian Grass* and *Wood Grass*, found on the dry soil of the Middle, and particularly the Southern States.

PROP., &c.—Alterative. The stems contain starch and sugar. The infusion may be used for scrofulous diseases. Its seeds contain some diuretic properties. Cultivated for making brooms.

The seeds of *S. vulgare* are by the Indians, made into flour for cakes; also used as coffee.

SPIGELIA MARILANDICA.

NAT. ORD.—Gentianea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Pink-root.

DESCRIPTION.—Root perennial, yellow, with many branched fibres in a bunch. Several stems, with four sides, erect,

simple, smooth. Leaves all opposite and sessile, oval elongate, very sharp or acuminate, entire and smooth. A raceme, seldom two, with few flowers, five to twelve, one-sided, on

short peduncles, without calyx, with five subulate serrulate segments. Corolla very handsome, one inch long, of a bright scarlet outside, but yellow above or inside, tube fusiform or swelled, and angular above, border with five acute spreading segments, like a golden star. Stamens five, short, inserted near the mouth, but decurrent. Anthers cordate, oblong. Pistil ovate, small, style long, filiform, jointed below, with a fusiform pubescent acute stigma. Capsule on the reflexed calyx, with two globular lobes and cells, and many seeds.

History.—The Pink-root is peculiar to the Southern States, from Maryland west and south. It is stated that we are indebted to the Indians for its discovery as an anthelmintic, and became known to the profession about 1740, through Dr. Gardner and others, of South Carolina. It has been known as the *Carolina Pink*, *Star Bloom*, *Indian Pink*, *Worm Root*, and by the Cherokee Indians, as *Unstitla*.

This is a beautiful and ornamental plant, and named in honor of Spigelius, an Indian botanist.

The roots are officinal. Sometimes the stems and leaves are collected, which are not desirable. Each root consists of a rhizome, giving off numerous small slender fibres of three to six inches long, brown color, of bitterish sweetish taste, and a slight peculiar odor. With this is sometimes found a smaller root of a light color, which should be thrown aside.

It is now collected in the South-western States, dried and packed into bales and casks. If allowed to get wet, it becomes mouldy and unfit for use.

PROP., &c.—Anthelmintic and narcotic. Its almost entire use has been to destroy worms in the alimentary canal. By analysis, it is found to contain an acrid resin and volatile and fixed oils in small proportions, with tannin and bitter extractive principles. It is not known which of these principles are destructive to worms; for while as a general rule we find the bitter agents objectionable to these mysterious parasites, we find also they can be removed by the oil of wormseed, by assofetida and half-drachm doses of capsicum.

Of the narcotic powers of Spigelia, Rafinesque says it is preferable to Digitalis, being milder in action, never causes sudden prostration, while it lessens and soothes the morbid irritability of the heart, arteries and nerves.

When given in too large doses, or continued too long, it causes the unpleasant symptons, vertigo, stupor, headache, dilitation of the pupil, flushed face, intoxication and delirium. On several occasions I have seen these symptoms by its use in domestic practice, which induces me to believe that serious consequences have often followed when given without the advice of a physician. Undoubtedly its effects are variable,

sometimes with good results, sometimes none at all; whilst at other times injurious and probably fatal consequences, because of its indiscriminate use in families.

Some authors claim the Pink-root as the most positive and available vermifuge. It is always advised to be accompanied with, or followed by a purgative. Of these purgatives the Old School have generally recommended senna, oil, or calomel. The Eclectic profession prefer senna, or some of the preparations of podophyllum. For this last article see *Podophyllum Peltatum*, as the compound is one of the best vermifuges known.

Pulvis Spigelia—*Dose* of the powdered roots, Grs. x to xv., for a child; adults, ʒi to iii. Repeat morning and evening for two or three days, and follow with an active purge.

Infusum Spigelia—Of Pink-root, ʒiv; boiling Water, Oi. Let it macerate four to six hours in a covered vessel. *Dose*—for a child, flʒss to i; for an adult, ʒii to iv. Repeat the dose one hour before or after eating, for two days, then purge.

Spigelia Compositum—Take of Pink-root, ʒss; Savine, ʒii; Senna, ʒss; Manna, ʒi; boiling Water, Oi. Let stand six hours, covered. *Dose*—flʒss to ii, three or four times daily. This is similar to the common *worm tea* of the drug stores.

SPINACEA OLERACEA.

NAT. ORD.—Antriplices. SEX. SYST.—Diœcia Pentandria.

Common Name.—Spinage.

DESCRIPTION.—Roots large, fibrous, light grayish color. Stems herbaceous, greenish, branching, one to two feet high. Leaves hastate, lobed, acute. Flowers staminate. Calyx five-parted. Seeds one with the calyx.

History.—The native place of Spinage is not known. It is cultivated in the gardens of the Middle States for early vegetables of the markets, as salads and pot-herbs for the table. The *S. spinosa* is another species.

PROP., &c.—Emollient, laxative, and alterative. When boiled, it is employed for inflammatory conditions of the stomach and bowels. A useful diet for scrofulous patients.

SPIREA TOMENTOSA.

NAT. ORD.—Rosacea. SEX. SYST.—Icosandria Pentagynia.

Common Names.—Hardhack, Rosay Bush, White Leaf.

DESCRIPTION.—Small shrub with many stems, two to four feet high, simple, upright, purplish, downy, terete. Leaves alternate, crowded, on very short petioles, oblong or oval lanceolate, subacute at both ends, with unequal acute serratures, dark green or brownish above, and rugose, white and tomentose beneath. Flowers terminal, in a kind of terminal panide, of a handsome red color, formed by compound spikes of small subsessile flowers. Calyx companulate, with five acute segments. Five round petals. Five pistils and capsules.

History.—The Hardhack is quite an ornamental shrub, growing in most sections of our country with other shrubbery, along the low moist places of meadows and fields. Its beautiful reddish-purple flower puts forth in July and August, and the small fine seeds remain until winter. There are several species of the Spirea.

PROP., &c.—Astringent and tonic. The leaves are officinal. and yield their properties to water. The flower, stems and blossoms may be used with the leaves. It is one of our pure, simple astringents, and probably equal to Kino, Geranium and other similar astringents. It is collected and pressed by the Shakers of New York State, and for sale in all of our large cities. Physicians in the country should collect it.

The infusion and decoction I have employed for a number of years for diarrhea, dysentery, and cholera infantum. Its taste is not unpleasant, and with children it will remain in the stomach when many other agents fail. It is known to be a useful tonic for the stomach in case of a relaxed and weakened condition of that organ. The decoction may also be used

by injection for leucorrhea and dysentery. The extract is prepared, and a convenient form.

Decoctum Spirea—Of the Leaves and Blossoms, ℥ss; Water, Oi. Boil twenty minutes and strain. *Dose*—fl℥ii to viii.

Extractum Spirea—Leaves and flowers, lb. i; Water, Cong. i. Boil and reduce to two quarts and strain. By gentle heat reduce the decoction to the consistence of thin cream. Place this in a suitable earthen jar. When cold, put on a little alcohol to prevent moulding, and cover tight. *Dose*—Grs. iii to v.

SPONGIA OFFICINALIS.

Common Name.—Sponge.

History.—This may be considered as possessing both vegetable and animal life. Grant classes it, *poriphera*, with poripherous animals. Others in the sub-kingdom of animal. It is the *acrita* of Macleay. Several authors deny that it possesses animal life, and Rafinesque asserts that it is simply a sea vegetable, having no animal motion whatever, of which there are two hundred and fifty species. It is found to consist of numerous fibres covered with gelatinous substance, having cells or pores, into which is received the sea-water, which imparts to the sponge its various elements. In 1828, it was analyzed by Hornman, who claimed that it contains fat oil, animal mucus, iodine, sulphur, phosphate of lime, magnesia and several other elements.

Sponge is found growing upon the rocks of the mediterranean, and near the Islands of the East and West Indies. The finest and best article comes from the former region of the world, and coarser from the latter. Many natives of the countries of its growth become expert divers, with knives hastily detatching the pieces, when it is taken ashore, squeezed, and washed in fresh water, then dried.

Prop., &c.—From Smyrna is derived the best Sponge of the markets, oval and cup-shape, of various sizes, and having soft, delicate, flexible texture. This is preferred in surgical cases, for removing blood in operations. This kind is also used as a pessary, to support the uterus.

Spongia Usta—The burnt Sponge has been used for bronchocele and scrofulous diseases. *Dose*—℥i to ii. Seldom employed.

STAPHYLEA TRIFOLIA.

NAT. ORD.—Rhamni. SEX. SYST.—Pentandria Trigynia.

Common Name.—Bladder-nut.

DESCRIPTION.—The leaves three, ovate, acuminate, serrate. Flowers yellowish-white, in pendulous racemes. Calyx five-parted. Petals five, erect. Stamens five. Pods large, inflated, three-lobed, three-celled. Nuts one to three, hard.

History.—The Staphylea is a shrub five to eight feet high, branching. Found in many parts of the country, along the margin of hills and damp grounds. Blossoms in May.

PROP., &c.—Tonic and anti-periodic. The bark is considered officinal, and yields its properties to water. The Eclectic Dispensatory mentions that Professor J. G. Jones, of Cincinnati, has made considerable use of it for intermittent fevers. It is also considered valuable in cases of indigestion and general debility. But little known to the profession. The infusion is the form of administration.

STATICE CAROLINIANA.

NAT. ORD.—Plumbaginacea. SEX. SYST.—Pentandria Pentagynia.

Common Names.—Marsh Rosemary, American Thrift, Sea Lavender.

DESCRIPTION.—Root perennial, large, fleshy, fusiform or branched, premose or obtuse, purplish-brown. Radical leaves, erect, on long petioles. Scapes round, smooth, one or two feet high, loosely panicled above, branches alternate. Calyx funnel-shaped, five-angled, five-toothed; angles ciliate. Petals blue, spatulate, obtuse. Pistil small, obovate, five styles, shorter than the stamens. Seed oblong.

History—This plant is undoubtedly a native of America, although some authors consider it a variety of the *S. limonium* of Europe. It grows on the damp and marshy grounds along the borders of the ocean, from New England to Florida, flowering in September and August. Rafinesque mentions five varieties. He also says that its astringent and and styptic powers are as great as the *nut-galls*, and equally valuable in making black ink.

PROP., &c.—One of the most active of the vegetable astringents. It contains tannin, gallic acid, gum, resin, albumen,

muriate of soda, and other properties. The root is officinal, and water its best solvent. The infusion is preferred for internal administration, as hemorrhages of the stomach, dysentery, and diarrhea, and a gargle for the mouth and throat of scarlet fever, ulcerated throat, apthea, and syongy gums.

Its decoction should be used as a wash for indolent ulcers, external piles, tetter, and sore eyes. By injection, used for dysentery, prolapsed uterus, and leucorrhea.

The powdered root is sprinkled upon ulcers and sores, and formed into salve.

Infusum Statice—The Roots, bruised, ℥i; Boiling Water, Oi. *Dose*—When cold, fl℥i to ii.

STELLARIA MEDIA.

NAT. ORD.—Caryophyllea. SEX. SYST.—Decandria Trigynia.

Common Name.—Chickweed.

DESCRIPTION.—The stem is herbaceous, procumbent, tubular, five to twelve inches long, branching. Leaves distant, ovate, acute, opposite. Flowers small, white, axilary, terminal. Peduncles one half to one inch long. Calyx five-cleft, hairy. Petals five, oblong, deeply divided.

History.—The Chickweed is common, found along fences, the borders of gardens and fields. It is seldom noticed, growing near the ground, generally partially covered by other plants. Found early in spring and late in the fall. Flowers from June to September. Many people who rear birds, obtain it for them to feed upon. It has seldom been noticed by medical authors.

Under the genus Stellaria (*Alsine* by some authors) are found some six or seven species. One of these is the *S. palustris*, Stich-wort or Meadow-star.

PROP., &c.—Mucilaginous, discutient, and alterative. Rafinesque merely notices this plant as being useful for scorbutic diseases; further than this, we have no knowledge of its internal use, only that it has been boiled like other herbs for table use.

For external use, we find it a most valuable agent to reduce local inflammation, being far better than Slippery-elm, because it retains its moisture much longer—not likely to become dry and irritating to the tender surface. When applied to joints attacked with gout, it gives relief in a few hours, dispersing the inflammation, and leaving the skin white, and the joint free from pain. I have applied it to external piles with remarkable success, subduing this most troublesome complaint in a few days. For internal piles, the infusion should be used per injection. This form may also be employed for dysentery.

Our profession will do well by giving proper attention to this plant. It should be gathered, and carefully dried in the shade for winter use.

Infusum Stellaria—Leaves and Stems of the Chickweed, ℥ii; Boiling Water, Oi. When cold, turn off as needed. *Dose*—fl℥i to iij. Used for irritation and inflammation of the stomach and bowels.

Cataplasma Stellaria—Leaves and Stems of the Chickweed, bruised, ℥ii; Slippery-elm, powdered, ℥i; Boiling Water sufficient to form a poultice. Applied to any external local inflammatiom, bruises, piles, burns, felons, boils, carbuncles, &c.

STEREIMIS REPENS.

NAT. ORD.—Amaranthi. SEX. SYST.—Monadelphia Pentandria.

Common Name.—Forty-knot.

DESCRIPTION.—The stems are procumbent, hairy. Leaves opposite, lanceolate, petioled, pubescent beneath. Flowers axilary, ovate heads. Calyx double. Stamens five, resting on the nectary. Style one. Capsule one. Seed one.

History.—This plant is the *Achyranthis* of most all authors. It is a native of South Carolina and other Southern States. It grows in and about the cultivated fields of low lands, and flowering in March.

PROP., &c.—Diuretic. The infusion of the leaves and roots may be used to relieve suppression of the urine, and to increase the secretion of the kidneys. But little known to the profession.

STELLARIA PALUSTRIS.

NAT. ORD.—Caryophyllea. SEX. SYST.—Decandria Trigynia.

Common Names.—Stitch-wort, Meadow-star.

DESCRIPTION—Stem erect, branching. Leaves without petioles, linear, lanceolate, opposite, one to two inches apart. Flowers white, on long, axilary peduncles, terminal. Calyx five-cleft. Corolla five-cleft. Petals white, five, each one-fourth parted.

History.—This plant is found on heavy ground, in many parts of the country, in uncultivated fields. The genus is found in Europe. Its name is derived from the Latin *stella*, because its five spreading petals resemble a star.

PROP., &c.—Alterative, astringent, tonic. It contains mucilage, resin, and a bitter principle. It may be employed for scrofulous conditions of the system, diarrhea, and debility. Its medical value is but little known, and requires further notice by the profession.

STILLINGIA SYLVATICA.

NAT. ORD.—Euphorbiacea. SEX. SYST.—Monœcia Monadelphia.

Common Names.—Queen's-root, Yaw-root, Cock-up Hat, Queen's Delight.

DESCRIPTION.—The stem is herbaceous, partially angled. When the fresh stem is broken, a milky juice exudes. Leaves oblong, lanceolate, sessile, tapering at the base. Flowers yellowish, in terminal spikes, those above sterile, and fertile near the base. Involucre hemispherical. Perianth tubular. Stamens two and three, exserted. Capsule three cells. Seeds three.

History.—The *S. sylvatica* has been found in western parts of Virginia, and more plentiful in the Western and Southwestern States. Its stem is two to three feet high, and blossoms in may and June. The root is officinal, which is long, cylindrical, sometimes one inch thick, of dark brown color externally, yellowish within. When dry, the outer cover becomes wrinkled.

So far as we can learn, Rafinesque, in 1830, was the first author to mention the medical virtues of the Stillingia. In 1843, it was first mentioned by the Old School authorities, though without any practical knowledge of its use. Its medicinal virtues and application to disease have been illustrated by the Eclectic profession.

PROP., &c.—Alterative and laxative. In large doses, it will cause vomiting. It contains an acrid volatile principle, woody fibre, resin, extractive and coloring matter. It yields its properties to alcohol and water. Most of its preparations will produce an unpleasant, pungent impression upon the faucus and throat, owing to the acrid and volatile principles it contains. Over-doses will irritate the stomach, and sometimes cause vomiting.

We class the Stillingia as one of the most active and efficient alteratives, with the Phytolacca, Iris, Versicola, Leptandria, and podophyllum. It has a high reputation for all stages of syphilitic diseases, for enlargement of the liver, and other glands of the system, exciting these organs to the office of secretion. It has also been employed for bronchial affections, for scrofulous and cutaneous diseases. This article is also said to be useful in paralytic affections, incontinence of urine and sterility, because of its peculiar stimulating powers.

The powdered root is seldom administered. The oil of Stillingia is found in the markets, used internally in drop doses, and externally a powerfully irritating agent. This, however, has the appearance, and no doubt is, the alcoholic fluid-extract.

The Stillingia, in any of its preparations, is best adapted to chronic forms of diseases. Being slow in action, though effectual, it is not much resorted to for inflammatory and rapid diseases. The physician and druggest should bear in mind that the root deteriorates if kept long on hand.

Tinctura Stillingia—The root of Stillingia cut and bruised, ℥ii; Alcohol, Oi. Digest ten days and filter. *Dose*—Gtts. v to xxx. Given in such vehicle as the physician prefers, sweetened water, compound or simple syrup.

Extractum Stillingia Fluidum—Take of the root, cut in pieces, bruised, lb. ii; Alcohol, Oiv. Digest five days and filter by displacement in a perculator. Let this tincture stand twenty-four hours, turn off, leaving any substance that may be at the

bottom, and reduce by water-bath to eight ounces. To the drugs add one quart of boiling water and digest twenty-four hours; in the perculator pass off this infusion, and gently pass through a half pint of boiling water; then by gentle heat reduce this to eight ounces; in this dissolve six ounces of loaf sugar, continuing the heat nearly to boiling for ten minutes, and to this add the alcoholic fluid, with one drachm of the oil of caraway or anise; continue the heat a few minutes until the whole is well incorporated together. When cool, place in a well stopped bottle for use. *Dose*—Gtts. iii to x.

For external application, the *alcoholic* fluid extract, as described above, becomes an active counter-irritant, and may be employed in compound liniments.

Syrupus Stillingia Compositus—Stillingia root and Yellow Dock roots, cut and bruised, each, lb. i; Pipsissewa leaves, lb. i; Blue Flag-root, bruised, ℥iv; Wintergreen leaves and stems (gaultherea procumbens), ℥iv; Alcohol, Oiv. Digest five days, and pass off by displacement. Let this stand twenty-four hours and turn off, and by water-bath reduce to two quarts.

To the drugs add two quarts of boiling water; let stand twenty-four hours, and pass off by displacement, passing through one pint more of boiling water. By gentle boiling reduce this solution to one quart; in this dissolve four pounds of white sugar; simmer for a few minutes, skim off any impurities that may arise, then add the alcoholic solution, remove from the fire, and when cool bottle for use. This will give about four quarts of the syrup. *Dose*—fl℥i to ii, with about a wine-glass of water, table or other simple teas.

Stillingin—Principles, resin, resinoid, alkaloid and neutral. *Dose*—Grs. ii to iv, three and four times daily.

STYRAX AMERICANA.

NAT. ORD.—Meliæ. SEX. SYST.—Monadelphia Decandria.

Common Name.—Spring Orange.

DESCRIPTION.—A branching, spreading shrub or bush. Leaves oblong, ovate and acute at both ends, glabrous. Flowers white, three to four in racemes. Calyx four or five toothed· Corolla five-parted. Stamens two, attached at the base of the corolla. Ovary three to five. Style simple. Fruit globular, hard, coated.

History.—There are three or four species of this genus, all found in the Southern States. This one is similar to the *S.*

laeva and *S. glabrum* of several authors. It is a handsome bush, growing around the margins of swamps, and along the borders of streams, blossoming in May; six to ten feet high.

[The *styrax officinalis* is a small tree, naturalized in Europe, but a native of Syria and Arabia, and fifteen or twenty feet high. The *storax* of the shops is the concrete juice of this tree; the best of this is whitish, tinged with yellow and reddish colors, opaque, soft and adhesive by pressure of the hand. There are other coarser kinds found in the markets.

Liquid Storax, imported, is commonly found in the drug stores; semi-fluid, adhesive, of brown color, tinged with green, and balsamic odor.

PROP., &c.—Expectorant. It has an affinity for the mucous membranes, like other balsamic agents, and employed for affections of the bronchial vessels, for gonorrhea and leucorrhea. For its fragrance, adhesiveness, and expectorant properties it is used in compounding pills and ointments. *Dose*—Grs. x to xx.]

PROP., &c.—The American Styrax yields from its bark a balsamic principle, possessing healing and expectorant properties, requiring further investigation.

SWIETENIA MAHOGANI.

NAT. ORD.—Meliæ. SEX. SYST.—Decandria Monogynia.

Common Name.—Mahogany Tree.

DESCRIPTION.—A tree. Its leaves are paired, ovate lanceolate, acuminate, uneven at the base. Flowers in axilary racemes. Calyx four to five cleft. Petals four or five. Stamens eight to ten. Capsule five celled, woody. Seeds winged.

History.—The Mahogany is a beautiful tree, many feet in height. It grows in the West Indies, Central America, and the southern part of Florida. Its wood is extensively used in manufacturing many articles of furniture.

The *S. febrifuga* is a large tree of the East Indies. Its bark has a slight aromatic odor, and possesses bitter and astringent principles.

PROP., &c.—The bark of the Mahogany tree is employed, yielding its properties to water and alcohol, which are tonic and astringent. It has been employed in febrile diseases for its tonic and anti-periodic powers. A strong decoction of shavings of the woods has been used for diarrhea.

SYMPHYTUM OFFICINALE.

NAT. ORD.—Boraginea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Comfrey.

DESCRIPTION.—Root perennial, whitish, thick, cylindrical, tapering or branched. Stem three or four feet high, upright,

branched, angular and winged, rough, branches erect. Leaves alternate, sessile, decurrent, oblong, attenuated, and rugose. Flowers in terminal racemes, glonerated, nodding, recurved. Corolla yellowish-white, base tubular, end ventricose, five-toothed.

History.—A native of Europe, and naturalized in this country. Occasionally found growing spontaneously in meadows and borders of fields; but that most found in our markets has

been allowed to grow about the borders of gardens, fields and fences. The root is officinal, which is long, tapering, fleshy, dark brown externally, and wrinkled when dry; internally, yellowish.

The *S. hirsutum* is a native species of this genus, found west of the Mississippi.

PROP., &c.—Demulcent and mild astringent. It contains mucilage, fecula, a small proportion of tannin and gallic acid, and yields its properties to water. Its indication is for diseased conditions of the mucus surface, so that by its soft emollient, yet astringent action, it becomes available in hemorrhage of the stomach, irritation of the intestines and dysentery. It should be used in pulmonary affections, where there is slight bleeding, irritation of the trachea, bronchial vessels, and mucus surface of the lungs. The fresh root, well bruised, is applicable to ulcers, sores, and fresh wounds. It should be collected early in spring or late in the fall, cut into pieces, dried, and kept from damp air, as it deteriorates by long keeping.

Infusum Symphytum—Of the fresh root, bruised, ℥iv; boiling Water Oiss. Let stand twenty-four hours. *Dose*—fl℥i to iii. To this infusion, while hot, port wine and loaf sugar may be added, if desirable.

Vinum Symphytum Compositum.—Comfrey roots bruised, ℥iij if fresh, ℥ii if dry; Gentian root and Sweet Flag root, each, bruised, ℥ss; Boiling Water, Oii. Macerate twenty-four hours, then add Port Wine, Oii. Digest ten days, and express in a screw-press, or through coarse linen. Let this stand twenty-four hours; carefully turn off, leaving any sediment that remains at the bottom. Place over a gentle heat, and add loaf sugar two pounds. *Dose*—One half to a wine-glass three or four times daily.

TANACETUM VULGARE.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Superflua.

Common Name.—Tansy.

DESCRIPTION.—Roots perennial, many clustering together. Stems in numerous clusters, leafy, branching near the top, one to three feet high. Leaves doubly pinnated, and leaflets notched. Flowers yellow, numerous, in close, dense corymb form.

History.—A native of Europe, and naturalized in our country. Cultivated in many gardens, and occasionally growing spontaneously along road-sides. It appears early in spring, apparently a second crop of leaves and flowers in the fall.

The *T. crispum* is a variety of this species, known as the *double tansy;* a traditionary idea with many people is, that this is superior to the *vulgare*—an error.

PROP., &c.—Tonic, emmenagogue, diaphoretc, anthelmintic, stimulant, and alterative. By analysis of Peschier, it was found to contain volatile and fatty oil, gum, bitter resin, tannin and gallic acid, extractive and coloring matter, and some other principles.

Tansy has been employed for various diseases; for a loss of the digestive powers, indigestion, intermittent fevers, suppressed menstruation, gout, coliacind worms. The cold infusion is usually employed, and sometimes the tincture. In domestic practice, it is often used for suppressed menstruation, and in spirits for *bitters*. Pregnant females frequently resort to the infusion and oil to arrest fetal gestation; but this is a dangerous practice, sometimes followed with alarming effects, sudden prostration and insensibility. The *oil* is a powerful external irritant, though seldom employed as such. As an emmenagogue, it should be dropped on sugar, followed with large draughts of diaphoretic teas, with the foot or hip-bath. For worms, it should be given on sugar, or combined with other vermifuges.

Infusum Tanacetum—Dried leaves and small stems, ℥ss; Boiling Water, Oi. *Dose*—fl℥i to iij.

Tinctura Tanacetum—Fresh Leaves, bruised, ℥iij; Good Brandy, Oii. *Dose*—fl℥ss to i, diluted in a little water.

Oleum Tanacetum.—Dose—Gtts. ii to vi, on sugar.

TEUCRIUM CANADENSE.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia.

Common Names.—Wood Sage, Germander.

DESCRIPTION.—The stem is erect, pubescent, partially jointed. Leaves on short petioles, opposite, serrate. Flowers purplish, in raceme whorls. Calyx five-cleft, pubescent. Corolla two-parted, the upper divided in two, and short; the lower in three, and long.

History.—The Wood-sage is one to three feet high, found in low wet ground, flowering in July. The *T. virginicum*' another species of this genus, is found in Virginia and southward. It bears purplish flowers, and found in damp ground.

In Europe, several species of the *Teucrium* are known, bearing the name in honor of *Teucer*, the founder of Troy.

PROP., &c.—Stimulant, tonic, aromatic, bitter. Its leaves have been employed by infusion, for fevers, rheumatism, gout, chlorosis, and hematuria. Alcohol will take up some of its active principles.

THAPSIA TRIFOLIATA.

NAT. ORD.—Umbellifera. SEX. SYST.—Pentandria Digynia.

Common Name.—Round-heart.

DESCRIPTION.—The stem about three feet high, jointed. Leaves radical, nearly oval, heart-shape; stem-leaves quinate, three-parted or lobed, toothed. Flowers yellow.

History.—This plant is found in the Northern, Western, and South-western States, in rocky, uneven grounds of woods and thickets, flowering in June. There are several species of this genus. It receives its name from the Island of *Thapsia*, where a similar plant is found.

PROP., &c.—Alterative, diaphoretic. The leaves and roots may be used for fevers and syphilitic diseases. Reputed to cure the bite of rattlesnakes.

THUJA OCCIDENTALIS.

NAT. ORD.—Labiatea. SEX. SYST.—Monœcia Monadelphia.

Common Names.—Arbor Vitea, False White Cedar.

DESCRIPTION.—The stem is rough and uneven, giving off many branches that are re-curved near their ends. Leaves evergreen, small, four-rowed. Cones or calkins formed by imbricated scales, oblong.

History.—This tree is found in Canada, the Northern and Western States, near streams, in swamps and uneven ground, twenty to forty feet high. Occasionally in fields, along the skirts of woods, where it is not so high, but more spreading. The wood is whitish and soft, except the centre, which is reddish and hard. Slow in growth, and durable.

The Arbor Vitea is sometimes mistaken for the white Cedar (*cupressus thyoides*), a tree more plentiful, and forty to sixty feet high.

PROP., &c.—Stimulant, diaphoretic, anthelmintic. The infusion of its leaves and small branches, drank warm, is employed for colds and inflammatory fevers. For rheumatism and stif-

fened joints, the infusion should be drank, and applied local or general, in the form of vapor.

By distilling the tops, a *volatile oil* is obtained, and a few drops on sugar relieves colic and other pains of the stomach and bowels. In this way, used for the expulsion of worms.

THYMUS VULGARIS.

NAT. ORD.—Labiatea. SEX. SYST.—Didynamia Gymnospermia

Common Name.—Thyme.

DESCRIPTION.—The stem is eight to twelve inches high, bending at its base. Leaves numerous, oblong, ovate. Flowers whitish, tinged purple, in whorls.

History.—Thyme is a small garden plant, cultivated for culinary purposes. Introduced from Europe, where by distillation, it yields an oil similar, and often sold for the *oil* of *Origanum.* It possesses a volatile, stimulating, aromatic oil, and yields its properties to water and alcohol.

The *T. serphyllus* is another naturalized species, called *wild Thyme* and *Mother of Thyme.* The *T. lanuginosus*, a species called *Lemon Thyme*, is probably a native of America. Thyme receives its name from the Greek *thumos*, courage, for its cordial qualities.

PROP., &c.—Stimulant, carminative, nervine. The infusion is useful for colic, hysteria, and painful menstruation. A brandy tincture of the leaves may be employed in a little warm, sweetened water. The oil, a few drops on sugar, occasionally used.

TRIFOLIUM PRATENSE.

NAT. ORD.—Leguminosea. SEX. SYST.—Diadelphia Decandria.

Common Name.—Red Clover.

DESCRIPTION.—The roots biennial. Stems erect, several from one root, twelve to eighteen inches high. Leaves trifoliate, oval, notched. Flowers red or purplish, in dense spikes of cone-shape heads.

History.—This species of Clover is extensively cultivated as hay by farmers, for feeding cattle. Besides the *T. repens*, white Clover, cultivated for pastures, there are many species growing wild, especially in our Western prairies.

PROP., &c.—Detergent. The flowering tops and leaves formed in salve, and applied to indolent ulcers, carbuncles, and cancerous sores. Sometimes combined in secret cancer-salves or ointment.

TRILLIUM ERECTUM.

NAT. ORD.—Asparagi. SEX. SYST.—Hexandria Digynia.

Common Names.—Beth-root, Wake-robin, Jew's-harp, True-love, &c.

DESCRIPTION.—The stem about twelve inches high, dark green color. Leaves large, ovate, rhomboid, sessile, acuminate, three. Peduncle long, bending. Calyx three-parted, large, acute. Petals three, oblong, ovate, large, edges waving, purplish and varying color.

History.—There are numerous species in the Trillium family, among the most beautiful of wild flowers. They are generally on rich land in heavy woods, ranging from Canada, the Eastern, Middle and Western States. When in blossom, their large, expanded petals supported by the deep green sepals, elevated above their rich green leaves, make them objects of admiration.

The *T. cernuum* is the *Wake Robin*, bearing white flowers.

The *T. grandifolium* is the large *white* Trillium, flowers white, changing to rose color.

The *T. nivale* is the dwarf *white* Trillium.

The *T. erythrocarpum* is the *painted* Trillium, with petals white, purple stripes near the base, and found as far south as Virginia.

Rafinesque claims to have been the first author to recommend the medical virtues of Beth-root, in his Medical Flora, 1828. It is known to have been a favorite with some of the Indian tribes for female complaints, consumption and bites of the rattlesnake. For more than thirty years the roots have been collected and used by the Shakers of New York State. However, this, with most of our indigenous plants, has been brought into use by the exertions of the early medical reformers, beginning with Samuel Thomson, Beach, Elisha Smith, Howard and others.

Of the several species of Trillium there is no particular one known to be superior to others, except perhaps that some predominate in coloring matter and astringent properties. The roots are officinal, generally dark brown (and some reddish color), externally, and whitish internally; large size, with numerous small fibres; when fresh, rather fleshy; when dry, brittle.

Of the late authors treating of the Beth-roots, we notice King's Eclectic Dispensatory; also Kost's Materia Medica, giving a large number of species, with two beautiful illustrations.

Of the pharmaceutists, it has been specially noticed by W. S. Merrell, of Cincinnati, and B. Keith & Co., New York.

PROP., &c.—Alterative, expectorant, astringent, antiseptic. It has been recommended for numerous diseases—for pulmonary affections, oppression, and short breathing; hectic fevers, asthma, coughs, and spitting blood; for the uterine organs, difficult menstruation, hemorrhage of the uterus, leucorrhea and difficult parturition; for urinary complaints, for diabetes, urinary hemorrhage; for diarrhea, and dysentery; for external affections, both leaves and roots, in the form of poultice, for indolent ulcers, putrid sores, buboes, carbuncles, to prevent and arrest gangrene and mortification. For external application, the powdered root, as well as the fresh leaves, bruised, may be resorted to.

The Beth-roots are highly valued by many Eclectic physicians, in compounding both expectorant and female syrups.

Pulvis Trillium—Powdered Root, ℥ss to i, in simple syrup.

Infusum Trillium—Root, bruised, ℥ii; boiling Water, Oi. *Dose*—fl℥i to iii.

Trillin.—Dose—Grs. i to iii, in syrup or mucilage.

TRIOSTEUM PERFOLIATUM.

NAT. ORD.—Caprifolia. SEX. SYST.—Pentandria Monogynia.

Common Names.—Wild Coffee, Fever-root, Horse Gentian, Tinker-weed, Wild Ipecac.

DESCRIPTION.—The root is perennial, long, branching, yellowish-brown external, whitish within. Stems erect, two or three feet high. Leaves opposite, acuminate, tapering at base, veined, pubescent beneath. Flowers purple, axilary. Calyx three-cleft. Corolla tubular. Petals five, purplish, striated. Stamens five. Style one. Fruit oval, yellowish, crowned with the hard, dry calyx. Cells three. Seeds three.

History.—This is a large, perennial plant, found in the Middle and Southern States, on rich, rocky grounds of woods and shaded places, flowering from June to August.

The *T. angustifolium* is a smaller species of this genus, having similar properties, with erect, hairy stems and yellow flowers, found in rocky and mountainous situations, flowering in June and July.

Its name, *Triosteum*, is applied because of its three hard, bony seeds. These seeds having been used as a substitute for Coffee, has given it the common name of *wild Coffee.*

PROP., &c.—Emetic, diaphoretic, tonic, and laxative. It is not often used by the profession, though highly recommended by the early medical reformers, and by Rafinesque and Howard. Professor Barton, of the Old School, was also among the first to notice the therapeutical effects of this plant. It has not been analyzed, and deserves further employment by Eclectics. The root of the wild Coffee has been used for febrile diseases, pleurisy, chills and fever, and some other diseases. It yields its properties to water and alcohol, and its powder, decoction, tincture, and extract, may be resorted to.

TRITICUM HYBERNUM.

NAT. ORD.—Graminacea. SEX. SYST.—Triandria Digynia.

Common Name.—Winter Wheat.

DESCRIPTION.—The roots of Wheat are numerous and fleshy. The stems erect, smooth, jointed, three to four feet high. Leaves linear, lanceolate, flat, entire. Flowers in spikelets, about three inches long.

History.—Wheat has been an important article of food since the earliest records of the world, and Hippocrates and Pliny noticed several species of it. The *T. hybernum*, winter Wheat, the *T. estivum*, spring Wheat, are the species chiefly cultivated in this country, of which there are some varieties, and supposed to be natives of Asia.

PROP., &c.—Demulcent and nutritive. By analysis of Vanquelin, it contains gluten, starch, gum, sugar, bran, and water. By its composition, it is thought to be superior to most other vegetable articles of food to increase the formation of blood and muscular tissue, but supposed to be less productive of fatty deposits. Wheat-flour has been adulterated with Potato-starch, the flour of Rye, Rice, Buckwheat, Peas, and Beans—with chalk and plaster of Paris.

Both the starch and flour of Wheat are employed externally upon burns, ulcers, and sores, to absorb and prevent acrid discharges from spreading upon adjacent parts. A thin solution of either may be administered in cases of over-doses of poisoning by iodine and the salts of copper and zinc.

Flour is also employed in the formation of poultices, Mustard cataplasm, and as an adhesive, mucilaginous agent in pills.

Wheat-bread, or crackers grated, is a valuable addition in poultices, because it readily absorbs water, and retains its moisture longer than most other agents, when the object is to allay local inflammation and irritation.

Toasted bread-water is often resorted to for allaying nausea and vomiting; for diarrhea, and as a nutritious drink in fevers and other exhausting diseases.

The bread of unbolted flour becomes available for weakened conditions of the digestive organs, attended with constipation.

Wheat-bran is always applicable in the formation of poultices; and its infusion of boiling water is useful to bathe sore and irritated surfaces.

TUSSILAGO FRIGIDA.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Superflua.

Common Name.—Colt's Foot.

DESCRIPTION.—Root perennial. Leaves all radical, petioles long, thick, canaliculate. Leaves cordate, rounded, or subdel-

toid, nearly obtuse; many unequal teeth, green and rugose above, woolly and white beneath. Scape longer than the leaves, terete and thick, nine to twelve inches high, with some remote, lanceolate, acute scales. Many flowers, forming a thyrsus or oblong raceme. Peduncles shorter than the flowers, axilary to subulate bracts. Rays white. Disk purple.

History.—A genus with many anomalies, often polygamous or dioical, with evident or obsolete rays. This species is a native of the boreal regions of the three Continents, Europe, Asia, and America,; in the mountains of Lapland, Norway, Siberia, Canada, Maine, Labrador, Greenland, &c. It blossoms in June.

We have also in America the common Colt's Foot, or *T. farfara* of Europe, found in New England, New York, Ohio, &c. It blossoms in April, before the leaves spring up. Easily known by its yellow, radiate flowers. Scapes uniflore and scaly. Leaves cordate, angular. Both species will be included here, having similar medical qualities. *Tussilago* derives its name from *tussis*, or cough, as useful for it.

PROP., &c.—Demulcent, expectorant, tonic. The leaves and roots employed, and yield their properties to water and alcohol. The infusion and syrup have been used for pulmonary affections, asthma, whooping-cough, and scrofula.

TYPHA LATIFOLIA.

NAT. ORD.—Typhacea. SEX. SYST.—Monœcia Triandria.

Common Names.—Cat-tail, Reed-mace.

DESCRIPTION.—The stem is erect, round, two to four feet high, bearing two to three leaves near the base, and terminating in a large, long, cylindrical spike. Leaves long, linear, flat, lance-shape, acute, sheathing at the base, about one inch wide and two feet long. Flowers numerous, reddish-brown color, on large, cylindrical spikes, five to eight inches in length.

History.—The Cat-tail is known in most sections of the country, and found in wet, marshy places, near cultivated grounds. Its leaves resemble the Flags, and often called *Cat-*

tail Flag. The flowers of this plant have been used as a substitute for feathers in beds, and the leaves for making seats of chairs.

The *T. angustifolia*, or narrow-leaf Cat-tail, is another and smaller species of this genus, found in the same localities.

PROP., &c.—Emollient and mild astringent. The infusion of the roots has been used for dysentery. The large amount of fecula contained in these roots has made them available as food for Indians in emergencies. The fresh roots, bruised, in poultice, becomes useful to discuss the inflammation of tumors and ulcers.

ULMUS FULVA.

NAT. ORD.—Amentacea. SEX. SYST.—Pentandria Digynia.

Common Name.—Slippery-elm.

DESCRIPTION.—A large forest tree. Leaves ovate, acute, serrate; deep green above, pale and pubescent beneath. Buds yellowish, tomentose. Flowers pale reddish, appearing as soon as the leaves. Calyx campanulate, four to five-cleft. Stamens five to eight. Styles two. Samara or capsule of the fruit is broad, compressed, with membraneous edges.

History.—The Elm trees are found in Canada, the Eastern, Middle, and Western States, and sometimes forty feet high. The outer bark is thick, rough, and grayish or ash color; the inner bark is near one-fourth of an inch thick, whitish, and contains a large amount of mucilaginous substance. Hunters and Indians resort to this bark when food has failed on their long travels in the wilderness.

The *red* Elm, which most authors identify with the above, is a mistake, as the tree is smaller, its outer bark is darker, and the inner is *reddish*, *astringent*, with but little mucilage. Besides, it is sometimes collected, mixed with, and sold for the *Slippery*-elm. Both druggists and physicians should bear this in mind.

The *U. Americana*, white Elm, is a large forest tree of Canada and the Northern States. I believe this is the true Slippery-elm, and the *U. fulva* is the *red* Elm. There are two other species—*U. nemoralis*, river Elm, and *U. racemosa*. In the Southern States is found the *U. alata*, Whahoo—its properties unknown.

PROP., &c.—Emollient, demulcent, nutritive. The inner bark is officinal, and water suspends its properties. Brought to market in bundles two to three feet in length, and strips of

bark one to three inches wide. The bark is ground in mills, and known as *ground* and *powdered* elm.

Internally, the bark is used for its mucilaginous, shielding, and healing effects for any inflammation of the alimentary canal, as inflammation of the stomach, intestines, diarrhea and dysentery. It is also used per injection for dysentery, as well as to fill up the rectum to protect the healthy parts in cases of fistula, when caustics are introduced through its canal into the rectum.

Externally, it is among the most available agents for local inflammation, deep, superficial, and gun-shot wounds; for boils, carbuncles, felons, burns, scalds, or other local inflammatory action, where it can be applied. The physician should remember that this application requires frequent changing, as the water evaporates, when the Elm becomes dry and irritating. To obviate this, grated crackers or bread should be mixed in the poultice. Hot or cold water may be used to form the poultice or mucilage.

The fine powder is often sprinkled upon ulcers, sores, scalds and burns. It is also useful in the forming of pills.

UNISEMA DELTIFOLIA.

NAT. ORD.—Narcissis. SEX. SYST.—Hexandria Monogynia.

Common Names.—Pickerel-weed, Shovel Leaf, Water Plantain.

DESCRIPTION.—Radical leaves, perfectly oblong, deltoid or shovel-form, base acute, end obtuse; stem-leaf oblong deltoid, undulate, base subreniform, lobes rounded; spike elongated, segments of the flower oval, obtuse. In West Kentucky, Tennessee, Alabama, &c. Stem about three feet high, leaves five to eight inches long; spikes three inches.

History.—This species is found in Kentucky, Tennessee and Alabama. The genus is the *Pontederia Cordata* of Linneus. Rafinesque changed it to *Unisema*, and enumerates eight or nine species, found in many States of the Union.

PROP., &c.—This plant is nearly or quite unknown to the profession. The best authority we have on the history and action of it is found in Rafinesque, second volume, Medical Flora, 1830. Of its medical properties he says: "I have the pleasure to introduce this singular genus to medical notice. All the species have similar properties; they reside chiefly in the roots, which are emollient, restringent, and anti-scrofulous.

The leaves form an excellent cooling topical application for inflammation on the surface of the body; they can be eaten boiled as greens, although rather austere when raw; the Indians use them along with *Tradescantia*, *Commelina*, *Orontium*, *Nymphea*, &c. The seeds are edible, farinaceous, and were used

by them for cakes and other dishes, like the seeds of *Orontium*. The roots are nearly equivalent to *Nymphea*, but much milder and mucilaginous. They may be employed in the same diseases, gleets, leucorrhea, fluxes, and externally for scrofulous tumors and sores. No medical writer has noticed these plants; they are only known to a few herbalists, and have not yet been analyzed."

URTICA CAPITATA.

NAT. ORD.—Urticea. SEX. SYST.—Monœcia Tetrandria.

Common Name.—Nettle.

DESCRIPTION.—The stem erect, furrowed. Leaves ovate, acute, nerved, serrate, on short petioles. Flowers whitish, green tinged, axilary, sessile clusters.

History.—This, the *U. capitata*, is found in open woods, damp, heavy, stony grounds, of Canada, Northern and Middle States. There are six or eight species, and several varieties of this genus, and all having similar medical properties.

The *U. dioica*, or large *Stinging Nettle*, is found in damp grounds of Northern sections, two to four feet high, branching; leaves on long petioles; flowers axilary. This is generally considered officinal, and best known in domestic practice.

The *U. urens*, or *Dwarf Stinging Nettle*, is frequently collected, and found in similar localities as above.

The *U. chamedroides* is found in Georgia and other Southern States, four to six inches high, flowers sessile, axilary; leaves bearing stings.

PROP., &c. — Diaphoretic, anodyne, tonic, and mild astringent. The Nettle plants, leaves, flowers, and small stems, have been resorted to with good success in acute inflammation of the lungs and and pleura. The warm infusion is employed to meet these cases; and the fresh leaves, bruised, are applied upon the chest as a counter-irritant. It is esteemed useful for hemoptysis, or spitting of blood from the lungs; also in nephritis and the discharge of bloody urine. The above are the most marked indications of the Nettle plants, although recommended for piles, diarrhea, dysentery, and scorbutic diseases.

As a subject of interest we quote from Rafinesque: "Nettles—Fifteen native species, all nearly equal. *U. dioica* best known as medicinal. Diuretic, pectoral, sub-astringent. Used in decoction for nephritis, gravel, hemorrhage, hemoptysis, jaundice,

bloody urine, bloody piles, &c. The property of stinging when fresh, called urtication, formerly used as a powerful stimulant and rubefacient in palsies, and to cause revulsions instead of sinapisms. When dry no longer stinging. Cultivated in Sweden for fodder; cows fed on it give much milk and yellow butter. Make horses smart and frisky. Stimulate fowls to lay many eggs. Spring shoots are boiled in Europe for pot-herbs. The stems of all afford a kind of tow, hemp or flax, cloth and paper. *U. nivea*, cultivated for linen in Japan. *U. canabina*, for hemp in Russia. Seeds vermifuge, laxative, good food for fowls and turkeys, said to cure the goitre, and to reduce excessive corpulence."

Infusum Urtica—Nettle leaves, flower and stems, dried, ℥ss; boiling Water, Oi. *Dose*—fl℥i to iv. Should be drank warm, for acute and inflammatory cases; cold, for astringent and tonic effects.

UVULARIA PERFOLIATA.

NAT. ORD.—Asparagi. SEX. SYST.—Hexandria Monogynia.

Common Name.—Bellwort.

DESCRIPTION.—The root perennial, creeping. Stem erect, eight to twelve inches high. Leaves ovate, acute at apex, broad, clasping, perfoliate at base. Flowers yellow, solitary, axilary, and nodding.

History.—The Bellwort is common in most sections of the country, in moist grounds, open woods, and shaded places. There are several other species, not understood as medical agents. The genus receives its name from the flower bearing some resemblance to the uvula of the throat.

PROP., &c.—Demulcent, nervine. The roots, powdered and in decoction, employed for irritation of throat, stomach, intestines; for dysentery, and general nervous debility. The leaves have been chewed for sore mouth; and the plant is a reputed cure for the bites of rattlesnakes. An ointment of the roots and leaves has been recommended for cutaneous diseases. Not analyzed.

VACCINIUM CORYMBOSUM.

NAT. ORD.—Ericacea. SEX. SYST.—Decandria Monogynia.

Common Names.—Bill-berry, Whortle-berry, Huckle-berry.

DESCRIPTION.—A shrub, erect, few branches. Leaves ovate serrate, veined, glaucous beneath. Flowers solitary, axilary,

nodding, whitish. Calyx superior, five cleft. Stamens eight to ten. Fruit bluish, globular; when green, crowned with the calyx. Cells four to five. Seeds many.

History.—This genus presents a large number of species, whilst scarcely two authors on Botany agree on their several

names and description. Some of these varieties are found in all sections of the United States, on various kinds of soil. Two or three of the species are more fruit-bearing than others, found on light sandy soil, in pine woods, along road-sides of uncultivated lands.

It is the Blue Whortle or Huckle-berry (the *V. frondosum* of some authors), which is most productive and desirable for delicious fruit, of which thousands of bushels are collected in New Jersey for the markets of New York and Philadelphia. It blossoms in May, and fruit ripens in August. All the species bearing fruit may be considered as medical agents.

PROP., &c.—The leaves and bark of the roots are astringent and tonic. The berries mild diuretic and astringent. The fruit is not only a desirable food, but is useful to increase the urinary secretions, mildly checks diarrhea and dysentery discharges, and is considered useful in scorbutic and scrofulous conditions. A decoction of bark of the roots is employed for dysentery and diarrhea, as a gargle for sore mouth, and wash for ulcers and sores.

VANILLA AROMATICA.

NAT. ORD.—Orchides. SEX. SYST.—Gynandria Monandria.

Common Name.—Vanilla.

DESCRIPTION.—The stem is running, twining, and ten to thirty feet in length. Leaves on short petioles, oblong, alternate. Flowers yellowish. Silique or capsule contains the fruit or bean, which is large, long, oval; light brown when first collected, but dark brown and wrinkled when cured.

History.—The Vanilla vine is found in Mexico, West India Islands, and South America. The Spaniards introduced the bean into England about the year 1602, for its perfuming qualities, Pareira enumerates a large number of species; but in this respect there is much confusion with authors. Mexico and some of the States of Central America, chiefly supply the article in commerce. The best beans are of dark brown color, soft and shining when rubbed with the fingers, heavy, and yielding a full, fragrant smell. They should always be kept excluded from air and light.

PROP., &c.—Stimulant and nervine. When powdered, it may be administered in doses, ℥ss to i, for hysteria, melancholy, and other debilitated nervous conditions. The tincture is occasionally used.

The chief and almost entire use of the bean is for flavoring ice-cream, and to flavor confectionary and liquors. It is also a favorite perfume with many snuff-takers. Rafinesque states it to be aphrodisiac, having powers to excite erection, and to increase the desires of coition.

VERATRUM VERIDE.

NAT. ORD.—Junci. SEX. SYST.—Hexandria Trigynia.

Common Names.—White Hellebore, Indian Poke, Itch-weed.

DESCRIPTION.—Its root or rhizoma is large and fleshy when green; brown outside and whitish within, and gives off many fibres. Stem herbaceous, stout, round, two to four feet high. Its leaves appear to be radical when the plant first starts from the ground. These are large, oval, acute, heavily ribbed or veined. They turn yellowish, decay, and fall as the stem ascends. The upper leaves are alternate, ovate, lanceolate, acute, and extending near to the top of the plant. Flowers in racemes, yellowish, tinged with green.

History.—This plant grows profusely in Canada and the Northern States, in woods, along streams, and damp, heavy grounds of pastures. In early spring, it has the appearance of the Cabbage leaves, large, broad, and acute at the apex. From the centre arises its large, round, fleshy stem, bearing alternate, sheathed leaves. It has the appearance of a rank poisonous plant.

Another species, the *V. pariflorum*, is found in the Southern States. Its medical properties not investigated; probably similar to the *Veride.*

The *V. album* is the white Hellebore of Europe. Pareira

thinks it the article noticed by Hippocrates and other ancient physicians. Its botanical appearance and medical properties similar to the *Veride.*

The *V. sabadilla* is a native of Mexico. Its therapeutical action is not well understood. The plant is the *Cevadilla* of some writers. Its seeds have been employed as an anthelmintic, and used externally to remove parasites from the body.

PROP., &c.—Sedative, diaphoretic, expectorant, emetic. In over-doses, an active and dangerous agent. It lessens the heart's action, relaxes the capillary vessels, produces general debility, prostration, fainting, dimness of sight, and insensibility.

Of late years, many Eclectic physicians resort to it for inflammatory fevers, especially those of arterial and nervous excitement, inflammation of the lungs, scarlet fever, gout, and rheumatism. In moderate doses, exhibits its sedative effects by allaying inflammatory action, lessening the heart's action, and producing gentle perspiration, without disturbing the brain.

Dr. W. C. Norwood, of South Carolina, has devoted much attention to this plant, and published a pamphlet exhibiting its therapeutical action and indications in the treatment of diseases.

When exhibited in any of its preparations, so as to induce nausea or vomiting, it should be lessened or withdrawn. An ointment from the leaves and roots has been successfully used for cutaneous affections, tetter, saltrheum, sores, and ulcers. For this, the root should be boiled to a strong decoction, and strained. Then reduce to a thin extract, and incorporate lard for an ointment. The leaves should be boiled in lard, and strained through coarse linen.

A strong decoction of the roots, mixed with molasses, destroys flies, cock-roaches, &c.

The root of the Hellebore is officinal, although the fresh leaves and stems may be employed. It contains an acrid, volatile principle, resinoid and alkaloid properties.

Pulvis Veratrum—Fresh Root, dried by gentle heat. *Dose*—Grs. iij to vi. Seldom used.

Tinctura Veratrum—Of the fresh Roots, bruised, ℥ii (dried Roots, ℥iiss); Alcohol, Oi. Digest ten to fourteen days. *Dose*—Gtts. iij to viij. The tincture is the most frequent mode of its use. Each dose should be given in one or two teaspoonfuls of water, gradually increasing from three drops to eight, if necessary, to observe its effects. It may be given every one, two, or three hours. The directions to the patient should be well observed. I have given larger doses than above stated, before witnessing its effects. With me, it is a favorite remedy.

Extractum Veratrum—Roots, lb. i; Water, Cong. i. Boil one hour, and strain; then reduce to an extract. *Dose*—Grs. ¼ to i. The hydro-alcoholic extract may also be prepared, and used in the same doses.

Veratrin.—Dose—Gr. ⅛.

VERBASCUM THAPSUS.

NAT. ORD.—Solanea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Mullein.

DESCRIPTION.—Stem erect, tomentose, winged, three to five feet high. Leaves radical, large, ovate, acute; stem-leaves alternate, lanceolate, tomentose. Flowers yellow, in terminal spikes. Capsule globular, two-celled. Seeds dark brown, numerous, dotted.

History.—A familiar plant in all parts of the United States, along road-sides, in pastures and uncultivated fields. There are two other species, bearing yellow flowers, one to three feet high, peculiar to the Southern States.

PROP., &c.—Astringent, demulcent, discutient. The leaves officinal, and the flower-stems employed when in blossom. It has a mild, mucilaginous, and bitterish taste. The flowers have been found to contain phosphoric acid, phosphate of lime, and several other elements.

The leaves boiled in milk, may be given for diarrhea and other bowel affections, though seldom used. In this form, by emena, for dysentery and piles. The leaves, either bruised or boiled, are serviceable applied to external piles. In form of poultice, combined with bran, hops, or bitter herbs, by aid of boiling water, or boiled a few minutes, constitutes a valuable aid to reduce swelling and inflammation of the liver and abdomen. Bruised, and softened with vinegar and water, a useful discutient for swelling of the testicles, glands of the groin, breast, throat, and face.

VERBENA HASTATA.

NAT. ORD.—Vitices. SEX. SYST.—Didynamia Gymnospermia.

Common Names.—Vervain, Purvain, Simpler's Joy.

DESCRIPTION.—Stem erect, angular, few branches, one to three feet high. Leaves large, broad at base, acute at apex,

serrate or notched, petiolate. Flowers purplish-blue, axilary. Calyx five-cleft. Corolla funnel-shape.

History.—The Veruain is common in most sections of the country, along road-sides, in old fields and pastures. It flowers in August and October. There are several species of this genus, all bearing bluish flowers, except the *V. urticifolia*, which are white. Most of them have been used in medicine.

PROP., &c.—Verbena is tonic, diaphoretic, and mild astringent. The cold infusion has been employed as an anti-periodic, and to give tone and strength to the digestive organs when weakened by lingering fevers. The warm infusion, in large doses, is said to produce vomiting, and in small and repeated doses, to effect a free perspiration. The Eclectic Dispensatory notices this plant as being reputed for scrofula, gravel, and worms. Kost's Materia Medica contains illustrations of the *V. verticifolia* and *V. hastata*.

VERNONIA ANGUSTIFOLIA.

NAT. ORD.—Corymbifera. SEX. SYST.—Syngenesia Polygamia.

Common Name.—Iron-weed.

DESCRIPTION.—Stem erect, scabrous, branching near the top, reddish-brown. Leaves long, linear, acute, pubescent, serrate. Flowers purple, numerous, and umbil form. Involucre ovate. Florets tubular. Stigma bifid. Pappus double, chaffy. Seeds striate, hairy.

History.—The Iron-weed is a showy plant, having somewhat the appearance of the Queen of the Meadow. It is found in many parts of the country, in and along the borders of damp, uncultivated grounds. It rises two to four feet high, and blossoms from July to September.

There are several species of this genus, some of which are peculiar to the Southern States, growing ten feet high.

PROP., &c.—Tonic, alterative, antiseptic. A decoction of its roots and leaves may be employed as a tonic and anti-periodic in febrile diseases. Also as a poultice and wash for bites and stings of insects.

VERONICA BECABUNGA.

NAT. ORD.—Scrophularia. SEX. SYST.—Diandria Monogynia.

Common Names.—Speedwell, Brook Lime.

DESCRIPTION.—Root perennial, fibrose, white. Stem creeping at the base, assurgent afterwards; about a foot high, with few branches, round and smooth. Leaves opposite, on short petioles, very smooth, oblong base rounded, end acute, subserrate; racemes on long axilary opposite peduncles, lax, elongate, and multiflore. Flowers on long pedicels, axilary to linear bracts. Corolla blue. Capsules bilobed, swelled, although sub-compressed.

History.—This is the *V. americana* of some late authors. It is found in the Northern and Middle States, along brooks, and in damp fields, bearing blue flowers in July and August. Gray's Botany enumerates twelve species and several varieties in this genus.

PROP., &c.—This plant is considered alterative, expectorant, diaphoretic, tonic and diuretic. Generally employed in decoction or infusion. Although but little used by the profession, it is reputed to be useful for pulmonary affections, scrofula, hepatic, and nephritic complaints, hoarseness, colic and hypocondria. The leaves bruised, or in poultice, have been applied to tumors, glandular swellings, &c.

Several of its other species are known by the common name of *Speedwell*, and used as a substitute for the above.

VIBURNUM OPULUS.

NAT. ORD.—Caprifolia. SEX. SYST.—Pentandria Trigynia.

Common Names.—Cramp Bark, High Cranberry.

DESCRIPTION.—A shrub, five to twelve feet high. Leaves three-lobed, notched, acute at the apex. Petioles glandular at the base. Flowers white, tinged with red, in peduncled cymes.

Calyx five-parted. Corolla five-cleft. Fruit oval, red, one seeded; ripens late in the fall, and resembles the common Cranberry.

History.—There are eight or ten species of the Viburnum genus. This one is peculiar to the Northern States and Canada; found in open, heavy timbered woods, and along the borders of fields. Sometimes several are found in clusters, each one rising three to six feet before giving off branches. The fruit is reddish, oval, oblong berries; internally fleshy, whitish, and sourish. Its fruit has the appearance and taste of the *Oxycoca Macrocarpa*, the low Cranberry, hence its common name of high Cranberry. The *V. dentatam*, or *Arrow Wood*, is a slender shrub, six to twelve feet high, branching, bearing large, ovate, deeply notched leaves, whitish flowers, and dark blue berries. Common in the Western, Middle and Northern States, and Canada.

To a limited extent this species has been employed in the forms of decoction and extract, as a diuretic and alterative agent, for affections of the kidneys, scrofulous and cancerous conditions.

The *V. prunifolium*, the *Black Haw*, and sometimes called the *Sloe Tree*, rising from eight to fifteen feet, with spreading branches. Its leaves are large, oval, obtuse, winged, serrate, and standing on short petioles. Its flowers are white, in sessile cymes. Its berries are deep blue, blackish. When in bloom, presents a beautiful appearance. It is found in woods of dryish soil, from New York west and southward.

The *Black Haw* is best known to the profession in the Western States, as a useful diuretic, astringent and tonic. It is highly praised in King's Eclectic Dispensatory for apthea, diarrhea, dysentery, palpitation of the heart, and as a wash for sore eyes and ulcers. Also as a valuable agent to arrest threatened abortion.

The *V. lantago* is the *Sweet Viburnum*, or *Sheep Berry*, and also known in some sections as the *Nanny Berry*. The leaves are large, broad, ovate, serrate, scattering. Flowers few, clustered, whitish. Berries at first red, turning blue-black when ripe; pleasant, sweet fruit. The medical properties of this species are not understood.

PROP., &c.—Anti-spasmodic, nervine, expectorant, anti-periodic. The Cramp Bark has been employed by medical reformers for the last thirty years. Dr. Elisha Smith, of New York, one of the earliest botanic physicians, mentions it as one of the most effectual agents in relaxing "cramps and spasms of all kinds." Of late years it is better understood by the profession, and reputed to be one of the most valuable remedies for convulsions, cramps, hysteria, intermittent fever,

and inflammation of the lungs. It is also employed for threatened abortion and to relieve after-pains. The bark is employed in decoction and extract.

Decoctum Viburnum—Bark, ℥iii; Water, Oiii. Reduce by boiling to two pints, and strain. *Dose*—A wine-glass three to four times daily. Add loaf sugar if desirable.

Tinctura Viburnum Compositum—Bark, coarsely powdered, lb. i: Lobelia Leaves, powdered, ℥iv; Sweet Flag-root, coarsely powdered, ℥ii; boiling Water, Oii. Digest twenty-four hours and turn into an open-mouthed bottle. Add Alcohol, Oii, and digest five days. Add Port or Sherry Wine, Oiv, and digest five days. *Dose*—fl℥i to iv, three to five times daily.

This preparation may be given to females during pregnancy, for threatened abortion, cramps, nervousness and general irritability; for St. Vitis' dance, or spasmodic and nervous affection of young girls about the age of puberty.

Viburnin. Dose—Grs. ii to x. This form of preparation is now in general use by the Eclectic profession, and highly praised.

VICIA FABA.

NAT. ORD.—Leguminosa. SEX. SYST.—Diadelphia Decandria.

Common Names.—Horse Bean, Sweet Bean.

DESCRIPTION.—Root annual. Stem erect, two to five feet high, flexuose, terete, seldom branched. Leaves alternate, with sagittate, acute stipules, toothed at the base, from four to six folioles, alternate, sessile, ovate, acute, entire, no tendrils. Flowers axilary, sessile, commonly ternate, or from two to ten racemose, large, erect, oblong, white, with two fine black spots on the wings. Pods large, three to eight inches long, oblong, turgid, thicker above, membranaceous, tomentose, end mucronate, from three to eight large seeds, shaped like a bean, reniform, compressed, thicker at both ends, of a bright brown color.

History.—The *Faba* is the true Bean of the ancients, and not the *Phaseolus*. It is a native of Persia, but has been cultivated in Europe from the most remote antiquity. It is cultivated also in the United States, the gardens of the North, and fields in the South. It has many varieties, like all long cultivated plants; the best are hardly known with us. It blossoms in the spring; the flowers are very pretty and sweet-scented. It is a valuable plant for farmers; it grows anywhere, never fails to give a good crop; an acre may produce one hundred bushels of seeds and ten tons of fodder. It is food for men and cattle;

a delicacy when green, ornamental, medical, and improves the land as a manure.

PROP., &c.—The flagrant flowers, being soft and mucilaginous, make a pleasant application for chapped hands and face, and excoriated and tender surfaces. The bruised leaves may be applied to reduce local inflammation of carbuncles, boils, &c. The beans, partially boiled, may be used as a poultice to discuss local inflammation.

Phaseolus Vulgaris, or *Common White Bean.* This and other cultivated beans of our country are among the most nutritious articles of food, being equal to wheat, rye, corn, rice and potatoes. It is also one of the cheapest articles that can be raised.

Beans, when about one half boiled for table use, form one of the most efficient applications known for softening, discussing, and relieving painful swelling of the testicles in metastasis of mumps, and gonorrhea; for inflammation and swelling of the mammary and other glands. It should be applied in a soft, warm, consistent poultice, directly to the surface, and changed in one to three hours, according to the extent of inflammation.

VINCA MINOR.

NAT. ORD.—Apocynea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Periwinkle.

DESCRIPTION.—Stem small, procumbent. Leaves ovate, lanceolate, smooth, entire. Calyx toothed. Corolla salver-form, with border five-cleft. Capsule or pericarp opening lengthwise. Seeds one, naked, oblong.

History.—The Periwinkle is believed to have been naturalized into this country from Europe, and growing spontaneously. It is a handsome evergreen plant.

The *V. major* is also supposed to have been naturalized, bearing ovate, ciliate leaves, and flowers on nearly erect stems.

PROP., &c.—Tonic, discutient, and astringent. It has bitter and astringent properties. The whole plant has been used for dysentery, bleeding piles, leucorrhea, and to repel the secretions of milk.

VIOLA TRICOLOR.

NAT. ORD.—Cisti. SEX. SYST.—Pentandria Monogynia.

Common Names.—Garden Violet, Heart's Ease, Pansy.

DESCRIPTION.—Stem erect, six to eight inches high, branching two or three. Leaves alternate, axilary, oblong, deeply notched, partially lobate, several at top of the stem. Flowers variegated, yellow, white, purple, and sometimes blue, on long peduncles, nodding. Sepals five. Petals five. Stamens five. Anthers cohering.

History.—There is a large number of species, and several varieties of the native Violets of this country, extending from Canada through the United States to Mexico. They are found in meadows, fields and woods. Some are cultivated in gardens, where they change in growth, color and beauty.

The *V. tricolor* will often be found to have its upper erect petals of a purple velvet appearance, its two lateral ones white, and its lower petal yellow.

V. cucullata, the *common Violet*, white, blue, purplish Violet. This little plant is found in many parts of the country, especially the North, East and West, in meadows, fields, and borders of gardens. In early spring its flowers are blue, in summer white, in fall often variegated. The stems are small, and several arising from the same caudex. Leaves ovate, serrate, veined, lower ones laying on the ground, often rolled inward at the base. Petioles long as the leaves. Flowers on long peduncles, curved at the top, giving off some short, some long spurs.

The *V. odorata*, or *sweet Violet* of Europe, the most fragrant of all species, and considered officinal. It is cultivated in some gardens of this country. Rafinesque says we have but two native fragrant species, the *V. canadensis* and *V. blanda.*

PROP., &c.—The roots, stems and leaves employed. Mucilaginous, laxative, mild emetic and alterative. A principle called *violia* has been obtained from these plants, having emetic powers. The decoction and syrup have been used for affections of the lungs, chest and throat; and for constipation of small children.

Externally, the whole plant has been applied in poultice to aid suppuration of boils and carbuncles.

VISCUM VERTICILLATUM.

NAT. ORD.—Caprifolia. SEX. SYST.—Diœcia Tetrandria.

Common Name.—Misseltoe.

DESCRIPTION.—A small parasitic shrub, ten to eighteen inches in length. Stem round, jointed. Leaves opposite, verticilate, cuneate, obovate, three-nerved. Flowers yellowish, on axilary spikes. Petals four. Anthers numerous, cells opened by pores. Stigma sessile, or setting downward. Fruit yellowish-white, pulpy, pellucid.

History.—This is the *V. album* and *V. flavescens* of different authors. A parasitic little shrub growing upon large trees, particularly the oaks and elms, most frequently found in the Middle States. For many centuries known in Europe, and supposed to be the Golden bough of Virgil. The Druids employed it in their religious ceremonies. It is not placed as an officinal agent in the late English Text books.

PROP., &c.—Anti-spasmodic, narcotic, tonic. Many years ago employed in Europe for epilepsy, St. Vitis' dance, and paralysis. Our species are recommended as equal to the foreign growth for nervous diseases, and pleurisy, vertigo and dysentery. The powdered leaves may be given in half-drachm doses. The leaves and berries by infusion. The whole shrub contains nitrate of potassa.

VITEX ANGUSCASTUS.

NAT. ORD.—Pyrenacea. SEX. SYST. —Didynamia Angiospermia.

Common Name.—Chaste Tree.

History.—This is a small tree found in the Southern States, and best known in Virginia and North Carolina.

PROP., &c.—Stimulant and tonic. The seeds are aromatic and fragrant, used as a stimulant and carminative. The leaves are employed to discuss the swellings of joints and testicles, bruised and applied as a poultice.

VITIS VINIFERA.

NAT. ORD.—Vitacea. SEX. SYST.—Pentandria Monogynia.

Common Name.—Grape Vine.

DESCRIPTION.—Perfectly trioical. Calyx cup-like, five-lobed before the flowers expand, entire afterwards. Corolla of five petals, oblong, obtuse, hooded, adhering at the summit. Five long stamina opposed to the petals. Pistil on a glandular disk, a stigma sub-sessile, capitate entire. Berry one celled, two to five seeds, obcordate. *Woody vines with alternate petiolate and stipulate leaves; tendrils and thyrsoidal racemes of flowers and fruits, opposite to the leaves.*

History.—The Grape was known as an article of luxury in the earliest ages of the world. The Old Testament records the fact that Noah not only cultivated the fruit, but drank of the juice thereof, after his ride in the ark. At later dates other writers, Hippocrates, Homer and Heroditus, seem to have understood the virtues of the Grape.

The Grape-vine is found in most divisions of the world, and specially cultivated in the warm climates of America and Europe; France and Portugal excelling all other countries.

Foreign Grapes have been divided. The round, purple or black Grape, known as the Corinthian or black *Currants* of the grocer. The oval, dark purple Hamburg Grape. The oval and elongated Grapes of Portugal, which are carefully collected and packed in saw-dust, and exported to this and other countries. These are large, whitish, fleshy, sweet, with a slight acidulous taste. They are not only used on the table as a luxury, but very beneficial and grateful in febrile diseases.

The foreign Grapes yield the various kinds of Raisins for the markets of the world, and produce the best of wines of various designations.

North American Grape-vines—The most extended and practical dissertation on the Grape of this country which I have ever seen, may be found in the writings of Prof. C. S. Rafinesque, one of the most energetic and devoted botanists of America. He enumerates forty species, and one hundred varieties, but says it is not always easy to designate them; and that all of our American vines agree in being humble trailing vines in their youth, but susceptible of living from one hundred to three hundred years, becoming very large, reaching the tops of the tallest forest trees that support them. Only a few species will here be noticed.

The *Vitis Saxatilis*—Stony Grape. Branches flexuose, nearly smooth. Petioles villose, variable. Leaves variable, cordate, often tri-lobed, with distant acute teeth. Most plentiful in the stony grounds of Arkansas and Texas.

V. Blanda — Bland Grape. Branches round, smooth. Petioles striated. Leaves nearly square, cordate, partially split at base. Teeth unequal. Racemes compound. Berries large and sweet. This vine is found from Pennsylvania to Louisiana. It is much cultivated, and among the best for eating, and making wine.

V. Longifolia—Long-Leaf Grape. Petioles short and hairy. Leaves oblong, cordate, partially cleft at the base. Berries blue and sweet. It abounds in Texas and Arkansas. By cultivation, it greatly improves, yielding excellent fruit.

V. Accrifolia — Maple-leaf Grape. Trailing. Petioles short, striated. Leaves, breadth about equal to length, unequally toothed. Introduced from Oregon, and yields very good fruit.

V. Multiloba—Dissected Grape. Branches tomentose, rusty. Petioles short, round, tomentose, rusty. Leaves palmate, numerous, lobed, or multilobe, pubescent above, nerved, rusty, glaucous beneath. Found in the Western States, and on the Red river. Cultivated, and produces large sweet Grapes.

V. Ciliata—Elsinburg Grape. Petioles striated. Leaves ovate, cordate, five-lobed. Berries dark-blue, large, sweet and juicy. Native of New Jersey. Much cultivated, and equal to any other species.

V. Angulata—Angular Grape. Branches stiff, angular, striated. Petioles slender. Leaves small, cordate, rounded, obtuse. Fruit black, sweet and juicy. It is bushy, seldom climbing. Found in the Carolinas, Arkansas and Texas.

V. Prolifera—Isabella Grape. Branches sub-striated. Petiole short. Leaves cordate, acute, square form. Racemes compound, proliferous. Berries large, elliptical, purple, excellent fruit. A native of North Carolina. There are several varieties of this species. The Isabella is extensively cultivated.

Although our native Grape-vines are numerous, and considerably cultivated in some of our States for wine, it is the foreign Grape that yields us chiefly our wines, raisins, and cream of tartar.

Fresh Grapes, whether imported or native, are a wholesome diet, possessing nutritious and refrigerant properties, and the larger species are mildly diuretic and laxative. The seeds and skins are not digested. Fresh Grapes are useful in febrile diseases.

Raisins—Dried Grapes lose their acidulous properties. They are employed on the table, and in articles of diet. In the curing process of Grapes, which constitutes the Raisins of the markets, the acidulous and much of the nutritious properties are lost. The seeds and skins are indigestible; generally injurious to persons of dyspeptic habits. Of late years raisins are seldom employed in medical formulas. Raisins are prepared by drying Grapes in ovens, in the sun's heat, and sometimes by partially cutting the stems so as to interrupt the flow of the sap of the vine, allowing them to dry before picking.

Bitartrate of Potassa—Cream of Tartar. Cream of Tartar is the product of several vegetable substances, yet it is almost exclusively obtained from the Grape during the process of making wine. It exists in the Grape juice, and during its fermentation, and at the time when Alcohol is being produced; the Cream of Tartar is precipitated, and found adhering to the walls of the wine tubs or vats, in crude crusts or cakes. In this form it is called *crude tartar* or *argol*. This is boiled in water and allowed to deposit, when it is again held in solution with water, with charcoal, alumin—thus removing all coloring matter, until the pure Cream of Tartar is produced.

Cream of Tartar when first prepared, is a salt of oblique rhombic prisms, but generally adheres together in fine powder,

having a gritty and acidulous taste. When pure, it consists of Potash, Tartaric Acid and water. It is sometimes adulterated with alum or bisulphate of potash.

Pareira states that Cream of Tartar as usually found in the stores, contains from two to five per cent. of tartrate of lime, yet does no material injury. It is sometimes found in grocery stores, much adulterated with lime or soda, or alum.

PROP., &c.—Cathartic, diuretic, refrigerant. Its action is marked on the serous tissues, which makes it an efficient hydragogue purgative, highly useful in dropsical diseases, renal affections and fevers.

Cream of Tartar is the best of the saline purgatives. For dropsy, it may be combined with Jalap or Podophyllum, to increase its general action; although when given alone, it has in large doses produced severe griping pains, inflammation, and death; yet its value and safety makes it one of the chief domestic remedies.

One drachm and a half dissolved in a pint of boiling water, flavored with sugar and lemon peel, form a valuable and grateful drink in febrile disases.

Serum Lactis Tartarizatum—Whey of Cream of Tartar. Add two drachms of Cream of Tartar to one pint of fresh milk; agitate and let subside; water may be added—for febrile and dropsical complaints.

Dose of Cream of Tartar, one half to one ounce, for active purging. One to two drachms for fevers and affections of the urinary organs.

XANTHOXYLUM FRAXINEUM.

NAT. ORD.—Zanthoxylacea. SEX. SYST.—Diœcia Pentandria.

Common Names.—Prickly Ash, Toothache Bush, Yellow Wood.

DESCRIPTION.—Shrub five to fifteen feet high. Branches alternate, with scattered prickles, sharp, strong and straight. Leaves alternate, oddly pinnate, petiole round, often inerme, folioles nine or eleven, opposite, nearly sessile, ovate, very sharp, with slight glandular serratures, somewhat downy beneath. Flowers in small sessile umbels, near the origin of young shoots, small and greenish.

History.—This little tree or bush is a native of this continent, ranging from Canada, south and west of the Mississippi. Its reproductive powers are not great, for it is not so fre-

quently found as most other shrubs. Its locality is mostly in shady places, along skirts of woods. By some authors this species is called *X. Americanum.*

X. Carolinianum—This species is peculiar to the coasts of the Carolinas, Georgia and Florida; also in the West Indies. It grows some twenty feet in height, branching, and armed with numerous large spikes. Its bark is smooth, of bluish-gray

color externally, and yellowish within. The wood is yellowish, and of close, solid texture, possessing more active and pungent properties than the *Fraxineum.*

The *X. glandulosum* is a third species, found in the Southern States, some forty feet high. It resembles the *Aralia Spinosa*, with which it is sometimes confounded.

PROP., &c.—The bark of prickly Ash is stimulant, of unequalled acrid and pungent powers, and nearly or quite as dif-

fusive as Capsicum or alcohol. It is a prompt sialagogue; sudorific, tonic, with astringent properties.

The *berries* or fruit possess aromatic, carminative, and stimulating properties. One ounce of the bruised berries saturated in one pint of good rum, taken in one or two ounce doses, repeated, becomes available for colds, colic, and rheumatism.

The bark is considered officinal, and that from the root preferable. It contains a fixed oil of greenish color, a volatile oil, gum, resin, and coloring extractive; also a crystalizable substance called *xanthoxyline*, that is soluble in warm alcohol. There has been no published analysis of this article since that of Dr. Staples, not less than thirty-five years ago. It exhibits itself admirably in paralysis of the throat, tongue, or other parts of the body. It is an invaluable agent in restoring the loss of voice, induced by colds or general debility. For this, a few drops of the tincture or the oil, triturated in sugar, and the xanthoxylin may be used. The tincture is valuable externally for rheumatic and neuralgic affections. The tincture and oil introduced into the cavity of a tooth, allays pain where the nerve has been exposed. The prickly Ash has had some reputation for gout, gonorrhea, and syphilis; also for intermittent fevers. Its continued use will bring on free salivation. The infusion and decoction in small proportions, in form of injections, to restore the functions of the colon, uterus, bladder, genital organs, and for paralysis of the lower extremities.

The powdered bark. *Dose*—Grs. x to xxv. Seldom used.

Tinctura Xanthoxylum—Dry Bark, bruised, ℥ss; Alcohol, Oi. *Dose*—fl℥i, in a wine-glass of water.

This, with equal parts of tincture of Lobelia, is among the best remedies for St. Vitis' dance. Twenty to thirty drops in a tablespoonful of thin sprup, three to four times daily.

Oleum Xanthoxylum—From the berries, by the common distilling process, or from its tincture, with ether or alcohol. The oil has been prepared by W. S. Merrell, of Cincinnati. It is a convenient form, that should be dropped upon or triturated with sugar.

Xanthoxylin—Obtained from the bark. That made by Keith & Co., of New York, contains resinoid and neutral principles. It has been employed for indigestion, general debility, paralysis, colic, rheumatism, gleet, leucorrhea, gonorrhea, and syphilis. *Dose*—Grs. i to ii, triturated in ten to twenty grains of sugar.

The prickly Ash is too much neglected by the profession.

XANTHIUM STRUMARIUM.

NAT. ORD.—Corymbifera. SEX. SYST.—Monœcia Pentandria.

Common Names.—Bur-weed, Clot-bur, Bur-thistle.

DESCRIPTION.—Stem angular, erect, pubescent. Leaves large, on long petioles, alternate, three-lobed, pubescent. Fruit pubescent, elliptic, armed with hooked bristles.

History.—This is a common plant, one to four feet high, found in dry fields. Its burs are troublesome to sheep, and sometimes called Sheep-bur. The flowers are white, expanding from July to October.

The *X. spinosum* is another species similar to the above, and common along the sea-coast.

PROP., &c. — Diuretic, alterative, astringent. The whole plant may be used. The infusion has been employed for scrofulous affections, and as a wash for erysipelas, and other affections of the skin.

XANTHORHIZA APIFOLIA.

NAT. ORD.—Ranunculacea. SEX. SYST.—Pentandria Polygynia.

Common Names.—Yellow-wort, Yellow-root.

DESCRIPTION.—A small shrub, two to four feet high. Stem simple, erect, glabrous, smooth. Leaves numerous, incised leaflets; under surface pubescent. Petioles two, six inches long. Flowers dark purple, in axilary racemes. Sepals five. Nectaries five. Folicles small, one-seeded, suspended.

History.—The Yellow-root is peculiar to the mountainous sections of the Southern States, of South Carolina, Florida, Georgia, and west to the Mississippi. The root is long, large; and its large amount of yellow coloring matter makes it useful in coloring wool and domestic cloths. It imparts its virtues to water and alcohol.

PROP., &c.—Tonic. The bark of the root is officinal. The powdered bark may be employed, in doses of ℈i to ii. The infusion and tincture preferable to the bark powdered. It is thought to be a good substitute for any of our best vegetable tonics, to restore the digestive functions when the system has suffered great exhaustion from febrile and erysipelatous attacks. It has the advantage of being more pleasant than most other tonics.

FOREIGN VEGETABLE AGENTS.

PART II.

THE arrangement of this work is such as to make the Vegetable Materia Medica its prominent feature. There are, however, many important articles, of great interest to the Druggist and Physician, which are imported from other Continents. Such of those agents as are most frequently employed, will here be noticed.

The arrangement will be in alphabetical order. The Latin and common names will be given to each article, whilst the Botanical descriptions will be omitted, as not very essential to the profession of this Continent. Some of the latest and best English authors have adopted this plan.

ACACIA.

Gum Arabic.

History.—The Acacia is a small tree, varying from ten to thirty feet in height, according to its several species, and is a native of Asia and Africa. Some authors have thought this to be the Shittah tree referred to in the Old Testament. It was noticed by Hippocrates, Theophrastus, Pliny, and other ancient writers, as yielding a gum for medicinal and dietetical purposes.

The several species yielding Gum Arabic, are—*A. Arabica*, of Arabia, India, Senegal, and Egypt; the *A. vera*, of Africa, Egypt, and Arabia; the *A. karoo*, of Cape of Good Hope; the

A. gummifera, of Africa and Arabia; the *A. seyal*, of Senegambia; the *A. tortilis*, of Arabia; the *A. Senegal*, of Africa and Arabia.

The gum exudes from the trees spontaneously, in certain seasons of the year, and from incisions made in the bark. As it flows out, it hardens from exposure to the atmosphere. The best gum is irregular, in different sized pieces, has a pale straw color, and when broken, presents a vitreous fracture. It is inodorous, semi-transparent, insipid, and feels viscid in the mouth. When dissolved in water, a small portion of insoluble matter is noticed, which contains nitrogen. According to Gerin, this gum contains arabin, bassorin, bimilate of lime, chloride of calcium, chloride of potassium, and acetate of potassa.

The several varieties of Gum Arabic are designated in commercial marts as the *Turkey gum*, imported from Constantinople, Beyrout, Leghorn, Alexandria, &c.; the *Barbary gum*, from Magadore; the *Senegal gum*, from Senegal, &c.; the *East India gum*, from Bombay, and the *Cape gum*, from the Cape of Good Hope.

The *adulterations* of Gum Arabic are frequent, by mixing the inferior gums, some of which are but partly soluble when added to water, forming a glutinous or jelly-like appearance; and this is the best ordinary test. The powdered gum is frequently adulterated with starch.

PROP., &c.—Emollient, demulcent, and nutritive. Many individuals have subsisted upon it alone for weeks and even months, whilst some animals, dogs, die under its use.

Its good effects as an emollient and demulcent are observed in the inflammatory stages of gonorrhea; for irritation of the throat and stomach, and for irritation of the kidneys and bladder. A solution of the gum in water has been used to shield the stomach and bowels from acrid poisons.

The powdered gum may be given in one half to one drachm doses. It is also useful in the forming of pill-mass.

Mucilago—Mucilage. Gum Arabic, ℥x; Boiling Water, Oi. Strain the solution through linen or muslin. If the solution stands long, it developes acetic acid, and becomes unfit for use.

Trochisci Acacia—Gum Lozenges. Gum, ℥iv; Starch, ℥i; Sugar, lb. i. Mix; add rose-water sufficient to soften the powder into a mass, and divide into lozenges of any size.

Mistura Acacia—Mixtura of Gum Arabic. Mucilage, fl℥ii; Sweet Almonds, ℥x; White Sugar, ℥v; Water, Oii. The almonds should be steeped a few minutes in boiling water; then turn off the water, remove the coating or skins. In a clean white mortar bruise the seeds, add the mucilage and sugar, turning in the water until the whole is thoroughly mixed; then strain through linen or muslin.

ANTHEMIS NOBILIS.

Chamomile Flowers.

History.—This is a small procumbent plant; indigenous to Europe, in old fields and commons, and extensively cultivated. It was known to the earliest medical writers. The flowers are officinal, which are large, oval, and yellow and straw-color. There are two kinds, the double and single.

Chamomile flowers have an aromatic, warm, and intensely bitter taste, with a peculiar and not unpleasant odor. Both water and alcohol extract their medical properties. The volatile oil, which gives them their odor and aromatic qualities, can be separated by distillation. The infusion and tincture are copiously precipitated by the acetate of lead; the sulphates of iron strike a blue-black color. They contain fat or oily matter, volatile oil, bitter extractive, tannic acid, and probably some gum and salts.

PROP., &c.—Tonic; in large doses, emetic. For centuries before the discovery of the Peruvian barks, the Chamomile flowers were employed in the cure of intermittent fevers. Their value in the convalescence from acute diseases, fevers, chronic diseases, dyspepsia, gout, and rheumatism, is well understood by the profession.

Pulvis Anthemis—The Powdered Flowers. *Dose*—Grs. x to ℥ss. Seldom used.

Infusum Anthemis—Infusion of Chamomile Flowers. Flowers, ℥v; Boiling Water, Oi. In twenty minutes strain. (Equal parts of good wine may be added.) *Dose* of the cold infusion, ℥i to ii. If desired to vomit, the warm infusion should be drank *ad libitum.*

Extractum Anthemis—Extract of Chamomile Flowers.—Chamomile Flowers, lb. i; Water, Cong. i. Boil down to four pints, and strain the hot liquid through flannel or muslin; then by water-bath reduce to proper consistence. In this process the volatile principles are lost, which lessens its value. It is employed in solution, with water, and in pills; also in several combinations for indigestion.

Oleum Anthemis—The Oil. Produced by ordinary distillation. *Dose*—M. i to iv.

ALOE.

Aloes.

History.—The Aloe plant is found in Africa, Spain, Greece, the East and West Indies, in Italy, Sicily, Malta, and some

other sections. It has long been known to the medical profession. The Aloe belongs to the natural order *Liliacea*, and divided into many species, whose leaves contain a juice yielding the *Aloes* of the shops. Some writers mention five kinds of Aloes used in medicine—the *Soccotrine, Cape, Hepatic, Barbadoes*, and *Caballine.*

A. soccotrina—Soccotrine Aloes. A native of the Island of Socotra, discovered by the Portuguese, in 1503. Much of the best Soccotrine Aloes comes from the kingdom of Melinda. The leaves of the different species which yield Aloes are fluted, stiff, spreading, thick, broad at the base, gradually tapering to the point, channeled, acute, toothed, one or more feet in length, some straight and some bending. The leaves of the plant are cut close to the stem, and the juice is allowed to run out. After this juice has been standing for a time the feculent falls, and the juice is poured off into shallow earthen dishes, and evaporated in the sun, or by a gradual artificial heat, so that when cold it is but an inspissated extract sufficiently hard to pulverize.

The real *Soccotrine Aloes* are very scarce in the markets, generally in small pieces, of dark garnet-red color, glossy, and its thin edges or fractured pieces reddish and semi-transparent, of dull lustre. The powder has a golden yellow color.

Aloe Capensis—Cape Aloes. Obtained chiefly from the Cape of Good Hope, and is of the species *Spicata.* The leaves are thick, broad, fleshy at the base, toothed, tapering to the apex, one to two feet long. The flowers are arranged in long spikes, campanulate and horizontal, light yellow tinged with green.

The leaves yield a large amount of juice, that is evaporated in large iron vessels. The Cape Aloes usually come in large sized pieces, brown color, tinged with green; glossy, brittle, and easy to fracture. The powder is of a light yellow color.

Hepatic Aloes—Aloe Vulgaris. The Hepatic Aloes, a species found in Barbadoes and several of the West India Islands. Its juice is obtained by allowing it to run out from the leaves, and when sufficiently inspissated, pouring it into gourds. Also by boiling the leaves.

Hepatic Aloes have a brownish-black or dark liver color; a dull fracture, and the splinters are nearly opaque. It is less easily pulverized than the Soccotrine or the Cape, and the powder is a less bright yellow.

Callabine Aloes—Obtained from the inferior kind of the Cape and Barbadoes. It is nearly black, empyreumatic, strong, fetid, and generally mixed with impurities.

All these Aloes are very bitter, with a strong odor, that is increased by breathing on them. The warmth of the hand will partially soften them—under a strong heat froth up, char,

and inflame. Cold water will partially dissolve Aloes when triturated in a mortar. They will entirely dissolve in boiling water; but on cooling, a resinous matter falls, that is entirely dissolved with alcohol. Aloes has been analyzed by several eminent chemists. That by Wenckler is: Barbadoes Aloes—Bitter extractive sixty, resin thirty-five, albumen five, in one hundred parts.

PROP., &c.—Purgative, anthelmintic, emmenagogue, stimulant. Physicians generally prefer the Soccotrine Aloes; but the Barbadoes, Cape, and Hepatic are most plentiful in market, and most frequently employed. These several kinds exert the same medicinal influence. They exhibit but little action on the duodenum and small intestines, whilst they seem to exert a special effect on the colon and rectum. To account for this peculiarity of Aloes, some have supposed that it was because the medicine was not sufficiently dissolved in the canal until it reached the two lower portions of the bowels. But Thomson, one of the best English authors, says: "Those who reason in this manner, have forgotten that Aloes, when applied to an ulcer on the back of the neck, acts on the rectum.

As a *stimulating tonic*, Aloes, where the digestive organs are weakened with habitual costiveness, if given in small doses, increases peristaltic action.

As a *cathartic*, it is given in larger doses, where there is a deficiency of the secretions of the liver, and where the colon, from loss of its proper functions, becomes empacted with feces. Whether in large or small doses, its action is very slow. It has but little action on the serous tissues of the canal, hence seldom produces watery discharges; but if long continued in full doses, will induce griping and bloody mucus discharges. For this reason, Aloes should be used cautiously on those having piles and hemorrhoidal discharges.

As an *emmenagogue*, Aloes have frequently been given to excite the menstrual flow, either alone or in combination with other agents, as myrrh and iron. To obtain its effect in this way, it should be continued for several days in moderate doses. It is thought to exert a special stimulating influence on the pelvic organs, although some have questioned this position, yet such action is generally admitted. It is well known that several of the drastic purgatives at times exert a powerful influence upon the uterus, even to the effect of abortion.

As an *anthelmintic*, may be employed internally for worms of stomach and intestines. But a few grains of the powder in half a pint of warm water, with half a teaspoonful of sweet oil, is an efficient remedy for the *ascaris vermicularis*, or small thread-worm.

When Aloes are combined with soap or an alkaline salt, it

acts quicker, and with less violence. Its action is modified combined with scammony, myrrh, assafetida, iron, and some of the aromatics.

The dose of Aloes, in powder or pills, varies from Grs. iij to xv.

Pilula Aloe—Pills of Aloes. Powdered Aloes and Castile Soap equal parts; Treacle (Molasses) sufficient to form a pill-mass. Divide into three-grain pills. *Dose*—Three pills every two hours, until they operate.

Pilula Aloe Composita—Compound Pills of Aloes. Soccotrine or Hepatic Aloes, ℥i; Extract Gentian, ℥ss; Oil of Caraway, M. vii. Mix into pill-mass, adding Molasses or Simple Syrup, if necessary. In this formula, half an ounce of the conserve of Roses (of no importance) may be added, if desirable. A useful pill for indigestion and costive habits.

Pilula Aloe et Assafœtida—Pills of Aloes and Assafetida. Aloes, Assafetida, and Castile Soap, each equal parts; Simple Syrup or Molasses sufficient to form in pill-mass. Divide into three-grain pills. *Dose*—One to three. Repeat at discretion. A good pill for torpid liver, hysteria, and dyspepsia.

Pulvis Aloe cum Canella—Powder of Aloes with Canella. Powdered Aloes, lb. ss; Powdered Canella Bark, ℥iss. Mix. *Dose*—Grs. x to ℈i.

Hiera Picra is the above formula, noticed in the old works, known to many in domestic use, and formerly much employed to bring on a return of the menstrual flow.

Canella bark is obtained from a tree growing in Jamacia and other West India Islands. It is a powerful excitant, having an aromatic, pungent taste. Seldom used in this country.

Tinctura Aloe—Tincture of Aloes. Aloes, bruised, ℥i; Extract of Liquorice, ℥iij; Distilled or pure soft Water, Oiss; Alcohol, Oi. Digest fourteen days, and filter. *Dose*—fl℥i to fl℥i.

Tinctura Aloe Composita—Compound Tincture of Aloes. Aloes, coarse powdered, ℥iv; Saffron, ℥ii; Tincture of Myrrh, Oii. Mix. Macerate fourteen days, and filter. *Dose*—fl℥ss to i.

This may be employed as a gentle purgative for costive habits, dyspepsia, and suppressed menstruation. Unpleasant, and not often used.

Vinum Aloe—Wine of Aloes. Coarse powdered Aloes, ℥ii; Canella Bark, bruised, ℥iv; Sherry Wine, Oii. Macerate (digest) fourteen days, and strain through linen or muslin. *Dose*—fl℥iv to fl℥ii.

The wine of Aloes is the most acceptable form of administration, both for children and adults. Aloes are often exhibited in combination with iron.

AMMONIACUM.

Gum Ammoniac.

History.—The exuded juice of the Dorema Ammoniacum, a plant found in several provinces of Persia. Its leaves are large, nearly two feet long, yielding a large amount of juice, which in proper seasons are punctured by innumerable swarms of beetles. Soon after the juice has oozed out in small tears, it becomes dry, when it is picked off and shipped to different parts of the world.

Gum Ammoniac is yellowish externally, whitish internally; often in tears or small oval pieces, and often in masses when by warmth it has adhered together. Its taste is unpleasant, bitterish and acrid. In cold weather it may be powdered, but adheres together in a warm temperature. It will not melt when heat is applied, but becomes friable, giving a strong, unpleasant odor.

It is partially soluble in water, forming a milky emulsion, which by rest deposits four parts of resin, whilst one of gummy matter remains in solution. This gummy solution reddens the tincture of litmus.

PROP., &c.—Stimulant, discutient, expectorant. It is believed to stimulate the respiratory nerves, and to induce expectoration in catarrh, and affections of the lungs. In serious difficulties of the lungs, some suppose its stimulating powers too great, and of but little use in phthisis and pulmonary diseases. It has been used for chronic catarrh of old people; for asthma, hysteria and dyspepsia. It has been triturated with nitric acid, largely diluting with water; also in combination with Ammonia.

It is but little used in this country. But there is one mode of its use that is worthy the attention of every physician—the plaster.

Emplastrum Ammoniacum—Plaster of Gum Ammoniac. Dissolve coarse-powdered Ammoniac in alcohol or proof spirits, then evaporate by water-bath to a soft consistence suitable for a plaster. It may also be done by placing over a moderate heat until *partially* melted (friable), then with a stiff spatula or knife, spread in plaster.

I have never found any plaster superior to this for indurated swelling of the joints; and for troublesome swellings of the mammary and other glands, it is valuable. It excludes the action of the air, stimulates the secretions and excretions of the parts.

Mistura Ammoniacum—Mixture of Ammoniac. Triturate Ammoniacum, ℥v, with Water, Oi, gradually added until an emulsion is formed. *Dose*—fl℥ss to i.

In powder or pills, Grs. v to xx.

ASSAFŒTIDA FERULA.

Assafetida.

History.—A plant found in Persia. It has large radical leaves, in the centre of which arises the flowering stalk, six to nine feet high, naked, about three inches in diameter, bearing an umbel of many rays. Some authors suppose there are two species of this annual plant. The root of the plant is large, fleshy, whitish within, and dark brown externally. It exudes a milky juice.

The season for collecting is when the leaves and stalks have decayed. The mode of collecting is by removing the earth from around a portion of the root; cut a slice transversely from the top of the root, cover over with leaves for forty-eight hours, then with a knife scrape off the exuded juice, and put into suitable vessels; cut off another slice, cover over, and so on until the root is used up.

Assafetida is often found in tears or small pieces; but generally in masses of different sizes by its adhering together, interspersed with tears, which have remained whitish and hard. The mass is changeable in color, brownish-yellow, reddish, and purple and violet color. That having the least impurities and most of the tears, is the best. Its exposure to air gives it a darker color, and makes it hard and brittle; it is not easily pulverized. In a moderate heat, it softens so as to allow of its being pressed through cloth. Under a high heat, it burns with a white flame. When triturated with water, it forms a milky-looking emulsion, which gradually lets fall the resin. The tincture with alcohol, takes up the resin; if water be added, it gives a milky appearance.

Pelletier's analysis of Assafetida discovers resin, gum, bassorin, volatile oil, and super-malate of lime; besides these, Brande finds extractive matter, oxide of iron and alumina. Pure potassa in solution, dissolves the whole.

Prop., &c.—Gum Assafetida is a mild stimulant and antispasmodic; nervine, expectorant and anthelmintic. It is frequently used for convulsions of children, and when not admissible by the mouth, the emulsion or tincture may be introduced by enema. As an expectorant for catarrh and asthma, it bears some reputation. I have noticed cases where moderate doses

would cause worms to leave the canal at both outlets. It has also been given for uterine obstructions. It sometimes disturbs the functions, and occasionally the heart, diaphragm and respiratory muscles, in which cases it should be discontinued.

The peculiar odor of this useful article, depends upon its volatile oil. Its use is objectionable to most people, whilst some are fond of its perfume. The natives employ it to flavor their dishes of soups, &c.

Some experiments have been made to show that Assafetida will increase the venereal feelings of the male, and catamenial flow of the female. Horsemen often give it in few ounce doses, both to increase the appetite and to affect a glossy appearance of the hair of horses.

Good Assafetida is easily formed into pills. *Dose*—Grs. i to iij.

Mistura Assafœtida—Mixture of Assafetida. Gum Assafetida, ℥ii; Water, Oss. *Dose*—fl℥i to ii.

Milk of Assafœtida is a common name for this mixture. To modify its unpleasant taste, some of the aromatic essences, as pennyroyal and cinnamon, have been added to it.

Pilula Assafœtida Compositum—Compound Pills of Assafetida. Assafetida, ℥ii; Galbanum, ℥iv; Myrrh, powdered, ℥ii; Treacle, or Molasses, sufficient to form into pill-mass. It may be necessary to place the ingredients in a water-bath, to aid the incorporation. *Dose* in pills, two to four.

The sugar-coated pill is the most acceptable form for use.

Tinctura Assafœtida—Tincture of Assafetida. Pure Assafetida, ℥ii; Alcohol, Oi. Digest twelve days and strain through linen. *Dose*—fl℥i to ii. For enema, one to three drachms.

Enema Assafœtida—Injection of Assafetida. Take either mixture or tincture, fl℥i to iij; Castor Oil, fl℥ii; Warm Water, Oi. Mix it well with the syringe, and in divided parts introduce into the rectum. Both the ingredients and amount may be varied to suit the occasion. It is a valuable aid for the relief of convulsions, hysteria, uterine irritation, threadworms, and flatulent colic.

BELLADONNA.

Deadly Nightshade.

History.—This plant is a native of Europe, and belongs to the natural order of Solonacea. Supposed to have been known to the ancient Greek and Roman physicians. The stem rises two to three feet high; roots fleshy; leaves large, ovate

entire. The leaves are officinal; and according to Brande, contain super-malate of Atropia, wax, gum, starch, albumen, chlorophylli, some salts and lignin; to which Leubekind added a new volatile alkali, which he named *Belladonnin;* and Richter a new volatile crystallizable acid which he termed *Atropic Acid.* The most important principle is the *Atropia*, which is procured in silky, acicular crystals, white and shining.

The poisonous qualities of the berries, and intoxicating effects of the root, have long been known. The first effects of over-doses of Belladonna, are fever, with dryness of the throat, difficult deglutition, mania and thirst, followed by vertigo, dilatation of the pupils, dimness of the sight, suffused eyes, and visual illusions; numbness of the face, extravagant delirium, resembling intoxication, sopor, an eruption over the skin closely resembling that of scarlatina. The pulse is usually small and hurried. These symptoms may also occur when the extract is applied to an abraded surface. When applied to the eyebrows, it acts on the radiated fibres of the iris, dilates the pupil, and maintains the dilatation for some time. If applied to only one eye-brow, it acts only on one eye.

Where over-doses of the powder, tincture, extract, or the Atropia have been taken, alkalies, emetics, strong decoction of green tea and the infusion of nut galls may be employed; also the stomach pump.

PROP., &c.—Anodyne, anti-spasmodic, prophylactic and discutient.

In neuralgic affections and acute rheumatism, the tincture has been employed. The extract may be applied to the uterus to relax the *os* in lingering labor. For stricture of the urethra, the ointment has been used; also introduced into the rectum for stricture of the bladder and rectum. And for hernia, to relax the parts involved. The extract has some reputation when applied upon indolent, painful ulcers and cancers; for scirrhus, tumors, and glandular swellings. Its powers to expand the pupil makes it sometimes available to the surgeon in operations of the eye.

In febrile diseases its reputation is varying. In cerebral inflammation, which sometimes contracts the pupil of the eye, it is said to be indicated. The tincture of Belladonna and Aconite, alternated, are favorite agents in the Homeopathic practice for scarlet fever; also as a prophylactic for this disease, Belladonna has been highly esteemed. The dried leaves have been smoked like tobacco for neuralgia and asthma.

The most prominent action of Belladonna in any of its forms, seems to be on the nervous system. Some physicians are very

partial to its use, others consider it unreliable. Its effects should be carefully watched.

Atropia—It is generally obtained from the root. Employed as a substitute for the Belladonna; more certain in its effects, and to be used with caution.

The dose of Atropia varies from one-thirtieth part of a grain to one-sixth of a grain. One grain may be dissolved in two hundred drops of cold water, of which six to twenty-five may be given. A few drops of this solution may be rubbed upon the eyelids to dilate the pupil.

The fresh powdered leaves. *Dose*—Gr. i, in a little water or simple syrup.

Tinctura Belladona—Tincture of Belladonna. Dried Leaves, ℥i; Diluted Alcohol, Oi. Macerate ten days. *Dose*—Gtts. v to xx.

By some the tincture from the extract is thought the most reliable. Extract, ℥x; Diluted Alcohol, Oi. Digest ten days and filter. *Dose*—M. i to iii.

In any form of use, the Belladonna should be given three or four times daily, until its effects are noticed upon the pupil of the eye. The tincture is generally employed.

Extractum Belladonna—Extract of Belladonna. This is simply the inspissated or expressed juice of the fresh leaves, gradually evaporated to a proper consistence. *Dose*—Gr. i, gradually increased until its effects are noticed.

The hydro-alcoholic extract is made in this country from the tincture, by evaporating it to a proper consistence by the water-bath. *Dose*—Grs. i to ii.

BAROSMA.

Buchu.

History.—There are several species of this small shrub, natives of the Cape of Good Hope. The leaves are officinal, from one half to one inch long, ovate, lanceolate, rigid, dark green color. They are imported into this country, and found in many of the drug stores.

PROP., &c.—Tonic, stimulant, mildly diaphoretic and diuretic. The leaves have been used for indigestion, for tonic and stimulating effects in cases of general debility. The most decided good results of Buchu are noticed in its action on the kidneys, in calculous complaints, especially of red gravelly deposits. In these cases it is believed to lessen the formation of lithic acid; for this purpose the body should be kept warm to favor its action as a diaphoretic.

There is some evidence of availability in some affections of the mucus surface of the bladder and urethra. Buchu has been employed in phthisis pulmonalis; and I have seen one gentleman who appeared to have been perfectly cured of an aggravated case of bronchitis, only taking an infusion of the leaves for about three weeks. It is worthy the attention of our profession.

The dose of powdered leaves, ℈i to ii.

Infusum Buchu—Buchu Leaves, ℥ss; Boiling Water, Oi. *Dose*—fl℥i to ii. Should be given warm, if desired to act on the surface.

Tinctura Buchu—Tincture of Buchu. Of the Leaves, ℥iv; Proof Spirits (diluted Alcohol), Oiss. Digest ten or twelve days and filter. *Dose*—fl℥i to iii.

BENZOINUM.

Gum Benzoin.

History.—The *Styrax Benzoin* is a small tree growing in Sumatra. When about six years old, incisions are made in the bark, from which a clear juice exudes, that is carefully collected. The best becomes hard, and may be pulverized. It is seen in masses, and in pieces or tears the size of almonds; has a pale, reddish-brown color, containing clear red spots; has a sweetish, balsamic taste, and aromatic, agreeable odor. It takes fire, and throws off an irritating smoke. M. Bucholz found it to contain resin, Benzoic acid, a substance analogous to balsam of Peru. It is wholly soluble in alcohol, and in a solution of potassa. Benzoin is soluble in boiling nitric acid, and on cooling, a copious deposit of Benzoic acid takes place.

Prop., &c.—Expectorant and stimulant. Benzoin has special action on the mucus surface. It has been employed for bronchitis and pulmonary affections. There is a difference of opinion about its availability, although it is generally admitted that it should not be exhibited in the first or inflammatory stages. It has been used for coughs of obstinate character, by adding a teaspoonful of the tincture to two or three ounces of Gum Arabic mucilage, triturated in the mortar. Very little employed in this country.

The powder is seldom used. *Dose*—Grs. x to ℥ss.

Tinctura Benzoini Composita—Compound Tincture of Benzoin. Benzoin, ℥iiiss; Storax, ℥ii; Aloes, ℥v; Balsam Tolu, ℥i; Alcohol, Oi. Digest fourteen days, and pour off the clear liquor. This is similar to a preparation of the old works, known as *Tincture of Benjamin, Friar's Balsam, Commander's*

Balsam, &c. *Dose*—fl℥ss toii. Incorporated in mucilage of acacia.

Acidum Benzoicum—Benzoic Acid. Obtained from Benzoin by the process of sublimation. Benzoic Acid, as found in the drug stores, is in white glistening crystals, light and feathery. It has a sour taste, with peculiar aromatic odor. The chief use of this acid is in the formula of *Paregoric.*

CAMPHORA OFFICINARUM.

Camphor Tree.

History.—This is a large, beautiful tree, found in Japan and China, where its white and fragrant wood is used for making trunks, boxes, &c. It is the *Laurus Camphora* of Linneus Every part of the tree yields Camphor, which is extracted from the wood and roots by chipping into small pieces and boiling in water In this process it is sublimed or condensed, and called *crude* Camphor, when it is refined and fitted for the markets of the world. As found in the shops, it is in various sized pieces, colorless, solid, translucent, and crystalline appearance.

PROP., &c.—The medical powers of Camphor are reputed to be stimulant, anti-spasmodic, anodyne, diaphoretic, and anti-aphrodisiac. It has been given in fevers, especially of a typhoid character, with a view to obtain its diaphoretic and anodyne powers. In such cases it is often combined with opium and ipecac.

In exanthemata, the eruptive diseases, as small-pox, scarlatina, &c., it has been used with a view to action upon the capillary system. In these diseases it is not much employed. It has been said that Camphor ointment applied to the face will prevent the accumulation of small-pox pustules.

For affections of the sexual and urinary organs, Camphor bears some reputation. In *satyriasis*, or a constant erection of the penis, with a continued desire for coition; also for onanism, as well as frequent nocturnal emissions of semen, the continued moderate doses are said to prove beneficial, as well as in those unnatural feelings in the sexual organs of females, known as *nymphomania.*

Camphor has been employed in chronic rheumatism, especially combined with other diaphoretics. Its narcotic powers have been noticed in mental disorders, as mania and melancholia; also for its relaxing effects when the penis and scrotum

are contracted, and the testicles are drawn tight up to the abdominal cavity.

As a stimulating nervine, the tincture is in constant domestic use for hysteria and fainting; for bathing in neuralgia and rheumatism. It is also introduced into the cavity of teeth to allay pain.

The *vapor* of Camphor has been highly recommended on account of its anodyne and diaphoretic action, in the cure of chronic rheumatism. The process for this vapor-bath is by placing the patient on a cane-bottom chair, beneath which is a chafing-dish. A tin basin would do, covered with an iron plate, or the thin lid of a stove; the whole to be surrounded with a blanket, pinned around the neck of the patient, when a large teaspoonful of powdered Camphor is to be placed on the hot iron. This volatilizes the Camphor, and surrounds the body with its vapor. To be continued fifteen or twenty minutes, when the patient is rolled in the blanket and carried to bed, when vapor should be applied to the feet, with a view to keep a moisture on the surface for an hour or more. The patient may then be bathed with spirits and warm water, and kept in a warm room. This process to be continued daily, until all pain disappears.

Camphor, in over-doses, produces a great variety of symptoms. Two scruples is said to be a poisonous dose, although it has very seldom been taken in sufficient quantity to produce death. Its first unfavorable effects are excitement, burning skin, hard, full, frequent pulse; the eyes sparkle, the face red and swelled, great weight of the head, burning sensation in the stomach, anxiety, agitation. These symptoms are followed with part or all of vertigo, deranged vision, a sensation of dreaming even in day time, when the patient is able to walk and converse, sweating, reduced pulse, sleep. In some cases, this unpleasant sensation of the head has continued for two or three weeks.

The *antidotes* for poisoning by Camphor are few, and not reliable. If it has been taken in substance, it remains in the stomach for many hours. Any mucilaginous substance may be given to shield the stomach from its irritation, followed by a brisk emetic; after this a purgative, with the view to relieve the whole canal. Diaphoretics and diuretics should be given, to relieve the circulation by rapid secretions and excretions. Opium is said to allay the nervous condition.

The *dose* of Camphor varies from Gr. i to ℈i; but it is usually exhibited in doses of Grs. v to xx. The pill is sometimes given, which is objectionable, because not easily dissolved in the stomach, and more likely to create unpleasant feeling in the epigastric region. Its emulsion or mixture is preferable.

Notwithstanding the extensive use made of Camphor in family practice, it is one of the unreliable agents in the hands of the physician.

Spiritus Camphora—Tincture of Camphor, Spirits of Camphor. Camphor, ℥iv; Alcohol, Oii. Much used for hysteria, fainting, and painful affections of the head, by smelling and and bathing. The *dose* is fl℥ss to i, in a little water. The water separates the Camphor.

Mistura Camphora—Aqua Camphor, Camphor Water. Camphor, ℥ss; Alcohol, M. xv, or fifteen drops; Water, Oi. First rub the Camphor with the alcohol in a clean mortar, then gradually pour in the water, and strain through linen. *Dose*—fl℥i to ii. This is a weak preparation of Camphor, and may be used to disguise the unpleasant taste of other agents.

Mistura Camphor cum Magnesia—Camphor Mixture with Magnesia. Camphor, Grs. x; Carbonate of Magnesia, Grs. xxv. Rub the two together in a mortar, gradually adding water Oi. *Dose*—fl℥iv to ℥i. The magnesia in this mixture gives it antacid properties, which has been administered in uric deathesis, and also in irritations of the neck of the bladder, to which add the inspissated extract of Hyosciamus, of Grs. v to each dose.

Linimentum Camphora—Camphor Liniment. Camphor, ℥i; Olive Oil, fl℥iv. Rub together in a mortar until thoroughly mixed. A gentle stimulating anodyne for bruises, sprains, glandular and other swellings.

Linimentum Camphora Compositum—Compound Liniment of Camphor. Camphor, ℥iiss; Solution of Ammonia, fl℥vii; Spirits or Tincture of Lavender, Ci. Dissolve the Camphor in the spirits, and then add the ammonia, and mix by agitation. This is an active irritant, if freely applied, for deep-seated pains; its secondary effects anodyne.

Linimentum Camphora Compositum—Compound Liniment of Camphor. Camphor, lb. i; Alcohol, Cong. i; Animal Oil (Whale or Sturgeon), fl℥vi; Spirits of Turpentine, fl℥vi; Spirits of Ammonia, fl℥vi. First dissolve the Camphor pure in the alcohol, then add the oil, and agitate occasionally for twenty-four hours, and then add the other articles. A most valuable liniment for pains, sore throat, glandular swellings, felons, contusions, sprains, bruises, rheumatism, and frosted feet. Internally, two teaspoonfuls in a wine-glass of water, wine, or mucilage, will relieve the severest pains of colic.

ELETTARIA CARDAMOMUM.

Cardamon Seeds.

History.—The Cardamon seeds of the shops are oblong capsules, varying in size from one-fourth to three-fourths of an inch long, of light yellowish color, containing numerous angular, blackish seeds, which have an aromatic odor, and warm, aromatic, agreeable taste.

The plant yielding these seeds is six to eight feet high, growing along the coast of Malabar. Cardamon is supposed to have been known to the early medical writers.

PROP., &c.—Stimulant and aromatic. Employed both for their flavor, and cordial, stimulating properties. The seeds are frequently chewed to disguise the disagreeable breath from bad teeth and other causes.

Tinctura Cardamomum—Tincture of Cardamon. Cardamon Seeds, bruised, ℥ii; Alcohol, Oi. Digest ten or twelve days, and strain. *Dose*—fl℥i to ii. The tincture is a convenient adjunct, both a stimulant and flavor for other mixtures.

Tinctura Cardamomum Composita—Compound Tincture of Cardamon. Cardamon and Caraway Seeds, bruised, each ℥iiss; Cochineal, powdered, ℥i; Cinnamon, bruised, ℥v; Raisins, the stones taken out, ℥v; Alcohol, Oii. Digest fourteen days, and strain. *Dose*—fl℥i to ii. Used for same purposes as the tincture.

CARYOPHYLLUS AROMATICUS.

Cloves.

History.—The Clove tree is a beautiful evergreen, twenty to thirty feet high, growing in the Molacca Islands and other places. The Clove is the calyx of the flower, enclosing the ovary or germ. First collected when the tree is six years old. They ought to be of a bright brown color, plump, heavy, greasy feel, and be easily bruised. Odor agreeable and aromatic; taste acrid and biting. They yield their properties to water and alcohol. In one hundred parts, are found eighteen of volatile oil, seventeen of tannin, six of resin, twenty-eight of lignin, and eighteen of water.

PROP., &c.—Aromatic, excitant, stomachic, and anodyne. Powdered Cloves is the general form for use, though not prescribed except in combination with other agents, both to cover unpleasant taste and smell, and for its carminative and stimu-

lating effects. It is indicated in atomic and gouty affections of the stomach. *Dose*—Grs. iv to x.

Infusum Caryophyllus—Infusion of Cloves. Cloves, bruised, ℥iiss; Boiling Water, Oi. Cover over, and let stand an hour or two. *Dose* of the infusion, fl℥ss to ii. Used for colic, dyspepsia, and gout of the stomach.

Oleum Caryophyllus—Oil of Cloves. This is obtained by common distilling process. Fresh, good oil is light yellow; by long standing, turns to a dark brown color. It is soluble in alcohol and the fixed oilsh. The oil is sometimes triturated with powdered forms for its aromatic and stimulating properties. It may also be triturated with sugar, and suspended in water. A drop or two is sometimes introduced into the cavity of a tooth, to deaden the exposed nerve.

Tinctura Carophyllus—Tincture of Cloves. Cloves, bruised, ℥iv; Alcohol, fl℥viij. Digest ten days, and filter. *Dose*—fl℥i to ii. Although seldom used, it is a convenient form.

CARUM CARUI.

Caraway.

History.—The Caraway plant grows spontaneously in most parts of Europe, and is cultivated in England. The fruit or seeds (*fructus semina carui*) is the Caraway seeds so extensively used in this country.

PROP., &c.—Aromatic and stimulant, imparting a peculiar, warm, spicy taste. The oil, infusion, and spirits or tincture, are sometimes employed to relieve pains of the stomach and bowels induced by flatulency; also as an adjuvant, and to cover the taste of unpleasant medicines.

The greatest use made of Caraway is by confectioners, and for culinary purposes.

The *oil* is the most convenient form, both for making the spirits of Caraway, and for uniting in pills and other formulæ. *Dose*—Gtts. i to x.

CASSIA OFFICINALIS.

Senna.

History.—Senna leaves (folia Senna) are the production of several species of plants, viz: *C. acutifolia*, *C. lanceolata*, *C. obtusata*, and *C. obovata.* These, and perhaps some other species, are found in India, Africa, and the southern parts of Europe.

That which is found in the drug-markets of this country, is mostly designated as *Alexandria* Senna, *India* Senna, and *Tripoli* Senna.

Alexandria Senna commands the highest price, and is esteemed better than other kinds. The leaves are narrow, lanceolate, of grayish-green color. They should be free from small broken pieces, and from adulterations of leaves of other plants, and from seeds, stones, and rabbit-dung.

The *India Senna* is milder in action, of a lighter color, and more likely to be broken in pieces. Its value and properties seem to rate between the other two kinds.

Tripoli Senna varies somewhat from the others, by having broader and shorter leaves, and having more of the petioles and smaller stems attached. It bears the lowest price in commercial marts, and is undoubtedly somewhat mixed with the Alexandria Senna. Its therapeutic action is about equal to the American Senna, Cassia Marilandica.

Some little experience is necessary in the purchase of Senna, as well as in most other drugs, especially if the leaves are much broken, of a light or dead looking color, or having impurities mixed with them. Care should be observed in purchasing the *powdered* Senna, which should have a green color, devoid of small and yellowish particles; its smell should be similar to green tea, although to some slightly nauseating.

PROP., &c.—Purgative and anthelmintic. Its indications are that of a general purgative, especially for inflammation of the serous tissue, particularly of the nose, frontal sinus, the lungs; and we think for inflammation of the alimentary canal and peritorial covering, although many dispute this, because of its liability to produce griping; but to obviate this, carminatives should be conjoined. To relieve the tightness, tension, pain, and obstruction caused by inflammation of the serous tissue, Senna is equal if not superior to any purgative in the Materia Medica.

It justly bears the name of an anthelmintic, because of being not only unpleasant to the worms, but for its rapid action on the serous tissue, filling the whole canal, causing sudden and heavy watery discharges. Its marked effects are observed in dropsy.

Boiling water is the best solvent for the properties of Senna. Powdered Senna, ℥ss to ii; Powdered Peppermint or Cloves, Grs. x to xx. Mix in a little cold water.

Infusum Senna—Infusion of Senna. The powdered Leaves of Senna, ℥i; Powdered Ginger, ℥ss; Boiling Water, Oi. When cold, strain through linen. *Dose*—fl℥ii to iij.

Infusum Senna Compositum—Compound Infusion of Senna.

Senna Leaves, ℥ii; Tamarinds, ℥i; Coriander, bruised, ℥i; Brown Sugar, ℥i; Boiling Water, Oss. Let stand in a covered earthen vessel for two hours, stirring occasionally, and strain. *Dose*—fl℥ii to iv.

Pulvis Senna Compositum—Compound Powder of Senna. *Antibilious Physic*—Powdered Alexandria Senna, lb. ss; Powdered Jalap, ℥iv; Powdered Peppermint, ℥iv; Powdered Cloves, ℥iv. Mix and pass it through a sieve. *Dose*—℥i, in a little cold water. An equal amount of Cream of Tartar added, is of great advantage in febrile diseases, for obstructions of the nose and head, for flatulence and swelling of the stomach, as well as an efficient hydragogue-cathartic for any dropsical effusions. It may be given in free full doses, or divided and given twice or thrice daily. It is also valuable for constipation of the bowels. If, however, there be too much acidity in the stomach, the Cream of Tartar may be omitted, and the Bi-carbonate of Potassa, Grs. vi to x, may be added for one or two doses.

For an infusion of this powder, ℥iii, in a tea-cup of boiling water. In thirty minutes strain, and give in whole or divided doses.

Confectio Senna—Confection of Senna. Senna, ℥viii; Figs, lb. i; Tamarinds prepared in pulp, lb. ss; Prunes, lb. ss; Coriander, ℥iv; Liquorice, bruised, ℥iij; Sugar, lb. iiss; Water, Oiii. The Senna to be powdered with the Coriander, and pass ten ounces through a sieve. Boil the water with the liquorice and figs, to one half; while hot, press out the liquor and strain through coarse linen, and evaporate this in a water-bath to fl℥xxiv. Add the sugar to form a syrup. Rub the pulp with the syrup, gradually adding the powder, until the whole is thoroughly mixed. *Dose*—℥i to ii.

Extractum Senna Fluidum—Fluid Extract of Senna. The Leaves of Senna, bruised, ℥xxxvi; Sugar, ℥xviii; Oil of Fennel, fl℥i; Compound Spirits of Ether, fl℥iss; Diluted Alcohol, Oiiiss. Add the alcohol to the Senna, and digest twenty-four hours; then put this in the perculator, and as the liquid is passing through, gradually add diluted alcohol until five quarts shall have passed. Reduce this by water-bath to eighteen ounces, and strain through linen. While warm, dissolve the sugar in it. Mix the oil with the ether, and mix this with the fluid-extract. *Dose*—fl℥i. This form of the Senna is well suited for children, though not very generally employed in this country.

CETRARIA ISLANDICA.

Iceland Moss.

History.—This plant is classed as a *Lichen.* It is found not only in Iceland and other parts within the Arctic circle, but in many places of the mountainous regions of Europe; and by some authors it is said to be found on the American continent. It grows in tufts, harsh and dry; tough and flexible when dry; about four inches in height; of chestnut-brown color, with occasional reddish spots, and sometimes tinged with green. When dry can be powdered. It absorbs its own weight in hot water. Has but little odor, and a bitter and slight astringent taste.

Iceland Moss as analyzed by Berzelius, contains saccharine matter, bitter principle, bi-tartrate of potassa, green wax, extractive, gum, fecula, and woody fibre.

PROP., &c.—Tonic and nutritive. The Iceland Lichen, or Iceland Moss, imparts its tonic powers from its bitter principle, which should be retained when employed as a tonic. When desired as a nutriment, much of the bitter principle may be removed by boiling in water, adding a little alkali (as the bi-carbonate of potassa), turning off and boiling again in fresh clear water.

Decoctum Cetraria—Decoction of Iceland Moss. Of the Moss, ℥v; Water, Oi. Boil a few minutes and strain. A few ounces of white sugar may be added if desired. *Dose*—fl℥ii to iv.

For phthisis and other affections of the lungs and bronchial vessels, and also for debility and emaciation induced by acute diseases, the following has been recommended by English authors: of the above decoction, fl℥iss; Diluted Sulphuric Acid, M. vi; Syrup of Poppies, ℥i.

CHONDRUS CRISPUS.

Carrageen, Irish Moss.

History.—Chondrus Crispus is common on the sea-shores of Europe, especially the coast of Ireland.

It belongs to the *Cryptogamia* division of plants. It consists of *fronds* of leaf-like appearance, varying in size from two to ten inches in length; flat, curled, cartilaginous, varying

in width; color reddish, and when long exposed, turns to a yellowish color; its taste is saltish, mucilaginous, and slightly bitter.

The *Chondrus Mamilosus* is another species that is frequently found mixed with the Irish Moss. It is rougher in appearance, and the expanded fronds divided into finer curled, crisped appearance.

PROP., &c.—Carrageen, or Irish Moss, is nutrive, demulcent, and alterative; and is chiefly composed of a mucilage forming a jelly, which some authors denominate *vegetable* jelly, but by Pareira called *carrageenin.* It also contains mucus, resin, fatty matter, and chlorides of sodium and magnesium.

It forms an excellent jelly for weak and debilitated patients; also for soreness and irritation of the stomach; for colds, coughs, tightness and tension of the chest. It is of value for children suffering from scrofula, rickets, enlarged glands, irritation of the kidneys, and dysentery and diarrhea.

Decoctum Chondrus—Decoction of Irish Moss. Moss, ℥ss; Water, Oiii. Add and let stand for half an hour, then boil for fifteen or twenty minutes. Strain through linen or muslin. This may be flavored with the essence of lemon, and drank *ad libitum.* In this formula, milk may be used in place of water, if desired, making it more nourishing to the sick.

Gelatina Chondrus—Jelly of Irish Moss. Take of the decoction, Oii; White Sugar, lb. ss. Reduce by gentle boiling, until it becomes thick or gelatinized when cool. While warm it may be flavored with orange, lemon, &c., as desired.

Blanc Mange may be made as above, except that milk is used in place of water.

CINNAMOMUM ZEYLANICUM.

Cinnamon Bark.

History.—The *Cinnamomum Zeylanicum*, or Cinnamon tree, belongs to the natural order *Lauracea*, and a native of Ceylon, Cochin China, Sumatra, and some other places; cultivated in the Isle of France, the West Indies, Brazil, and some other parts of South America. It is a slender tree, seldom reaching forty feet.

Cinnamon is the inner bark of the cultivated tree. After it is removed from the limbs of the tree, it is scraped and arranged so as to dry in cylindrical or quill form. The acrimony of the recent bark is so great that it blisters the mouth when chewed. It is examined and divided into three sorts. In Ceylon, that which is too acrid and otherwise unfit for the market, is put into the still for obtaining oil.

There are four varieties of Cinnamon known in commerce—*Ceylon*, *Chinese*, *Cayenne*, and *Flat*. The *Ceylon* is considered the best; found in packages of long quill pieces of about two feet in length, often folded one within another, thin and brittle. The *flat* Cinnamon is that taken from the large branches of the tree; thick and rough in appearance; less aromatic in taste and smell; somewhat astringent, and less valuable than the other kinds.

According to the analysis of Vauquelin, the bark contains volatile oil, tannic acid, mucilage, a coloring substance of a vegeto-animal nature, an acrid, woody fibre. Other chemists have found it to contain also bitter resin, fecula, and caryophylline. The active properties of the bark are ascribed to its volatile oil and bitter resin. The bark yields its properties to water, alcohol and ether.

PROP., &c.—Stimulant, excitant, aromatic, and slightly astringent. Although Cinnamon is seldom employed alone, or simply to obtain its own action, its infusion, and the oil triturated or dropped on sugar, is often an acceptable and useful stimulant for the stomach, containing an undue amount of phlegm or mucus, by increasing the functions of that organ. Indicated in several forms of dyspepsia. In some cases of debility of the alimentary canal, attended with diarrhea, it may be used to good advantage.

The powder in substance. *Dose*—Grs. x to xxv.

Aqua Cinnamomum—Cinnamon Water. Oil of Cinnamon, fl℥i; Carbonate of Magnesia, ℥ii; distilled or pure soft Water, Oiii. In the mortar, triturate or rub the oil and magnesia well together, gradually adding the water until thoroughly mixed, and filter through paper. *Dose*—fl℥ii to viii.

This is a convenient form to flavor the taste and smell of unpleasant medicines.

Oleum Cinnamomi—Oil of Cinnamon. Most of the oil in the markets is obtained in Ceylon by the common process of distillation, after the bark has been macerated in sea-water for a day or two. Its color varies, the best being of a golden-yellow, while that less valuable is reddish. The best oil is heavier than water, having a sweetish, hot, biting taste, with the odor of the bark. *Dose*—Gtts. i to v. Mixed or triturated with sugar or mucilage.

Spiritus Cinnamomi—Spirit of Cinnamon. Oil of Cinnamon, fl℥ii; Proof Spirits, Cong. iss. Agitate until dissolved. *Dose*—fl℥i.

Essentia Cinnamomi—Essence of Cinnamon. Oil, fl℥i; Rectified Spirits, fl℥x. Dissolve. *Dose*—Gtts. x to xx.

CINNAMOMUM CASSIA.

Cassia.

History.—The Cassia tree is cultivated in China and Java. Some writers believe that it also grows in Ceylon. Imported from China in boxes, tied in small bundles. This bark is coarser, thicker, and darker than the Cinnamon from Ceylon. Its sweetness and flavor is less, but equally pungent, and followed by a bitter taste. There is considerable of poor Cinnamon in the markets, but as it comes from China, Ceylon, or other places, it is advisable, in purchasing, to be governed by the description of the Ceylon bark.

PROP., &c.—The Cassia, or Chinese Cinnamon, is possessed of similar medical properties, and fulfilling the indications of the Ceylon Cinnamon, although some suppose it to possess more active astringent properties.

Oleum Cassia is the label frequently noticed in drug stores, but whether it is the Chinese oil, or the Ceylon oil, probably makes but little difference.

COCCULUS PALMATUS.

Calumba, Calumbo.

History.—A plant found in Africa, along the coast of Mozambique and Oibo. The roots, *radix calumba*, are officinal, which, when collected, are cut into transverse circular pieces, varying from one half to one inch thick, and one to three inches in diameter. The centre of these pieces are concave on both sides, by the shrinking of the spongy centre, and of greenish-yellow color. The outer covering, or cuticle, is olive-brown color and wrinkled. Containing considerable starch, it is liable to be worm-eaten. The best pieces are solid and heavy.

Calumba contains starch, about one-third its weight; yellow ozatized matter, bitter yellow principle, traces of volatile oil, woody fibre, salts, consisting of basses of lime and potassa-oxide of iron, and silex. A newly crystallized principle, *Calumbin*, has been procured by digesting the powdered root in ether, filtering and evaporating. The root has a slight aromatic odor and purely bitter taste.

PROP., &c.—Tonic. It has been known to the profession since 1685. To give tone to the system in low and continued fevers, and for debilitated conditions of the digestive organs, the Calumbo has long been esteemed as a valuable agent. Dr.

Denman has praised its use in puerperal fevers, and combined with rhubarb and sulphate of potassa, as extremely useful in the mesenteric affections of infancy and childhood. It stands among the best of tonics.

Infusum Calumbo—Infusion of Calumbo. Of the Root, bruised, ℥v; boiling Water, Oi. Let stand two hours, and strain. *Dose*—fl℥ss to i.

The *cold infusion* can be prepared by adding cold in place of boiling water, allowing it to stand twenty-four hours. In this mode the bitter principle is extracted with the starch, and hence thought to be the best of the two forms of preparation. *Dose* as above.

Tinctura Calumbo—Tincture of Calumbo. Of the powdered Root, ℥iss; Alcohol, Oi. Digest twelve days and filter. *Dose*—fl℥i to ii. The tincture is appropriate in the weakened conditions of the stomach, induced by febrile diseases, indigestion, ardent spirits; also to relieve attacks of mania potu.
general debility; and for inebriates, a good substitute for

COLCHICUM AUTUMNALE.

Meadow Saffron.

History.—This plant is found in the meadows and in many parts of Southern Europe. Its *root* or *bulb* (cormus) has the appearance of some of the tulips. Its leaves are lanceolate, and deep green color. Its flowers are tubular form; when kept from the light, perfectly white, with appearance of wax; but growing in the open field, its flowers are lilac and pale purple. It was known to Dioscorides and other early medical writers. It being poisonous to dogs, the Dutch call it *hundus hoden.* The Swiss peasants tie its bulb (cormi) round the necks of their children as amulets.

The Colchicum seeds (semina) are employed in medicine; of dark brown appearance, somewhat resembling the black mustard and turnip seeds.

Prop., &c.—Narcotic, cathartic, diuretic, poisonous. Thomson, one of the best English authors on Materia Medica, relates: "Alexander Trallianus, a Greek physician who lived in the sixth century, first recommended it for gout," and for this disease it has been esteemed a useful agent up to this time, especially in Europe.

In full doses, its *primary* action is cathartic, exciting the liver and its ducts, causing free bilious discharges. Its *secondary* effects are to allay febrile action, and to lessen pain. Not only in gout, but for painful rheumatic attacks of the ligaments

of the joints, it was held as a specific by some of the earlier writers. In full doses repeated once or twice, it becomes a drastic cathartic, inducing great depression. In over-doses it exhibits poisonous symptoms, lips purple, tongue pale and cold, constant vomiting, and not always, but generally, purging.

As a *diuretic*, it is said to act in the same manner as (the stomach separates the volatile oil) in the cubebs, it separates the *colchicia* from the Colchicum, and the former passes into the circulation, and stimulates the kidneys. The root (corni) and the seeds (semina) are both employed, having about the same powers of action. Extensively used in Europe, considerably by the Old School in this country, but seldom by Eclectic physicians.

Pulvis Colchici—Powdered Colchicum Root, Grs. v to viij.

Tinctura Colchi—Tincture of Colchicum. Of the Seeds, bruised, ℥v; Alcohol, Oii. Digest twelve days, and filter. *Dose*—fl℥ss to ii.

Tinctura Colchici Compositum—Compound Tincture of Colchicum. Of the Seeds (or Root), ℥iij; Aromatic Spirits of Ammonia, Oii. Macerate fourteen days, and strain. *Dose*—Gtts. x to xx.

Vinum Colchicum—Wine of Colchicum. Of the Seeds, bruised, ℥ii; Sherry Wine, Oi. Macerate ten days, and filter. *Dose*—fl℥ss to i.

COLOCYNTHIS.

Colycynth, Bitter Cucumber.

An annual plant, with a running vine, found in Japan, Turkey, Cape of Good Hope, and other parts of the world. Its fruit (pepo) is employed, which has the appearance of a middling-sized Orange. These are generally found in the markets, *peeled*, having the yellow covering taken off. They contain a pulp of a light or whitish-cream color; when dry, light and porous, divided into cells, containing many whitish seeds. Some are dark or brownish color; all have an intensely bitter taste, and nauseous.

PROP., &c.—Hydragogue-cathartic. The Colocynth has been known for many centuries as an efficient purgative. It has been employed for dropsy, constipation of the bowels, amenorrhea, chlorosis, and for worms. For its drastic power of action, it is not admissable when there is much local inflammation of abdominal viscera. In full doses, it frequently gripes when operating; and over-doses, bloody stools, inflammation of the colon, and sometimes serious results. For these reasons, it is

generally administered in combination with other agents. The extract in pills is recommended as the most efficient for constipation.

Extractum Colocynthis—Extract of Colocynth. Of the fruit, cut in pieces, ℥x; Pure Water, Cong. ii. Boil gently for one hour. Strain while hot, and by gentle heat reduce to a proper consistence, on cooling. *Dose*—Grs. v to xx.

Extractum Colocynthis Compositum—Compound Extract of Colocynth. Of the fruit, bruised, ℥vi; Diluted Alcohol, Cong. i. Digest in a warm place for six days, and strain. To this fluid add Hepatic or Soccotrine Aloes, powdered, ℥xii; Scammony, powdered, ℥iv; Castile Soap, ℥iij. Mix the above well together, and gently evaporate, so that when cold, can be powdered. Before the evaporation is completed, add powdered Cardamon Seeds, ℥i. This form is not only convenient for compounding with other agents, but of itself makes a valuable purgative in many forms of disease. In pills, it answers for the *Colocynthis Pilula.*

Emena Colocynthis—Clyster of Colocynth. Extract of Colocynth, ℈ii; Castile Soap, ℥ss; Warm Water, Oi. Soft, or the common washing soap may be used. A good enema for constipation of the bowels.

Colocynthis—A valuable form for constipation of the bowels and bilious colic. *Dose*—Gr. $\frac{1}{8}$ to i, triturated with ten grains of sugar.

CONVOLVULUS SCAMMONIA.

Scammony.

History.—Scammony is the concrete juice of the Convolvulus Scammonia, a beautiful climbing plant found in Syria, and belonging to the natural order Convolvulacea. It was noticed in the earliest records of medicine.

In the medical markets, it is known as, first—*Virgin Scammony*, generally found in irregular masses, friable, and breaking with a regular, smooth, faintly-shining fracture. It has a peculiar odor, similar to ewe-milk cheese. The stronger this odor, the better the Scammony. Its taste is bitterish and slightly acrid. The color is dark gray. If good, it lathers or turns to a dirty white when rubbed with a moist finger.

Second quality—This is heavier than the first variety, its fracture duller, and color grayish. The best of this resembles the virgin Scammony in other respects. It has been adulterated with flour and chalk.

Third quality—This is inferior to the first two kinds, and most often seen in the drug stores, in flat, hard pieces, dark

brown or grayish, mottled with whitish specks. It often contains chalk.

Good Scammony forms a milky, emulsive solution when triturated with water, which, on standing, lets fall a portion of insoluble resin. It is chiefly composed of resin, with small proportions of gum and extractive matter.

PROP., &c.—Cathartic. It is drastic in its action, depending chiefly upon its large proportion of resin, and in over-doses liable to produce inflammation of the bowels. It has been employed in hypochondriacal cases, and for removing the scybala or balls of feces that sometimes lodge in the colon. The Old School frequently combined it with calomel and sulphate of potassa, for worms. *Dose*—Grs. v to xv.

FENICULUM DULCE.

Fennel.

History.—Fennel seeds are obtained from the above-named plant, found in Portugal, Italy, and other parts of Europe. The seeds are officinal, and contain a volatile oil, upon which depends its medicinal powers.

Feniculum Vulgare, or common Fennel, is another species of this genus, the seeds of which yield a volatile oil that is stimulant and aromatic. Seldom employed.

PROP., &c.—The seeds of sweet Fennel are aromatic and stimulant. Sometimes combined with articles that are unpleasant to the taste and smell. The oil is also employed, dropped on sugar, or combined in pills and mixtures. *Dose* of the oil, ten to twenty drops.

GAMBOGIA.

Gamboge.

History.—There are known to be two species of the Gamboge tree—the *Gambogia Siamensis*, which grows in Siam, and the *Gambogia Zeylonica*, found in Ceylon. At the proper season, both of these trees yield a yellowish, milky juice, that soon hardens when exposed to the air. It is a gum-resinous exudation.

The Siam Gamboge is found in the shops for general use. It is obtained by taking off a small portion of the outer bark, when the juice, which flows freely is collected, and soon

hardens. The best article is said to be obtained by merely breaking the leaves of the tree, allowing the juice to fall into suitable vessels. It is imported in three different forms—*pipe*, *lump*, and *coarse* Gamboge.

Pipe Gamboge is in cylindrical form, of one to two inches in diameter, often tinged with green. It is very brittle, breaking with a smooth, glistening, brownish, or deep orange color; and its powder is bright yellow. It has no odor, very little taste at first, but in a short time imparts some acrid dryness to the throat. When triturated with water, it forms a turbid, bright yellow solution, which slightly reddens the tincture of litmus. Alcohol dissolves nine parts in ten of Gamboge, forming a deep orange colored tincture.

According to the analysis of Dr. Christison, Gamboge contains in one hundred parts—Resin, 74.2; soluble gum, 21.8; moisture, 4.8.

Lump Gamboge is found in irregular masses, sometimes containing fragments of wood. It is less brittle than pipe Gamboge, contains air-cells, and exhibits a splintery, dull fracture. This kind is most used in this country, although inferior to the first.

PROP., &c.—Gamboge is powerfully drastic and hydragogue-cathartic. In over-doses, it has been known to produce large watery discharges, severe griping, hard vomiting, intense pain, sinking pulse, cold extremities, syncope, and death—acting as an acrid poison. Owing to its great efficiency, even in small doses, it has been much resorted to by the profession, and is a leading article in most of the pills made for public purging and plunder of pockets. Because of its powerful action, it should always be combined with milder articles, as Leptandrin, Rhubarb, soap, &c.

In dropsical diseases, Gamboge should be combined with Eupatorin, sulphate of potassa, bi-tartrate of potassa, to modify and insure its action upon the kidneys and cutaneous surface. In watery effusions upon the brain, the modified action of Gamboge is highly recommended.

For obstinate constipation, it is quite reliable, if given in moderate doses, repeated. It has formerly had some reputation for removing worms from the alimentary canal.

The *resin* of Gamboge, obtained by evaporating its ethereal tincture, is occasionally used by the profession. It is also called *Gambogic acid.*

Pilula Gambogia Compositum—Compound Pills of Gamboge. Gamboge, powdered, ℥i; Aloes, powdered, ℥iss; Ginger, powdered, ℥ss; Castile Soap, ℥ii; Syrup sufficient to form in pill-mass. Divide into three-grain pills. *Dose*—Three to four, repeating if necessary.

GENTIANA LUTEA.

Gentian.

History.—This plant is obtained in southern parts of Europe. It is tall, erect, bearing large, ovate leaves, and large yellow flowers. The root, which is officinal, is large, spindle-shaped, somewhat branched. When dry, the epidermis is of dark brown color, and wrinkled; internally, a dark yellowish color. As found in the shops, they are broken in pieces of a few inches in length, and from one-fourth to three-fourths, of an inch thick.

The plant is said to have received its name from Gentius, King of Illyria, reigning about a century and a half before the Christian era. Other species have been noticed, having similar appearance to the above.

PROP., &c.—Tonic. Although Gentian is ranked among the simple bitter tonics, large doses, and even small doses, on susceptible individuals, have been known to excite vomiting, to increase the pulse, and to cause pain in the gastric region. For this reason, Gentian should be exhibited in moderate doses. It has been found to contain a bitter principle, a slight odorous principle, a substance resembling bird-lime, green fixed oil, a free acid, uncrystallizable sugar, gum, yellow coloring matter, and lignin. Owing to the sugar, the infusion soon ferments and spoils.

Gentian is specially indicated in those cases of indigestion where there is absence of pain and local irritation of the digestive organs, and where there is too much phlegm or mucus adhering to the walls of the stomach. In small doses, it is sometimes available in convalescence of febrile diseases.

It has also very marked anti-periodic powers, which makes a useful adjunct in the treatment of intermittent fevers. In former years, it has been considered a useful anthelmintic. In all cases, the dose should be small at first, not only to obtain its good effects, but to avoid irritation of the stomach. *Dose* of powder, Grs. v to xv.

Infusum Gentiana Compositum—Compound Infusion of Gentian. Gentian Root, bruised, ℥iv; Dried Orange-peel, bruised, ℥i; Coriander Seeds, ℥i; Diluted Alcohol, fl℥iv; Water, Oi. First add the spirits, and let stand a few hours; then pour on the water; in twelve hours after, strain for use. This infusion readily combines with salts, alkalies, and acids; covers the taste of unpleasant doses, and a useful tonic for general debility.

Tinctura Gentiana Compositum—Compound Tincture of Gentian. Gentian Root, bruised, ℥iiss; Dried Orange-peel, bruised,

℥x; Cardamon, bruised, ℥v; Diluted Alcohol, Oii. This tincture is similar to the celebrated *Stoughton's Bitters*, and generally used at bars of hotels; frequently used by hard drinkers to prolong the stimulating effects of the dram. It is one of the best agents in the after-treatment of chills and fever, to prevent the return of the paroxysms. *Dose*—fl℥i to ii, in a wine-glass of water.

Vinum Gentiana Compositum—Compound Wine of Gentian. Gentian Root, bruised, ℥ss; Peruvian bark, powdered, ℥i; Dried Orange-peel, bruised, ℥i; Canella, powdered, ℥ii; Diluted Alcohol, fl℥iv; Sherry Wine, Oii. Digest fifteen days, and filter. *Dose*—fl℥iv to fl℥i. This is more agreeable than the tincture, for which it is a good substitute.

Extract of Gentian—This is prepared in the ordinary mode of obtaining extracts, and becomes convenient in pill formulæ, for purposes indicated. *Dose*—Grs. vi to xv.

GLYCYRRHIZA GLABRA

Liquorice-root.

History.—This plant is a native of Syria, and cultivated in Spain and other places. Its stem rises three or four feet; and after three years' growth, its long, woody roots are collected for the markets. These roots vary in thickness and length; grayish externally, light yellow within; odor sickly, taste sweetish. There are several species of the plant. Besides the various principles contained in Liquorice-root, it contains *glycyrrhizin*, which is yellow, transparent, and brittle.

Prop., &c.—Demulcent and nutritive. The substance of the root is seldom employed alone, whilst its powder is a useful adjunct in the formation of pills, both to aid in forming the mass, and its mucilage modifies the action of more powerful agents. Its decoction is occasionally resorted to as a vehicle for other medicines. ℞—Glycyrrhiza Radix, ℥i; Aqua Font., Oi. Boil ten minutes and strain.

Extractum Glycyrrhiza—Extract of Liquorice. Liquorice Root, bruised, lb. iss; Water, Cong. ii. Reduce by boiling to one gallon, and strain while hot; then by gentle heat reduce to a proper consistence.

Most of the extract comes from Spain, and in different sized rolls, covered with Laurel-leaves. Some of it is of coarse, inferior character, that should not be used. None but the *refined* or pure extract should be employed, which is a fine consistence, glossy black, sweetish taste, and completely soluble in water.

Trochisci Glycyrrhiza—Liquorice Lozenges. Extract of Liquorice, ℥iii; Gum Arabic, powdered, ℥iii; Sugar, lb. ss. Add sufficient boiling water to make a paste to form lozenges.

Wistar's Cough Lozenges—Liquorice Extract, Gum Arabic, and Sugar, all powdered, five ounces each; Opium, powdered, ℥ii. Mix these thoroughly, and add oil of Anise, fl℥i, then add sufficient warm water to form a paste to make into lozenges of six grains each. A soothing, emollient, and anodyne for coughs of a troublesome character.

ISONANDRA GUTTA.

Gutta Percha Tree.

History.—A native tree of Singapore. It is tall and beautiful; and in proper seasons it is cut down, when from it is obtained large quantities of milky juice that soon hardens by exposure to the air, which is whitish or of a dirty pinkish color. It is softened and purified by immersing it in hot water. The oil or spirits of turpentine is the best known solvent for Gutta Percha.

Its great value is found in many of the arts and manufactures. It has been brought to the aid of surgery by softening it in hot water, then shaping it to the parts injured to act as splints. For such purposes it has been held in solution by chloroform, which evaporates, leaving the Gutta Percha to harden and hold the parts in position. When it has been broken or worn out, the two evenly cut edges may be united by holding them adjusted in hot water.

MELALEUCA CAJUPUTI.

Cajuput Tree.

History.—A tree of considerable size, found in the Malucca Islands. Because of its white wood, a writer by the name of Rumphius, called it *arbor alba.* It is only the oil that is used for medicinal purposes, which is obtained from its deep green leaves by careful process of distillation. The oil of Cajuput is limpid, and green color, resembling the solution of chloride of copper; it has the aromatic odor of combined camphor, rosemary, and cardamon; its taste is camphorous, and at first

slightly pungent, followed by a coolness similar to that of the oil of peppermint. The oil is of high price, and generally scarce in market. It is said to be sometimes adulterated with a solution of the oxide of copper, and when so, the addition of a solution of the ferrocyanide of potassium forms a red precipitate.

PROP., &c.—Stimulant, anti-spasmodic, and sudorific. This oil has been administered for colic, paralysis, spasms of the stomach, epilepsy, hysteria, asthma, and as a stimulating sudorific for chronic rheumatism. It is valuable for bathing in rheumatism and stiffened joints. Its aromatic and agreeable odor makes it useful in compound liniments. *Dose*—Gtts. ii to viii, on sugar or in syrup.

MOMORDICA ELATERIUM.

Squirting Cucumber.

History.—This plant is a native of the southern part of Europe, and cultivated in England. From its fruit is obtained the *Elaterium* of the drug stores. The fruit is about one inch and a half long, an inch thick, oval, resembling a small cucumber. It was employed by Hypocrates, Dioscorides, and other ancient physicians. The virtues of *Elaterium* depends somewhat upon the manner in which it is obtained from the fruit, as well as upon the extent of its adulteration, which is effected by the addition of starch and chalk. There are two kinds in the markets, *English* and *Maltese*, and the latter most likely to be impure.

The Elaterium is not so freely used in this country as in Europe ; and English authors devote a good deal of time and space to its consideration. The best English Elaterium is in thin, flat cakes, broken in pieces, of pale green color ; a bitter and slightly acrid taste, which remains in the mouth for some time. The Maltese article is often of a dark brown or olive color.

PROP., &c.—A diuretic, hydragogue cathartic. It is one of the most active in the whole list of the Materia Medica. The diseases in which it is most relied upon are dropsy, local and general, cerebral affections, constipation and gout. Its special action seems to be upon the serous tissues, inducing large amounts of watery discharges from the bowels. In over-doses it has been known to produce pain, nausea, debility, falling of the pulse, cyncope, and death ; hence great care should be observed in its exhibitions. Some authors intimate that in dropsy, whilst its action calls off the watery effusion, its effect is also to arrest the accumulation. Thomson, one of the best English

authors, says: "I have found it the best means of reducing the circulating mass in hypertrophy of the heart." He further says: "I am much in the habit of administering it in the form of tincture, in which its action can be more controlled by the extent of the dose than when it is administered in substance; if the tincture be made with Elaterium, Gr. i; Alcohol, fℨii, when the dose may be twelve drops, gradually augmented."

The *dose* of Elaterium is one-*eighth* to one-*half* of a grain. Usually in form of pills, combined with extract of Gentian, &c.

MYRRHA.

Myrrh.

History.—A small tree or shrub, found near Gison, on the borders of Arabia Felix. It is noticed in the earliest records of the world: "And they lifted up their eyes and looked, and behold a company of Ishmaelites came from Gilead with their camels, bearing spicerie, and balm, and myrrh, going to carry it down to Egypt."—Genesis, chap. xxvi., v. 26.

In the earlier ages, Myrrh was used for burning incense upon the altars of worship, and in the temple of Vulcan, near Memphis. It was used as a medical agent by the earliest physicians, and in all ages to the present day.

Myrrh is a gum-resinous exudation which oozes out from the bark of the tree, that soon hardens in dry weather, and collected by the natives. Good Myrrh is found in irregular pieces, seldom larger than a walnut, varying to small particles; it is of dull reddish or brown color externally, easily powdered when dry; its taste is bitterish and slightly aromatic; odor peculiar and rather agreeable. Inferior Myrrh is often found in our markets, in large pieces, dark brown color, and unpleasant odor; also bark and small stones are mixed with it. Many druggists have used the poor and cheap article for making compound tincture of Myrrh, the Number Six of Dr. S. Thomson.

Myrrh has been divided into three classes—1st. The Turkey Myrrh, which is the best quality, in pieces sometimes larger than a walnut, of reddish-brown color, pleasant odor, and free from impurities. 2d. That of small tears and pieces. 3d. That which comes in various sized pieces, dark brown, blackish color, unpleasant odor, and often mixed with other gums and impurities.

According to Pelletier, Myrrh is composed of *resin* mixed with volatile oil, 34–68; *gum* and traces of *salts*, 65–32 in one hundred parts. It is partially soluble in water, forming with it an opaque yellow solution. Alcohol takes up the

portion insoluble in water, and forms a tincture, which water renders opaque and whitish. It is soluble in the alkalies; when it is distilled, a heavy fixed oil is procured.

PROP., &c.—Myrrh is stimulant, tonic, slightly diaphoretic, and antiseptic. It stimulates the digestive organs, increases the heart's action, and acts gently on the mucus surface of the lungs and uterus; hence its adaptation in chronic catarrh and pulmonary affections, and to aid in restoring the menstrual secretions; and recommended in pale, leuco-phlegmatic, languid girls.

Its mild tonic and probably astringent effects have been observed in checking the puriform expectoration of pulmonary diseases, as well as in mucus discharges from the bowels. Large doses are not indicated; for its action is generally slow, and requires several day's continuance. It is often combined with other tonics.

Externally is employed with good effect. The powder is used upon foul ulcers, to absorb and change unhealthy discharges, and to aid healthy granulation. It is also a valuable dentifrice for sore and spongy gums; useful in compound tooth-powders. The tincture makes a valuable wash for sore mouth, and a good detergent stimulant applied to indolent ulcers. *Dose* of powdered Myrrh, Grs. x to ʒi.

Tinctura Myrrha—Tincture of Myrrh. Myrrh, coarse powdered, ʒiii; Alcohol, Oii. Digest ten days. *Dose*—Gtts. x to flʒi.

Tinctura Myrrha Compositum—Compound Tincture of Myrrh. Myrrh, coarse powdered, lb.i; Capsicum, ʒi; Alcohol, Cong. i. Digest ten days and filter. To this original formula of Samuel Thomson, should be added—Powdered Golden Seal, ʒii; Peach Kernels, bruised, ʒii. This preparation is valuable for atonic forms of dyspepsia, rheumatism, sick-headache, neuralgia, colds and chilliness, colic, wounds, cuts and bruises. The Materia Medica does not furnish a better application for fresh wounds, to prevent inflammation and suppuration, or more readily aiding healthy granulations. Although it produces a momentary smarting, it arrests many cases of bleeding if applied directly to the injured parts. *Dose*—Gtts. xx to flʒi, in a little warm or cold water.

MYRISTICA FRAGRANS.

Nutmeg Tree.

History.—A small native tree of the Malucca Islands; cultivated in Java, Bengal, Cayenne, and the West India Islands. This tree yields the nutmegs of the shops. There are two

kinds of this fruit in commerce—the *round* or *cultivated;* the *long* or *wild* Nutmegs. The first is nearly round, the second is oblong and more pointed, less aromatic, and also inferior to the first. The odor is of a strong agreeable aromatic; its taste oily, hot, and slightly acrid. Externally, marked with shallow furrows, and of ashy-gray color; internally, mottled with dark and light gray and reddish colors. Nutmegs are sometimes found to have been attacked by insects, which lessens their weight and qualities; the best have a solid or heavy feel.

Mace is one of the parts of the fruit of the tree. It is the portion which directly envelopes the Nutmeg, between it and the external covering of the whole. There are two kinds obtained from the *cultivated* and from the *wild* trees. The best Mace (*Macis*) is from the cultivated tree, or the true Nutmeg. It is in flattened irregular pieces, of golden-yellow color; its odor and taste is similar to the Nutmeg. The poor or inferior kind of Mace is from the *wild* tree. It has little or none of the aromatic properties, and is of dark red color. The properties and therapeutical effects of good Mace, are similar to the Nutmeg.

PROP., &c.—Aromatic, mildly tonic and astringent, narcotic. Nutmegs and Mace are both employed for diarrhea, and for imparting their pleasant flavor to disagreeable medicines. Their principal use is in flavoring food for the table; and sometimes in warm stimulating drinks. Large doses of Nutmeg have produced stupor, delirium, and insensibility. The *dose*, powdered, is Grs. v. to x.

Oleum Myristica—Oil of Nutmegs. It is sometimes colorless, or tinged with yellow; has the taste and odor of Nutmegs. It is seldom used in medicine, except occasionally in its officinal form of *spiritus Myristica*, which is a simple solution of the oil with diluted alcohol; the *dose* of which is fℨii to iv. The oil has been used externally for neuralgic and rheumatic affections; also in perfumery. *Dose* of oil, M. i to iv, on sugar.

OLEUM OLIVÆ.

Olive Oil, Sweet Oil.

History.—A small tree, belonging to the natural order Oleacea, and the Olea Europea of some authors. It is a native of Asia, naturalized and cultivated in Spain, Italy and France. There are several varieties of the tree, all yielding this well-known bland and fixed oil. It was noticed by the earliest writers of history, and so much esteemed in past ages, that it

became an emblem of peace; hence the traditionary phrase—"the Olive branch;" the "Olive branch of Peace." The fruit of this tree is found occasionally in the stores of importers of foreign fruits, known as Olives. They are picked before fully ripe, and preserved for use; the French and Spanish Olives.

It is from these Olives that the Olive oil is obtained, by pressing the pulp of the fruit in a press. It is a fixed oil; has a soft, bland taste; very little odor; when fresh, has a pale or straw-yellow color; if much exposed to light and air, assumes a darker color; some of the best Olive oil has a greenish yellow tinge. In cool weather it concretes or partially congeals, showing a light thick appearance. In one hundred parts of the oil, there is seventy-two of oleine, and twenty-eight of mangerine. It is sometimes adulterated with cheap oils, lard, and oil of Poppies. The best kinds are said to be Florence, Genoa, and Lucca oils, brought in small flasks, and in jars holding several gallons. Some of the inferior and cheaper kinds come from Spain and Sicily; employed for oiling machinery, and for making soaps. *Glycerine* is also obtained from this oil.

PROP., &c.—Demulcent and laxative. When taken into the stomach, it has but little effect until it passes into the intestinal canal, when it softens the feces, lubricates the mucus surface, and aids the peristaltic motion. As a demulcent, it shields the stomach and canal from foreign and poisonous substances, as copper, lead, and arsenic, and somewhat prevents these agents from being taken up by the absorbent vessels. In this view, it may be employed as an antidote for all poisonous agents taken into the stomach by accident or design. It has been employed to allay the cough of pulmonary and bronchial affections.

Olive oil is employed in warm water as a laxative enema, for constipation of the bowels, for dysentery, and also to remove the small worms that frequently infest the rectum. It is used to form liniments, cerates, plasters; also upon instruments in surgical operations. The best Olive oil is considerably used for preparing salads for eating. The poorer kinds are known as Sweet oil. *Dose* of Olive oil, fℨi.

OLEUM TIGLII.

Croton Oil.

History.—This oil is obtained from the seeds of the *Croton Tiglium*, a middle-sized tree found in India, Ceylon, Malucca Islands, and Cochin China. The wood, bark and leaves have

active properties; hydragogue-cathartic. The wood has been regarded in Europe as an infallible remedy for dropsy. The oil is pressed from the seeds. It is of a bright straw color, and sometimes of a reddish-brown; has a faint, and a hot, extremely acrid taste, which remains long upon the palate and fauces, producing a burning sensation, and a feeling of constriction in those parts. This oil is sometimes adulterated with Olive and Castor oil, and it most readily assimilates with the latter.

PROP., &c.—An active drastic cathartic, active irritant, and a poison. This oil is seldom used as an internal remedy, although there are several diseases for which it has been employed; for constipation of the bowels and bilious colic. In dropsy, paralysis and hydrocephalus, its irritating action on the alimentary canal has been found serviceable. The smallness of the dose makes it available combined with other cathartics, if well incorporated so as to insure its equalized action. For this reason it has been conjoined with the compound extract of Podophyllum. It sometimes occurs that the physician finds his patient ejecting almost every purgative at hand, when this oil will be found not at all nauseating, and if well triturated with a teaspoonful of some mucilage, simple syrup, syrup of Tolu, Ginger, &c., or even molasses, that it may not much irritate the stomach before it passes into the duodenum, thus insuring its cathartic effects. In emergencies it may be given in one drop put on a soft pill composed of a crumb of bread. Well mixed in almost any mucilage is best. Some authors think this oil very useful and easily managed with *caution;* others, that it is unreliable, sometimes very efficient, and at other times showing but little effect. Most physicians view it as a doubtful remedy. The oil is officinal.

Externally it is in considerable favor as a counter-irritant, for deep-seated inflammation of the thorax and abdomen, of the kidneys, and rheumatic affection of the intercostal muscles; also for glandular swellings and neuralgia. When applied to the surface, it produces pustular eruption, and may be continued so as to break down the cuticle. It sometimes fails to produce this action, either from the insusceptibility of some patients, or from an inferior or adulterated oil. To modify its action it may be mixed with equal parts of sweet or other fixed oil. It may be applied with a small piece of muslin or a feather. For internal use, one drop of Croton oil has been dissolved in half a drachm of alcohol or brandy. For a liniment, Croton Oil, fl℥i; Spirits of Turpentine, fl℥vii.

Serious cases have occurred where this oil has been used for sweet oil, in mistake, and in some instances death has ensued. For over-doses, any convenient emulsion should be given;

drinks of Slippery-elm water, gruel, gum Arabic water, &c., to protect the walls of the stomach and bowels, followed by emetics; opium and astringents to check pain and diarrhea. When great debility follows, give ammonia and brandy.

ORNUS EUROPEA.

Manna.

History.—Manna is the concrete juice of the Ornus Europea (the Fraxinus Rotundifolia of Linneus), found in the south of Europe, Sicily, Mount Parnassus, and the loftiest mountains of Greece. It is a small, beautiful tree, belonging to the natural order Oleacea, and bears resemblance to the Ash trees. Two other species, the *O. rotundifolia* and the *O. excelsior*, also yield the best of Manna.

To obtain Manna, incisions are made into the bark of the trees; and it also exudes from the puncture of an insect, the *Tettigonia Orni.* As the juice flows out, it is nearly colorless, but as it concretes or hardens, it acquires a tinge of yellowish color. *Flake Manna* is the best kind in the markets, which comes in variable sized pieces, two to six inches long, one or two inches wide, and about half an inch thick; light and porous, color whitish yellow; ordo similar to honey; taste sweetish, followed by a slight acrid sensation.

Manna in sorts is an inferior quality of a mixed character, varying in size, quality and color. The best should be selected for use. It softens in the hand, melts at a temperature of 108, is soluble in three parts of water, and readily dissolves in boiling alcohol. It consists principally of a crystallizable sugar, and a bitter principle, upon which depend its purgative powers. Its sugar yields *Mannite*, which is of beautiful white crystalline appearance, of a slightly sweet taste, dissolving in water and hot alcohol.

PROP., &c.—A laxative or mild cathartic. Not so much used as in former ages. Senna, Manna, and Salts have been a standing formula for domestic practice for many years. The object of the Manna being to modify the action and taste of the other disagreeable agents. It is employed for children and delicate females, being a mild and not disagreeable laxative. *Dose* for adults, ℥i; for children, ℥i to iii, dissolved in milk or water.

PIMPINELLA ANISUM.

Anise.

A plant of about one foot in height, which is a native of Egypt and cultivated in several sections of southern Europe. It has been known to the profession for many centuries. Anise seeds are small, slightly compressed or flattened, and of a yellowish color, slightly tinged with green; they have an aromatic odor, and sweetish taste. The seeds are officinal, as well as the volatile oil, which is obtained by distillation. This oil is nearly colorless, having a slight tinge of yellow. It congeals in cool weather of about fifty degrees. By exposure to the air it thickens by a resinous formation. It consists of two volatile oils, one of which congeals sooner than the other.

PROP., &c.—Carminative and stimulant. It is employed for flatulency of children; for combining with other medicine to allay griping. It is one of the ingredients of Paregoric. *Dose*—Gtts. v to xv, dropped on sugar or mixed with syrup or mucilage.

Spiritus Anisi—Spirits of Anise. Oil of Anise, fℨiii; Alcohol, Cong. i. A convenient carminative for flatulency and pains of stomach and bowels. When sweetened, rather a pleasant stimulant. *Dose*—fℨi to v.

PTEROCARPUS SANTALINUS.

Red Sanders.

History.—A tree growing in Ceylon; its wood is of brownish-red color, hard and compact, having but little taste or smell. It is sometimes imported in billets of wood, though generally rasped or chipped in fine pieces. It yields all of its coloring matter to alcohol, and but little to water.

PROP., &c.—Supposed to have tonic properties. Its chief use is for coloring medicinal agents; sometimes for coloring water in the show-bottles of the windows of drug stores.

PTEROCARPUS ERINACEUS.

Kino Tree.

History.—This tree is found in the East Indies, growing forty to fifty feet high. From the cracks and incisions made in the tree, a juice flows out, which hardens with a dark blood-red color, of very brittle and shining pieces.

A portion of the Kino of the shops is said to be obtained from the *Eucalyptus Resinifera*, a plant found in Van Dieman's Land; also the inspissated juice of the *Nauclea Gambia*, an Indian plant. Some confusion may be noticed among English authors in reference to the source and qualities of Kino. It is asserted that all the varieties have similar properties. The *East India* Kino readily dissolves in alcohol, forming a claret-colored tincture, which is not resinous, nor rendered turbid by the addition of water. The *Botany Bay* Kino, when dissolved in alcohol, renders a deep brown tincture. In one hundred parts of Kino there is tannin, seventy-five; gum, twenty-four; insoluble matter, one

PROP., &c.—Astringent. Kino is one of the best astringents known to the profession, especially because it exerts but little if any other therapeutical effect upon the system. Its most frequent use is for diarrhea; and for this purpose the tincture should be added to the neutralizing mixture. In this way diarrhea can be controlled and cured in nine cases of every ten. The powdered Kino may be given internally for water-brash, and some forms of dyspepsia, depending upon a relaxed condition of the stomach; also to check the mucus and bloody discharges of dysentery. Externally, it is employed for ulcers; and the tincture may be used for a gargle for sore mouth; by injection for dysentery and leucorrhea. *Dose*—Grs. v to x.

Tinctura Kino—Tincture of Kino. Take of Kino, bruised, ℥ii; Alcohol, Oi. Digest a few days and filter. *Dose*—fl℥ii to iv.

Pulvis Kino Compositus—Compound Powder of Kino. Powdered Kino, Grs. xl; Powdered Opium, Grs. ii. Rub well in the mortar. For chronic and painful diarrhea. *Dose*—Grs. v.

CUBEBA OFFICINALIS.

Cubebs.

History.—A climbing shrub, growing in Java, wild and cultivated, yielding fruit that is collected before fully ripe, which constitutes the Cubebs of the shops. This fruit resembles black Pepper, only a little larger and lighter color, having less wrinkles, and having its small stems on pedicels attached to them. They have a fragrant, agreeable odor, and a pungent, aromatic, bitter taste.

Cubebs contain a volatile oil, resin, gum, extractive and salts, and a principle called *Cubebin* or *piperin*. Powdered Cubebs is of a dark brown color, said to be sometimes adulterated with powdered Pimenta.

PROP., &c.—Like many other agents, the action of Cubebs is not well understood. It is known to be an excitant, and to possess some diuretic powers; and I am convinced that it possesses astringent properties. Its chief use has been for gonorrhea; and I cannot account for its control over this disease, except that its secondary effects are to close up to a healthy condition the relaxed mucus surface; and there is no reason to suppose that a mere diuretic and stimulant can possibly do it; hence the first effect is to stimulate the mucus surface to throw off its unhealthy accumulation, and the second effect is to constringe the relaxed surface. In large doses, it is said to act as a purgative. Its diuretic action depends on the volatile oil, the odor of which is soon noticed in the urine. Some advise Cubebs for gonorrhea in its first, whilst others prefer it in the second stage. The powder is also recommended for mucus discharges of the kidneys and bladder; for gleet and leucorrhea.

The fresh powder is always desirable, as it deteriorates by keeping. One of its best exhibitions for gonorrhea, is by combining it with equal parts of cream of tartar. When the powder is used as a snuff, it is of value for removing obstructions in the nose and frontal sinus; for catarrh, colds, and pain in the head. *Dose*—Grs. x to ʒi; and some prefer it mixed with milk.

Oleum Cubeba—Oil of Cubebs. Obtained from the fruit by distillation. It is light color, tinged with green, lighter than water, and possesses the taste and smell of cubebs, for which it is often used as a substitute. In the treatment of gonorrhea, it may be combined with Copaiva, sweet spirits of nitre, turpentine, &c. *Dose*—Gtts. x, increasing.

The extract and tincture are occasionally employed; but the powder and oil are preferable.

PIPER NIGRUM.

Black Pepper.

History.—Black Pepper is the unripe dried fruit of a plant growing in East Indies, and cultivated in Sumatra, Java, the West Indies, and other places. The Piper Nigrum belongs to the natural order Piperacea. The fruit about the size of small peas, first green, then red, and black when ripe. Collected before ripe; so that, by drying, the outer covering becomes wrinkled and dark brown, having a pungent, biting taste, and aromatic.

White Pepper is the fruit collected when ripe, then steeped several days in water, and removing the outer coat, which gives it a whitish appearance—the *Piper Album.*

Black Pepper contains piperin, volatile oil, starch, malic and uric acids, with some resin. Its pungency and therapeutical action chiefly depends on its *oleo-resinous* principle.

Piper Longum—Long Pepper. A perennial shrub, and native of India. The fruit is cylindrical, about one inch long, firm, heavy, of dark gray color, pungent taste and aromatic odor, similar to the black Pepper. Not much used in this country.

Oil of black Pepper, although seldom used, is one of the most powerful of vegetable excitants. When applied to the surface, it reddens and inflames immediately. It is dangerous to the tongue. That which is usually sold as oil is but the fluid-extract of the Pepper.

PROP., &c.—Stimulant and tonic. Black Pepper has long been known to possess anti-periodic powers, for Celsus employed it for shortening the chill, and bringing on the hot stage of intermittent fever. Of late years, its use has increased, especially with the Eclectic profession, particularly combined with the Chinoidine pills—see Cinchona. A full dose of powdered Pepper has been often employed to arrest chills; but if it fails in this, the fever is likely to be more severe. It is related that over-doses act as an irritant poison. It is frequent that so much is taken on food as to produce an aching and burning sensation of the stomach, followed by a spreading glow over the system.

Although black Pepper is a good condiment for food, especially if much fat be eaten, and the stomach weak, there is often too much taken in this way. A healthy person should take but little of it. It is indicated in bitters, to restore the digestive powers.

As a topical agent, when ground, it is valuable to contract the relaxed and lengthened uvula, carefully applying so that it does not come in contact with tongue and fauces. The fluid-extract will answer this purpose. *Dose*—Grs. v to x.

The *confection* of black Pepper is seldom employed. The *ointment*, made by mixing the powder with lard, has been used for skin diseases.

Extractum Piperis Fluidum—Fluid-extract of black Pepper. Saturate half a pound of the powder in one pint of Ether, introduce it into a percolator, let the liquid pass through, gradually turn in half a pint more; then evaporate the ether by water-bath to twelve ounces; put it into a shallow vessel, to let the balance of the ether evaporate; then put the thick liquid in a piece of flannel or cloth, press out the liquid, which is to be used.

QUERCUS INFECTORIA.

Nut-galls.

History—The Quercus Infectoria is a species of the Oak, a small tree of Asia Minor. It was employed externally and internally by Hippocrates and other ancient physicians. These galls are the exuded juice of the tree, flowing out after the small stems and petioles of the leaves have been punctured by an insect, the *cynipis*, known as the Gall-fly. When the insect makes its puncture, it deposits a small egg, which is soon surrounded by the juice. After the gall has formed, it soon becomes hard; the egg enlarges, becomes hatched, and then eats its way out of the nut, leaving a small round hole.

The best Galls are those of Aleppo and Smyrna. They vary in size, from the large black Cherry to a Hickory-nut. They should be of a bluish-gray color, heavy, compact, brittle, and those without the holes of the insect the best. They yield all of their active matter to water, and a considerable portion to alcohol and ether. The analysis of Sir H. Davy exhibits in one hundred parts—25 per cent of tannin, 6.2 of gallic acid and extractive, 2.4 of mucilage and insoluble matter, 2.4 of carbonate of lime and saline matter, 63 of lignin, woody matter.

Prop., &c.—The Nut-gall is the most efficient astringent in the vegetable kingdom, owing to its large proportion of tannin. It is employed internally for checking chronic mucus discharges; for dysentery, diarrhea, and hemorrhage of the stomach. For intermittent fever and hemorrhage of the lungs, it is said to have some good effect, and if so, through the medium of the blood circulation, contracting the minute vessels.

Externally the powdered Gall is used upon indolent flabby ulcers, and in form of ointment for piles. The infusion is a valuable gargle for the relaxed uvula, for diptheria and other ulcerated and inflamed conditions of the mouth and throat; by injection it is reliable in checking the bloody discharges of dysentery, and very useful for leucorrhea.

The finely powdered Gall is preferred by some few authors for internal use; but this must be an error, for it is reasonable to suppose that the infusion most readily yields to digestive and absorbent functions. *Dose*—Grs. x to xv.

Infusum Gallæ—Infusion of Galls. Nut-Galls, bruised, ℥iv; Boiling Water, Oss. Digest a few hours. *Dose*—fl℥i to viij.

The infusion is a very simple and efficient form of administration, both internally and topically. It is obvious that if

long continued internally, constipation will follow. There are numerous agents with which it should not be combined, as the tincture of Cinchona, Opium, and lime-water; carbonate of potassa, acetate of lead, sulphates of copper and iron, and some other articles. It is administered as an antidote for overdoses of Tartar Emetic; and for Ipecac, Opium, and several of the poisonous vegetable agents. The infusion will cause precipitates to fall when added to the solution of iron, zinc, copper, lead, and several other metals.

Tinctura Gallæ—Tincture of Galls. Of Galls, bruised, ℥v; Diluted Alcohol, Oii. Digest ten days and filter. The tincture is used as a chemical test for other agents, and not so much given internally as the infusion; diluted with water, employed as a wash and garle. *Dose*—fl℥ss to i.

Unguentum Gallæ—Ointment of Galls. Galls, finely powdered, ℥ss; Lard, ℥iii. Used for piles, prolapsus ani, indolent ulcers, and some forms of skin diseases.

Compound Ointment of Galls is prepared by adding powdered Opium, to be employed in painful conditions where the astringent effects of the galls are indicated.

Acidum Tannicum—Tannic Acid. It is obtained mostly by adding ether to the bruised Nut-Galls, being introduced into a displacement apparatus. The tannic acid thus suspended in the ether, precipitates to the bottom, and afterwards washed with pure ether, and evaporated, which is a light yellow color, without odor, light, spongy, and having the crystalline appearance, with taste powerfully astringent.

Tannin received its name by the French, for its important part in the process of *tanning* leather. It solidifies and hardens the gelatine of skins of animals so as to resist moisture, making them fit for use. It is the *tannin* in the bark of the oak and hemlock trees, that becomes useful to the currier in tanning leather.

Tannic acid may be used for all the indications of the Nut-Galls, and much more preferable for its convenience and greater activity. Besides, it being fine powder, is often of good service in the treatment of chancres which are not deep-seated, destroying by its caustic action, and absorbing the virus discharged. *Dose*—Grs. i to x.

It may be used in form of pills, in solution for gargle and wash, and in form of ointment. The solution of ten grains to one ounce of water is a useful application in the treatment of chancres.

RHEUM.

Rhubarb.

History.—The native country for Rhubarb is Chinese Tartary. There are several species of the plant, which, it seems, are not well defined by botanists; and the *Rheum Palmatum* is thought to be the best officinal kind. It has been cultivated in England, producing an inferior root. It is also cultivated in France. The root (radix Rhei) has been designated with various commercial names—Turkey, Russian, Chinese, Canton, East Indian, English Rhubarb, &c.

Russian Rhubarb is considered superior to other descriptions, as its selection and control is effected by the Russian Government. It comes in irregular pieces, varying in size, oval, and sometimes flattened and angular surfaces. All of it has been bored, making a large hole either half or entirely through each piece, to test its qualities. Its color is reddish-white, and sometimes reddish veins extending through it. Each piece should feel compact and heavy in the hand. When broken, it fractures abrupt, although uneven, showing the veins. Its odor is aromatic and peculiar. When chewed, its taste is slightly bitter and astringent, giving a *gritty feel* to the teeth. When powdered, it presents a bright yellow or buff color. In this form it is frequently mixed with inferior Rhuburb, for this reason the powder should be purchased sparingly.

Turkey Rhubarb—This is but the best selected from the Russian, and commands the hightest price.

India Rhubarb—The most of this kind is imported from Canton, and frequently called the *Canton* or *Chinese Rhubarb.* These pieces of the root are generally oval, oblong, and sometimes a little flattened. Some of them have small holes through them to suspend them by small cords for drying, portions of which are sometimes found in the pieces. Sometimes small patches of the cortex or covering, are seen on the pieces, which have been omitted in the process of scraping. The color is yellow and reddish-yellow, dull, and often yellowish dust on the surface. Should have a heavy, firm feel in the hand, with odor and taste similar to the Russian article. Color of powder is orange yellow.

As there is much worthless Rhubarb found in the market, some of which is said to be the English and French growth, every physician and druggist should, if possible, be able to select for themselves, not depending on others. All that feels light in the hand, or is dark and spongy, should be rejected. The pieces should feel heavy and compact; when broken, should appear solid, of grayish appearance, mixed with brown

and yellowish colors; the best has the *gritty* feel when *chewed*, although this last evidence may not be found in good Rhubarb. Powdered Rhubarb is only to be judged by its uniform yellow appearance, and gritty feel to the teeth.

PROP., &c.—Rhubarb is a gentle purgative. Its action appears more on the muscular fibres of the canal, relieving the bowels of fecal matter without producing watery evacuations; hence its effects are not so prostrating to the patient. It bears some reputation for its action on the liver and messenteric glands, indicated in bilious and other fevers, where an evacuation is desired without reducing the vitality of the patient. It is also employed for jaundice and scrofula.

Owing to its astringent powers, it is a popular remedy with the Eclectic profession for diarrhea and dysentery. It is one of the few agents possessing both cathartic and astringent effects, and similar to the Juglans Cinerea, or Butternut bark. The first effect of a moderate dose is to slowly and mildly evacuate the bowels; its second effect is to arrest the discharge by its astringent action on the mucus surface. Its frequent use to relieve costiveness is a great error, and one that is very common throughout the country.

Tonic powers are ascribed to Rhubarb, which may be ascribed to the astringent principle that is exhibited in dyspeptic cases, where the stomach and canal are in a relaxed and weakened condition.

Dose—Powdered Rhubarb, ℈i to ʒi. As a tonic and astringent, Grs. v to x. It may be combined with magnesia or bi-carbonate of soda, when there is acidity of the stomach.

Infusum Rhei Composita—Compound Infusion of Rhubarb. Powdered or bruised Rhubarb, ʒii; Peppermint Leaves, ʒi; Boiling Water, Oss; Bi-carbonate of Potassa, ℈i; White Sugar, ʒi; Brandy, flʒii. Strain through muslin if all is desired for use. *Dose*—One teaspoonful for children, to allay vomiting and to arrest diarrhea, repeated as often as necessary. To increase its purgative action, small portions of powdered Rhubarb should be added. This preparation will cover the taste and smell of more active and disagreeable purgatives.

This is one of the most valuable compounds for affections of the stomach and bowels, especially in summer and fall, when diarrhea most frequently prevails. Similar to the neutralizing mixture of Dr. Beach.

Tinctura Rhei Composita—Neutralizing Mixture. Rhubarb, bruised, lb. ss; Brandy, Oii. Add, and let stand forty-eight hours; then strain the tincture through muslin, and set it aside. To the Rhubarb should be added Ovi of water, gently boiling for ten or fifteen minutes, and strain through muslin. Add to this infusion White Sugar, lb. ii; Saleratus, ʒiij. Place

this mixture on a gentle fire, to dissolve the sugar, and remove it. Now add Oil of Peppermint, fl℥ii to the tincture, and mix both fluids together. *Dose*—fl℥i to fl℥i.

Pilula Rhei Composita—Compound Pills of Rhubarb. Powdered Rhubarb, ℥ss; Powdered Aloes, ℥iij; Powdered Myrrh, ℥ii; Oil of Peppermint, Gtts. xx. Add sufficient thin mucilage of Gum Arabic to form a pill-mass. Divide into three-grain pills. *Dose*—For a tonic and gentle aperient, give two morning and evening. Four will be a moderate purgative dose.

These pills serve a good purpose for female debility, attended with constipation and difficult menstruation.

Syrupus Rhei Aromaticus—Spiced Syrup of Rhubarb. Rhubarb, bruised, ℥iij; Cloves, bruised, ℥ss; Cinnamon, powdered, ℥v; Nutmeg or Mace, ℥ii. To these add two pints of diluted Alcohol, macerate twelve days, and strain through coarse linen or muslin; then reduce by water-bath to one pint, and while hot, add six pints of simple syrup. *Dose*—fl℥i to fl℥i.

This popular domestic remedy is a carminative and mild laxative. It is employed in summer complaints of the bowels. The neutralizing mixture is preferable.

Rhubarb is used in several other combinations, as tincture of Rhubarb and Aloes, the tincture of Rhei and Gentian, wine of Rhubarb, &c. The extract and fluid-extract are sometimes employed.

STRYCHNOS.

Nux Vomica, Quaker Button.

History.—It is the seeds obtained from the fruit of middling-sized trees that are denominated Nux Vomica. These trees consist of several species—the Strychnos Nux Vomica, the Strychnos St. Ignatia, the S. Colubrina, and the S. Upas tiente. The S. Nux Vomica is considered officinal, being the principal one from which the seeds, or Nux Vomica, are obtained. The fruit of the tree is about the size of a small Orange, having a hard rind when ripe, of an orange color, filled with white, soft pulp, several seeds (Nux Vomica), that are large, flattish, depressed in the centre on one side and convex on the other, covered with whitish, woolly down. The tree is a native of the Indian Archipelago and Ceylon. All parts of the tree possess a bitter principle, yielding strychnia and brucia.

PROP., &c.—Nux Vomica (the seeds of the fruit) is an active poison. It is poisonous to most animals, though less to the herbivorous, as the horse, &c., than to the carnivorous, as the dog, &c. One ounce or more may be required to destroy a

horse, while ten to fifty grains may kill a dog. It causes fear of external impressions, convulsions, asphyxia, and death.

Upon man, when given in small doses it is said to increase the powers of digestion, increasing the secretions of the skin and the kidneys. When the doses are increased, the stomach gives signs of trouble by loss of appetite; the limbs become weak, with rigidity and trembling at efforts to move, the feelings depressed. The nerves of motion are first affected by slight convulsive movements of limbs and body, with but little effort and power either to walk, stand, or sit up. These are the first indications that Nux Vomica is performing its office. And further, when the system has been impressed with this agent, it affects the muscles of the esœphagus, pharynx and larynx; it also stimulates the penis to erection, and excites the venereal desires in females. The pulse is but little affected.

When the dose of Nux Vomica is sufficiently large to produce death, the pulse increases to eighty and one hundred, though contracted and faint; moisture of the skin and convulsions come on, which soon pass off, when much fear and anxiety is felt by the patient. Each convulsion becomes harder, the whole frame convulsed, the legs rigid and extended. In the intervals of the paoxysms, much thirst is experienced, and the mind becomes comparatively clear. Each convulsion increases in force, the fascial muscles twitching and tightened, the face livid, pulse imperceptible, asphyxia, death; and the whole body and limbs rigid. What is distressing, the face generally exhibits the horrible feeling of the patient.

Pareira's Materia Medica gives the most elaborate accounts, collected from various authors, of the *modus operandi* of Nux Vomica. It is generally admitted that its most prominent action is upon the cerebellum, the spinal column, and the nerves of motion, with more or less effect upon the sentient nerves, the whole brain, and all parts of the system. It is believed that death ensues from the spasmodic action of the muscles of respiration, and by diminishing nervous power.

PROP., &c.—Nux Vomica has been employed for several diseases dependent upon nervous derangement, as amaurosis, chorea, tetanus, epilepsy, and hysteria; for disorders of the alimentary canal, dysentery, lead colic, prolapsus of the rectum.

It is specially recommended by English authors as a most effectual remedy in the treatment of paralysis. But it is not advised where there is local or general inflammatory action, and in this respect a good observation on the part of the physician is required. It has been used both in partial and general paralysis, to restore the lost action of the nervous and muscular system.

For impotence, or loss of sexual power and feelings, some authors aver it to be a most successful agent. In this, as in all other cases, its administration should be carefully guarded by the physician, because of its dangerous character. It is better to avoid its use, if possible.

Antidotes to this poison are wanting, although the extract of conia and hemlock, ether, and the oil of hemlock, have been recommended. Undoubtedly, so soon as the danger is known, the first indication is to fill up the stomach with any convenient fluid, soon followed with full emesis.

Dose—Powdered Nux Vomica, Grs. ii to iii. It should be given, if necessary, until some of its peculiar symptoms are noticed. It is said to have been increased to fifty grains.

Tinctura Nucis Vomica—Tincture of Nux Vomica. Nux Vomica, scraped and bruised, ℥iss; Alcohol, Oss. Digest ten days and filter. *Dose*—Gtts. v to x. The tincture has been used for bathing in local paralysis.

Extractum Nucis Vomica—Extract of Nux Vomica. *Dose*—Gr. ss, increasing to two or even three, until its effects are observed. Administer in form of pill.

STRYCHNIA.

Strychnine.

This alkaloid is one of the active principles obtained from Nux Vomica. It is white, odorless, intensely bitter, and a crystalline substance, the form of the crystals being the octohedron or four-sided prism. When this salt is exposed to the air it looses it four-sided and needle-like appearance.

The effects of Strychnia are the same as those from Nux Vomica, only more powerful and violent. For experiment, a half grain has been blown into the mouth of a dog, producing death in five minutes. This amount applied to a wound in the back of a dog has produced death in three minutes and a half. When this animal has taken into the stomach a poisonous dose, one-half grain or more, the first effect noticed is rigidity and loss of power in the back and hind legs, whilst with his fore legs he may be able to find his way to his house, if near by, for his powers of instinct are clear between each paroxysm to the last. I have seen one dog readily take active emetics, sufficient to prove the complete recovery of the animal.

Dr. Christison says: "I have killed a dog in two minutes with the sixth part of a grain, injected, in the form of alcoholic solution, into the chest. I have seen a wild boar killed in the same manner, with the third of a grain, in ten minutes." Pareira says: "Some individuals are more susceptible to the action of Strychnia than others. The largest dose I have ever given is a grain and a half, and this was repeated several times before the usual symptoms, indicative of the affection of the system, came on. Smaller doses had been previously given without any obvious effect. Subsequent experience has convinced me that so large a dose was dangerous." Andral has seen a single pill, containing one-twelfth of a grain, cause slight trismus and the commencement of tetanic stiffness of the muscles, while in other cases, the dose may be gradually increased beyond a grain.

Strychnia is the active principle of Nux Vomica, and may be given in pills or alcoholic solution, and in vinegar or acetic acid. Its most obvious indication seems to be in paralysis, or loss of muscular power. Eclectics seldom resort to so dangerous a remedy.

The *dose* of Strychnia is one-twelfth of a grain, increased until its effects are observed on the muscular system.

VALERIANA OFFICINALIS.

English Valerian.

History.—This plant is a native of Europe, and has been employed for many centuries. For many years it has been cultivated in England, where it is carefully prepared and sent to the marts of commerce. It rises three to four feet high, bearing pinnate leaves. The root consists of a short rhizome or stem, giving off numerous round, fibrous roots, about six inches long; whitish within, externally yellowish.

The taste of the root is a little acrid and bitter; slightly warm and camphorous. The smell is peculiar and lasting, owing to its volatile oil. It is its odor that gives it a powerful attraction for cats. It contains a peculiar principle that is soluble in water, soft, dark colored resin, volatile liquid oil, gummy extract and lignin. The volatile oil is of light green color, with odor of camphor, and aromatic bitter taste. Valerian yields a volatile oil, valerianic acid, valerianin, and resin. A very good substitute for this plant is to be found in the Cypripedium, or American Valerian.

PROP., &c.—The therapeutical effects of Valerian, like Camphor and some other agents, is found to be varying and often uncertain. It is a stimulating nervine, depending much on the condition of the patient. In large doses it accelerates the pulse, causes giddiness, mental excitement, headache, restlessness, and sometimes apparent scintillations or flashes of light. It has been employed to allay high nervous excitement, as well as to restore nerve action in low debilitated conditions.

Valerian is employed for nervousness and hysteria depending on debility; for epilepsy, and as an anti-spasmodic. Of the various forms for administration, the fluid-extract is preferable, to which may be added small proportions of spirits or aqua Ammonia, when the patient is weak and prostrated. The physician should always be mindful that in whatever form he may choose to give Valerian, the dose requires to be gauged according to the various circumstances of the patient.

Valerian has some reputation for emmenagogue powers; to relieve hysterical females suffering from amenorrhea. In these cases it is not known to have any direct impression on the uterus or its functions, but probably only allays nervous irritation.

On some persons it stimulates the heart's action, excites a fulness of the face and brain; and hence it is that some patients require not more than one-fourth the dose that others do.

The dispensatories lay down various formulæ for the preparation of Valerian; but the fluid-extract when properly prepared from the well cured root, is the best form.

The powdered root. *Dose*—Grs. xx to ℈ii.

Infusum Valeriana—Infusion of Valerian. Of the bruised Root, ℥ss; Boiling (soft) Water, Oi. Cover over and let stand one hour. *Dose*—fl℥i to ii. This does not possess all the active properties of the plant, yet is preferable to the powder.

Tinctura Valeriana—Tincture of Valerian. The Root, bruised, ℥v; Proof Spirits, Oii. Let it digest seven to ten days and filter. *Dose*—fl℥i to iii. This form holds volatile oil, valerinates, valerianin, and resin, most all of the active principles of root. In some few cases the effects of the spirits may be objectionable.

Tinctura Valeriana Composita—Compound Tincture of Valerian. Valerian, bruised, ℥iiss; Aromatic Spirits of Ammonia, Oi. Digest in a well closed bottle for ten days and strain. *Dose*—fl℥i to ii. This form is preferable to the simple tincture in some nervous and hysterical cases dependent upon general debility.

Extractum Valeriana Fluidum—Fluid-Extract of Valerian.

Coarse powdered Root, lb.i; Ether, fℨvi; Pure Alcohol, Oi. Put these together in a closely stopped vessel, and let stand twelve hours; then put it into a displacement apparatus or percolator; let the liquid pass off clear, and also pass through half a pint of alcohol. Take all the liquid thus obtained and put it in a shallow vessel; let it stand in a warm room until reduced to fℨxii. Now pass through the drug in the percolator, a pint and a half of diluted alcohol, until twenty ounces are obtained. Mix this with the twelve ounces first obtained. *Dose*—Gtts. v to xl.

This form of Valerian is preferable to any other. A few drops of Spirits of Ammonia may be added, if indicated.

ANIMAL MEDICINAL AGENTS.

PART III.

THE great bulk of medicinal agents are to be found in the vegetable kingdom, whilst a number are employed from the animal kingdom. Both of these divisions are organized substances. The mineral kingdom gives us in-organized substances.

In the middle ages, and even up to the eighteenth century, a large number of animal agents, human bodies, and down to the lowest insects, were included in the category of the Materia Medica. The busy reading student will peruse medical authorities of two centuries past with feelings of interest and surprise. In the last fifty years the profession has divested itself of much useless material, as well as many delusions that formerly encompassed the practice of medicine.

In natural history the animals have been classified, and the arrangement of Cuvier is one generally adopted. His classification is—

1st. The *Vertebrated animals.*—Those in which the body and extremities are supported by a skeleton of osseous framework.

2d. The *Molluscous animals.*—These have no articulated skeleton.

3d. The *Articulated animals.*—Having successive joints, or articulations, which support their bodies.

4th. *Radiated animals*, or Zoophytes.—In these animals the organs of motion surround a centre. They have no distinct nervous system; no particular organs of sense; and very little traces of circulation. In this division is found the Sponge, which is the connecting link between the animal and vegetable kingdoms.

BOS TAURUS.

The Ox.

History.—The Ox has been known from the early records of man, and one of the most useful of domesticated animals.

The *Cow*, which is the female of the Bos Taurus, yields milk that is employed both for dietetical and medicinal purposes. Milk of the cow is denominated *lac vaccinum.* It has, when fresh, a sweetish alkaline taste. Under the microscope, milk is found to contain myriads of globular particles, which form butter. When allowed to stand a few hours, cream rises to the surface, and on being removed, what is called skimmed milk remains.

Milk is divided into, 1st, Cream, consisting of solid and liquid fat; and buttermilk, which is caseum. 2d. Skimmed milk, consisting of coagulable matters, whey or serum.

Butter consists of three fatty bodies—stearine, oleine, and butyrine.

Caseum is the albumin of milk, coagulated by the addition of acetic acid, and its changes of spontaneous decomposition.

Sugar of Milk is produced from whey by evaporation. In commerce it is found in cylindrical masses. Much employed by Homeopathic physicians.

Milk also yields lactic acid and salts.

PROP., &c.—As a dietetical agent, milk is one of the most important to the human family, being specially provided by a law of nature to give sustenance to the young. There is no other article that so readily assimulates with the blood, giving vitality, strength and growth to the system. Every mother, having taints of scrofula, or hereditary affections of the lungs, leading to consumptive habits, should nurse their offspring by hand upon the fresh milk of a healthy cow.

For medicinal purposes milk is a demulcent, valuable to shield the walls of the stomach against acrid poisons, as corrosive sublimate, sulphate of copper, &c.

Whey is both nutritive and refrigerant; useful in febrile diseases.

Wine Whey (serum lactis vinosum) is of service for relief of inflammatory infections resulting from colds. Given warm and under favorable circumstances to induce perspiration.

Ox Bile—Fel Bovinum. The gall of the Ox is tonic and alterative. The inspissated extract may be used in form of pills to increase the secretions of the liver, and for dyspeptic cases. The gall sack, when hung up in moderate heat, becomes gradually reduced in its contents to a thick extract, and will

so harden as to admit of being powdered. *Dose*—Grs. v to x. It may conveniently be formed into pills, and given to a good advantage when there is a deficiency of biliary secretions. The fresh gall is often employed upon cuts and sores, and frequently used in embrocations for horses.

Lactic Acid—One of the constituents of the gastric juice, and has of late years been obtained from the stomach of the Ox. It has been given in dyspeptic cases, and recommended as a good solvent for phosphatic deposits in the urine.

Oleum Bubulum—Neat's Foot-oil. Obtained from the feet of the Ox, by taking off the skin, and then boiling them for a long time in water. As the oily substance is disengaged, it rises to the surface of the water and is skimmed off. This process is repeated until all the fatty matter is extracted. This substance is placed in water, when at a moderate heat it is allowed to cool, the oil separates from the fatty substance. This thin oil is then passed through pieces of charcoal.

When this oil is pure it is of a yellowish color, has but little odor, and a soft, bland liquid. It is much used by shoemakers and saddlers to preserve leather.

PROP., &c.—A relaxant and emollient. It is frequently employed upon sores and abraded surfaces; to form liniments; upon swelled breasts, and other glandular enlargements.

CANTHARIS VESICATORIA.

Spanish Fly.

History.—There are several species of this insect, some of which were known to Hippocrates, Dioscorides, and Pliny. The *Cantharis Vesicatoria* is officinal. This species and several others are found in various parts of Europe. The C. V. is imported into this country from St. Petersburg and other places. It is one-half to three-fourths of an inch long; body and head of a dark brown color; its outer pair of wings of glistening green. The time of obtaining them is in the spring of the year, which being the time of their copulation, they collect in large swarms in small trees, and early in the morning they are beaten off with poles, falling upon sheets spread to receive them, when they are exposed to the vapor of vinegar or turpentine.

The American blistering Fly is the *Cantharis Vittata* or the potato Fly, found in the Middle and Southern States.

The active principle of the Spanish Fly is called *canthara-*

dine. The Fly also contains a small portion of green oil, fatty matter, and traces of uric acid. Care should be observed to protect them in well-stopped bottles, by adding a few drops of acetic acid.

PROP., &c.—*Externally*, the tincture has been used topically, by adding four to six drachms to a pint of water, to stimulate indolent ulcers; for fistulous sores; as a wash for chronic sore eyes, and to prevent baldness. The powder has been sprinkled on the parts bitten by rabid animals. As a *rubefacient*, the tincture is used alone or combined with liniments, for neuralgia, numbness, and paralysis. As a *vesicant*, the plaster is employed on the skin where desired, remaining from six to twelve hours, as may be necessary to induce the blister or vesicle. In some cases, the plaster is applied as an irritant only, when it is removed before the serous effusion forms under the skin. If a complete blister is desired, the plaster remains until this object is effected, when it is removed; the skin clipped with the scissors, the fluid escapes. The dressing will depend on circumstances. If desired to heal soon, apply simple cerate; if desired to continue the sore and discharge, dress either with Savin or Cantharides ointment. Should much swelling and adjoining inflammation ensue, dress with mucilage of Slippery-elm, adding grated cracker or Chickweed plant.

Internally, a tonic, stimulant, irritant, poison. In *moderate* doses of tincture or powder, a warmth is felt in the chest and stomach, tickling in the urinary passage, a desire to void urine, and sometimes sexual desires increased. In *large* and *over*-doses, burning in the stomach, bowels, and respiratory passages, great sensibility and vomiting, thirst, dryness of skin, fetid breath and ptyalism, constant desire to pass urine, with but a few drops at a time, often mixed with blood; difficult swallowing, violent gripings through the abdomen, giddiness, convulsions, dislike or dread of water, delirium, coma, death.

It is not very essential to enumerate all the diseases for which the Fly has been used. On the urinary organs, its effects have been noticed in part; even its blistered surface will cause suppression of urine; hence for incontinence of urine, which frequently occurs with children during sleep, it becomes serviceable. On the female *organs* of *generation*, it is said by Pareira to be a "stimulating emmenagogue." It is also said to have produced abortion; but to accomplish this effect, death to the mother would be likely to ensue. It has been used as an *aphrodisiac*, to stimulate the penis to erection. In this it often fails, because long continued immoral excesses have destroyed the powers of the organs. The tincture is employed for obstinate cases of gleet and gonorrhea. Pareira recommends it

with tincture of chloride of iron, equal parts, in twenty-drop doses, increased.

Cantharides have also been given for skin diseases and nervous affections. The blister plaster is frequently applied on and near *ring-worms* and *run-rounds*, and sometimes with good effect. Some patients are very susceptible to the poison of the Fly, so that stranguary ensues as soon as the blister is drawn; and this difficulty has occurred to some persons by even smelling of powdered Fly.

Some writers advance the view that the good effects of this blister is because of its action on the serous tissue, thereby inducing watery discharges from the blood circulation; hence its application in dropsical effusions of the head, chest, and abdomen. Its action is more satisfactorily noticed and admitted as a counter-irritant.

The Spanish Fly has been recognized as a medical agent since the days of Hippocrates, about four hundred years before Christ, except that for a time its use was prohibited in England; and, as mentioned by Pareira, a physician was imprisoned in Newgate, in 1693, for daring to employ it.

It may be admitted that in some of the diseases to which we have referred its application, good effects follow its use; but its frequent employment in this country for a long series of years, has been a burning torture to the sick, and disgraceful to the profession. In many forms of disease, and on many thousand victims, the shaved and blistered head has been the last crowning act of the doctor in hastening away his agonized patient; not with a design to murder, but *secundum artum*, to do all that could be done according to *science*. After the patient has withstood active salivation, to several pints in twenty-four hours, drastic purgation and the loss of one to two pints of blood every twelve hours, the fever still raging, the disease consuming, the blister is applied with these consoling words—that "all has been done that could be done." This was supposed to be *science*, but it was *horrible*. It was the general practice of the old Alopathic dogmas as late as 1850. But the bold advances of the medical reformers, after many years of hard labor, have so revolutionized the minds of the people, that now, in the year 1865, the Fly-blister, with its kindred tortures, has greatly disappeared. The Eclectic profession seldom applies the Fly-blister. Other agents are generally employed as counter-irritants.

Tinctura Cantharides—Tincture of Spanish Fly. Take of the Powder, ℥iv; Alcohol, Oii. Digest seven days, and filter. *Dose*—Gtts. x to fl℥i. It is best to administer in thin mucilage of Slippery-elm, Gum Arabic, or Marsh Mallow, if con-

venient, and observe that it does not affect the bladder. It may be used on the skin as counter-irritant or rubefacient.

Emplastrum Cantharides—Blistering Plaster. Of the Powder, lb. i; Wax and Lard, each ℥viii; Resin, ℥iv. Melt the last three articles by gentle heat, and, removed from the fire, incorporate the powder until the mass is cold. Should this be too hard, add a little more lard, and if too soft, a little more resin, applying gentle heat.

For stranguary, give mucilaginous and diuretic drinks. In over-doses, give diluents and emetics.

CASTOR FIBER—CASTOREUM.

The Beaver.

History.—The Beaver is a small animal that inhabits our Northern and Eastern States, the Canadas, and also the northern parts of Europe. It lives near water, in which it delights. It is capable of moving, by aid of small streams, small pieces of wood to lay a foundation for what is known in the North as "*Beaver dams*," and to carry sand, mud, leaves, and rubbish. In this work they use their teeth, feet, and large, flat tails to make these abodes for the winter, and for breeding.

The male and female bear Castor-sacs, just under the skin, and near the organs of generation. The ancient physicians used these sacs for medicine; they also had a foolish opinion that when the animal was hotly pursued, it tore out these sacs with its teeth, and left them as a ransom for the hunter.

These sacs are collected by the hunters in Russia, and also by the Hudson's Bay Company. They are still found in our markets, though very seldom used by the profession.

PROP., &c.—Stimulant and anti-spasmodic; for hysteria, epilepsy, &c. *Dose* of powder, Grs. xx to ℥i.

The tincture has been employed.

CETACEUM.

Spermaceti.

History.—Spermaceti is obtained from the large cavities of the head of the Sperm Whale, the *Phyceler Macrocephalus* of naturalists, also from other species of the Whale. As soon as

the animal is killed, the large cavities are opened, and the liquid is removed with buckets. When this liquid cools, the oil or Spermaceti separates from the watery parts. It is then put under strong pressure, when heat is applied to melt it, the impurities separated, until it forms into crystals; then fused into large cakes for the market.

PROP., &c.—Spermaceti is chiefly used in form of candles, and for ceremonies of the Catholic and Episcopal Churches, and Jewish ceremonies. It is demulcent and emollient. Its chief medicinal use is in the formation of ointments.

Unguentum Cetacei—Spermaceti Ointment. Spermaceti, ℥iii; White Wax, ℥ii; Olive oil, fl℥iii. Melt over gentle heat, set aside, and stir until cold.

CERA ALBA AND FLAVA.

Wax.

History.—White and yellow Wax are the products of the *Apis Mellifica*, the Honey Bee.

This little animal lives in communities of fifteen to twenty thousand. They live in *swarms* and *hive* together. The Honey Bee has been noticed in all ages of the world, because of its peculiar mode of living, great economy, and instinct in preparing food for the winter seasons. A swarm consists of three classes—1. A female. 2. Males or drones. 3. The neuters, or working Bees.

Mel—Honey. This substance is secreted by certain glands of flowers, and collected by the neuter Bees, in its *crop* or *sucking-sack*, and deposited in the Honey-comb, previously prepared by this industrious insect.

In some persons, Honey causes severe colic pains; and some writers suppose this to be from Honey obtained from poisonous plants. This is a doubtful conclusion, because several persons may eat from the same crop of Honey, whilst not more than one of the number will suffer pain or inconvenience. And it is well established that some persons cannot, without pain, eat Honey of any kind.

Honey is of two kinds—the *crystallizable* and *uncrystallizable*. It is a concentrated solution of sugar, wax, gum, odorous and coloring matter, and probably mannite.

PROP., &c.—Nutritive, demulcent, emollient, and laxative. Although Honey occasions griping and colic pains on some individuals, it is highly prized as an article of luxury for the

table. The assertion of some authors that its occasional unpleasant effects results from being obtained from poisonous plants, have no positive ground to base such an opinion. One writer, Tournefort, ascribes this unpleasant effect of Honey to the venomous properties of the Bees.

Honey is employed medicinally, combined with borax, white sugar, and hot water, for aptha and sore mouth; with Lemon-juice or vinegar, in hot water, as a cooling or refrigerant drink in febrile diseases. It is also spread on linen to aid suppuration of felons, boils, and carbuncles; and for these affections, is combined with soap.

Mel Depurative—Clarified Honey. Put Honey in an earthen vessel, and set it in hot water until melted; then strain through flannel. This deprives Honey of certain impurities, and prevents fermentation.

Oxymel—Simple Oxymel Syrup. Honey, lb. iiss; Acetic Acid (pure Vinegar), fl℥iiiss; Pure Water, fl℥iiiss. In a tin or earthen vessel, apply gentle heat until the Honey is hot, and while yet over the fire, mix the vinegar and water until well incorporated.

Oxymel is refrigerant, when diffused through hot Barley-water, as a cooling drink in febrile diseases.

Wax—This substance is collected by the Bee from various flowers, and formed into *comb* or *cells*. This work is really of mechanical ingenuity, constructed into hexagonal cups for the reception of the Honey, and some of them for the re-producing of the young Bee. A resinous substance called *propolis* is collected from the buds of some trees, and used by the Bee for lining of cells of the new comb, and for stopping any cracks of the cells.

Yellow Wax—Cera Flava. This is obtained from the Honey-comb, mixed with a little Honey and what is called Bee-bread, of dark yellow color and aromatic odor. It is brittle, though not hard. When a little warmth is applied, it becomes ductile and unctuous, and does not adhere to the fingers. When cut, it presents a peculiar surface, known as waxy lustre.

White Wax—Cera Alba. This is prepared from the unbleached yellow Wax, by first being melted, then bleached by exposure to the light and air. After this it is melted in water, acidulated with sulphuric acid, then thrown into moulds, which gives it the flat, round, and disc-like shape of the white Wax as seen in the shops.

Wax (yellow) is sometimes adulterated with Pea or Indian meal; and if so, it is more brittle, and of a light grayish-yellow color. Sometimes powdered resin is added; and if so, it presents a smooth, shining fracture. When being thrown into alcohol, the resin dissolves, and the Wax remains unaffected.

Wax, combined with soap and mucilaginous solutions, has been employed for dysentery; but its chief use is found in the formation of cerates, ointments, and plasters; and mechanically, for moulds in making false sets of teeth, and for sealing the mouths of bottles to prevent the escape of volatile and powerful agents, as nitric acid, &c.

COCCUS CACTI.

Cochineal.

A small insect found in Mexico, and known to the Indians for its coloring properties before Columbus discovered this Continent. Pareira says the Spaniards noticed it about the year 1518. These insects feed on the Nopal, a small shrub that abounds in Mexico.

The Cochineal of the shops is said to consist of the female insects, about one line long, wrinkled, convex on one side and concave on the other, with a light silvery covering, showing a tinge of red within. When powdered, of a dark red color.

PROP., &c.—Formerly it was believed that Cochineal exerted physiological effects on the system by its diuretic, anodyne, and other exhibitions. Of late years, it is thought to be of no medicinal value, and now only employed for coloring matter.

Alcohol takes up the coloring matter; and the tincture of Cochineal, say two and a half drachms of the powder to one pint of alcohol, is a convenient form for coloring many medicinal preparations.

Carmine is prepared from Cochineal, and employed by artists for water-colors and other fine paints. It is employed also in *face* painting.

HIRUDO.

Blood-sucking Leeches.

History.—The earliest record of the Leech is found in the Bible: "the horseleech hath two daughters, crying, give, give." But some translators deny that the Leech is found in the original writings of the Book.

Earlier authors arrange all Leeches under the genus *Hirudo;* later writers divide the species; and the Leeches most in use are arranged under the genus *Sanguisuga*, and Pareira describes two species:

Sanguisuga Officinalis—With dark green backs, six rusty-red bands or stripes, with belly olive green; not spotted. Obtained in the south of Europe.

Sanguisuga Medicinalis—With greenish backs, six rusty looking bands round the body; often with black spots. The belly is greenish-yellow, with black spots—north of Europe.

The American Leech is sometimes collected for use; of dark green color, with three rows of spots lengthwise, the centre one being of dark orange color; two and a half inches long. The European Leech is three and a half inches long.

European Leeches are obtained in the lakes of Bohemia and Siberia; and lakes, pools, and swamps of many sections of Europe. Pareira estimates that many millions of them are used in Paris annually.

The American Leech is found in the water of swamps and marshes of the United States, and has been considerably employed; but the imported article is much the best.

The act of the Leech in biting is by applying its disk-like mouth to the skin, exercising a force of suction, then applying its sharp teeth in a saw-like motion.

The *physiological* effects of leeching are of a local character; yet it has been frequently observed that constitutional effects follow, with children and delicate persons, and even in robust persons, where a large amount has been abstracted by applying numerous leeches at one time, so as to induce syncope or fainting, followed with debility. Cases are reported where death has ensued.

Leeches should only be applied for local objects. Where the blood has violently determinated to any one point; for severe contusions, wounds or bruises; for swelled, inflamed testicles, mammary glands, tumors, or piles, &c.

The number of Leeches applied is often of much importance, because the constitutional effects may sometimes be unfavorable, with debility, and possibly death to children and frail constitutions. Not more than four should be applied to a child under five years, nor over eight to a child under ten years. It is ascertained that Leeches will draw from one up to four drachms, according to size.

Leeches will not easily take hold on the hairy parts unless shaved and clean; nor do they like the presence of grease, vinegar, salt, and some other substances. Sugared water, milk and blood induces them to bite. They also object to bite when surrounded by the fumes of tobacco, sulphur and vinegar. It is advised that the Leech should not be forcibly taken off, as he may leave some of his sharp teeth in the wound, but should be allowed to drop off.

After-bleeding from the wound or bite of the leech some-

times follows; in such cases compression, styptic astringents, and even caustics may be employed.

It has occurred that when applied in the mouth they have crept into the throat, and passed into the stomach. Also that men have drank of the water in which they live, swallowing the small leeches, and causing much distress, and some deaths.

To apply leeches, a good plan is to dry them by rolling in a soft piece of clean linen, and thus held, put the head to the part desired, or lay them on the lid of a pill-box, and apply them as near as possible. Some place them in glass tubes, thus guiding the operation. Leeches are sometimes "stripped" of the blood and used the second time.

ICHTHYOCOLLA.

Isinglass.

History.—Ichthyocolla was the ancient name applied to several species of fish containing glue.

Isinglass is obtained from the sounds or swimming-bladders of the Cod and several other species of large fish. It is taken from the fish, slit open, well washed, and freed from the thin membrane that covers it; then allowed to dry in different shapes, in rolls, or folded in book form; and that found in the markets prepared in this way is considered the best. It should be dry, whitish, semi-pellucid, and inodorous. It is chiefly composed of gelatin and albumen, with traces of phosphate of soda and lime.

Isinglass is or has been prepared in New York. It chiefly comes from Russia, East Indies, Brazil, Hudson's Bay, and some other parts.

PROP., &c.—It has demulcent and mucilaginous properties, but seldom employed internally. Its solution, added to tincture of Benzoin, aids in making the black court-plaster. It has also been used in forming Gelatine capsules.

Isinglass is employed for clarifying syrups, wines and beer, and much in domestic use for refining coffee.

MOSCHUS.

Musk.

History.—Musk is the secretion of an animal having a near resemblance to the deer tribe. It is the *Moschus Moschiferus*, belonging to the order Ruminantia, and a native of Thibet,

China, and Siberia. The Musk is contained in a bag, which lies close to the skin at the posterior part of the abdomen of the animal, and opens exteriorly, by a small aperture immediately in front of the preputial orifice.

This bag or musk-sack is about one and a half inches broad, and two and a half inches long, three-fourths of an inch thick. It is oval on the outside, covered with stiff hairs, and a little convex on the side, adhering to the walls of the abdomen of the animal. It is an appendage of the male only. The sacks will average about two drachms each. The Musk-deer is a very timid animal, and caught at night by surprise.

There are two kinds of pure Musk found in the markets—the Tonquin, or Chinese, the bag covered with cinnamon-colored hairs, which is the best; the Karbardine or Russian, having coarse white hairs. The Musk concreted in these sacks is in brown granular masses, slightly unctuous, and has no gritty feeling when rubbed between the fingers. It has a bitter acrid taste. Alcohol takes up about one half of its properties, and ether nearly the whole.

The adulteration of Musk is very common. It is effected in China by taking a piece of the skin and a piece of membrane of the animal, and making a sack as near to the true one as possible. This false sack is then filled by taking the dried blood of a bullock, a portion of ammonia and true musk, and rubbing it in a mortar. In this way many false Musk-sacks are found in the market. In 1862, some of the most creditable drug dealers informed me that they believed there were very few, if any, true Musk-sacks in Philadelphia. The scarcity of good Musk is one cause of its extensive adulteration. The true Musk-sack always shows the natural orifice in the centre of it.

PROP., &c.—The high price of Musk precludes its general use in this country and Great Britain. It is a general excitant and anti-spasmodic; excites the pulse, and aids perspiration. It has been found useful in hiccough, palpitation of the heart, and spasms of the stomach and intestines.

Dose—Powdered Musk, Grs. v to ʒi.

The principal use of Musk in America is in form of tincture or essence, for perfumery.

OLEUM MORRHUA.

Codfish Oil.

History.—This oil is obtained from the Codfish, and from some other species of this fish. It is also obtained from the fatty tissues of the bodies of some of these species. Pareira

remarks, that it "appears to have been for a long period a popular remedy in various countries of Europe, for rheumatism and some other diseases. In 1782, it was recommended for chronic rheumatism by Dr. Percival."

The common Cod (*Gadus Morrhua*) is the most interesting, and from which nearly all of the best Cod-fish oil is obtained. It abounds in innumerable numbers along the Northern Atlantic coasts, from Maine to Newfoundland. From these fish is derived one of the most valuable resources of food; and thousands of small vessels are annually employed in catching, cleaning, packing, and preserving them for the table. The Norwegians and Islanders rely upon them for food.

The liver of the Cod, when fresh, is eaten by many with satisfaction, yet most all are used for extracting the oil. When cleaning the fish, the livers are thrown into large masses, submitted to heat in boiling water, broken into a pulpy condition, put into strainers over large tubs, into which the liquid passes. The oil rising to the surface, is drawn off. It is again strained, until divested of impurities. Sometimes this oil is thrown into large reservoirs in cellars, where it becomes further clarified, purer, and better fitted for use.

From the analysis of De Gough, this oil is found to consist of a peculiar substance called *gaduin*, oleis and margaric acids, with glycerine, butyric and acetic acids, several biliary principles, iodine, chlorine, and traces of bromine, phosphoric and sulphuric acids, phosphorus, lime, magnesia, soda, and iron.

The oil varies in color—the *white* or *pale* yellow, *brownish* yellow, and the *dark* brown, as designated in the markets. This is probably owing to the manner of extracting the oil. The pale kind is esteemed to be the best, because procured from the fresh livers, and before decomposition has taken place in them. It has the consistence of lamp oil, taste and smell peculiar; but the more *fishy* in this respect, the poorer the quality. Curriers use the coarser article.

The biliary matter adds to its yellowish color; and some suppose its value as a medicine depends much on it. Others contend that the pale oil is best, and its efficiency depends on the iodine and some other principles. When a decided fish smell is present, it should be rejected.

PROP., &c.—For half a century, Cod oil has been employed for rheumatism, gout, scrofula, and affections of the joints and spine; carious ulcers, tabes messenteria, and rickets.

About 1850, either by advice of some of the profession or by the speculation of medical venders, or both, the public were overtaken with a mania in the laudation and use of this oil for the cure of phthisis pulmonalis, as well as for other diseases

above alluded to. It became so popular that the livers of the Cod could not have possibly supplied the demand. The pure white oil from the head of the Whale was undoubtedly in great demand, as the Cods could not have possibly supplied the millions of quarts distributed throughout the country. It commanded a high price. This *fishy* oil became *fashionable.* Dr. So-and-so advised it, the Rev. So-and-so recommended it, and large sums of money were made in the operation. But it was too *fishy;* and in 1863 it had lost its charms and fallen into disuse, after the manner of Sarsaparilla, Wild Cherry, and several other articles through which the public have been humbugged and plundered. The bubble burst.

That Cod oil is of value in the cure of emaciated conditions resulting from scrofula, bronchitis, phthisis, and some other diseased conditions, we have no doubt. The pure oil alone should be taken.

Dose—℥ss to i, twice daily.

ŒSTEA EDULIS.

Oyster.

History.—The common edible Oyster belongs to natural order of invertebrated animals. Its shell is bi-valve. Valves orate, roundish, or ovate. The upper one flat.

In Europe the Oyster has long been esteemed as a delicious article of food. But those found on the American Atlantic coast are vastly superior to the article of other countries. Oysters are most prolific in the sea-water in which they cast their spawn, which like a little grease-spot, attaches to stones, rocks, oyster-shells, or other hard substances. When about two years old, they are fit for market. Some are found adhered in bunches, others separate.

The best are those that have been caught and placed in "oyster-beds," where they receive portions of fresh water, and those found in bays receiving some fresh water, as New York, Delaware, Chesapeake, &c. Millions of dollars are realized in this trade. The islands of New Jersey, between Amboy and New York, present many most beautiful houses and farms of the Oystermen. The transplanted Oyster in a few years becomes very large; the shell six to seven inches long, and four to five in width. During the time of spawning, from June to September, they assume a milky appearance, and are unfit for use.

PROP., &c.—Oyster-shells, *testa Oystrea*, are officinal. For use, the shells must be reduced to an impalpable powder, by

first washing them clean in boiling water; after this, thrown in water, stir it, let stand a few minutes, then pour off into a vessel, that the fine powder may fall to the bottom; after this, turn off the clear water, and let the powder dry. This is the *Testa Preparata*—Prepared Oyster-shells.

In this form the shells have been employed in some forms of indigestion depending on too much acidity of the stomach, some forms of diarrhea, and skin diseases. The water used in making the powder, is sometimes employed both for drinking, and washing the parts affected with tetter.

As a substitute, Prepared Chalk is employed, although the shells are thought best because of some animal matter they contain. *Dose*—℥i.

As food and a luxury, the raw Oyster is most easily digested. Oysters boiled a few minutes with water, is often very nourishing, and acceptable to the stomachs of invalids.

OVUM.

Egg.

History.—The *Gallus Domesticus*, the domestic Cock and Hen, yields the *Ovum* or Egg so extensively employed for food, and sometimes for medicinal purposes.

This class of fowls are domesticated everywhere, but supposed to be natives of Persia. They constitute a large variety in size and colors. Among the best are those known as the Dorking and Poland breeds. A few years past the Malay breeds were introduced into this country, known as the Shanghai and Cochin China fowls. Many people had the "fowl mania," for raising and propagating this large breed. Dr. James McClintock, of Philadelphia, left his profession to embark in this trade a few miles from the city. The bubble bursted in a few years.

PROP., &c.—The shell, *Testa Ovi*, according to Prout, contains carbonate of lime, phosphate of magnesia and lime, small portions of iron and sulphur, and animal matter. The shell powdered and washed, is used for its antacid effect in diarrhea. A substitute for oyster shells.

The yolk, *vitellus Ovi*, contains a yellow crystallizable fatty oil, and albumen containing phosphorus and water. When long boiled, it is hard to digest. In its raw state a laxative.

The white or glaire, *albumen Ovi*, according to Dr. Bostock, consists of water, albumen and uncoagulable matter. It is

demulcent and emollient. It is employed as a shielding agent for poisonous substances that may be introduced into the stomach. It is used to clarify coffee, syrups and wine.

Compound Albumen Ovi—The White of one Egg. Castor Oil, ℥i; White Sugar, ℥i. Beat together until it has the appearance of ice-cream. *Dose*—A tablespoonful. A useful remedy to shield and heal the irritated canal; it is also a good nutriment.

SEVUM.

Suet.

History.—This is the Mutton-suet, obtained from the sheep, *Ovis Aries.* The part preferred is found surrounding the kidneys of the animal. When cut in pieces, by adding a little water, submitting to gradual heat, and straining through flannel. Fresh Suet should always be used if possible.

PROP., &c.—Emollient. It is shielding to the alimentary canal in affections of dysentery and diarrhea. In form of salve it is used for dressing blisters. It is a valuable addition to lard in formation of salves and ointments.

SUS SCROFA.

The Hog.

History.—In the early ages of the world the Hog was known in Asia and China. It was naturalized by the European settlers of America. It is a prolific animal; and this country, it is said, produces more pork than any other nation, and it forms one of the heavy articles of trade.

The Hog is an unclean and filthy animal in its habits; yet its flesh is very white, delicate and tender. The supposition prevails with many that pork, when eaten, is liable to exhibit scrofulous taints in the system. Some writers dispute this position by reference to families that eat largely of it, showing no symptoms of such disease. There is probably no positive evidence on either side. It was prohibited by the Levitical law. "And the swine, though he divide the hoof, and be cloven-footed, yet he cheweth not the cud; he *is* unclean."—Leviticus xi., 7. The Jews to this day discard it for food. The Mahomedans also interdicted its use.

Although easy of digestion, the flesh of the Hog should not be eaten too long, for it favors obesity and disorders of the

skin. I once knew a young man who was excessively fond of fat pork. It was a luxury to him. He accumulated fatty matter so fast that it run out of his eyes. In early manhood he died of a skin and apparently scrofulous diseases.

PROP., &c.—Lard of the Hog is officinal. It is inodorous, white, soft, granular appearance. It is chiefly composed of three principles—olein, stearin, and margarine.

Olein, when pure, resembles oil, clear and colorless; but little odor, and sweetish taste; insoluble in water, but soluble in boiling alcohol. It is convertable into glycerin.

Stearin is white, concrete and fusible; insipid, inodorous, and slightly soluble in alcohol. Like *olein*, is composed of carbon, oxygen and nitrogen.

Lard when exposed to the air, absorbs oxygen, and becomes rancid. It should always be kept in well-closed vessels, or it becomes unfit for dietetical or medicinal purposes.

For medicinal use, lard should be fresh or pure, and contain no salt. It is emollient, and sometimes, when hot, applied with friction to swelled breasts and other glands. Often used in form of enemata for constipation of the bowels. Its chief value is in forming cerates or ointments.

TEGENERIA.

House-spider.

History.—The family of Spiders are considered by some naturalists as animals, and by others as insects. Linneus includes them as the genus *Aranea*, whilst Walckenear defines the genus to be *Tegenerea*. The last named author describes *T. domesticus* as being the European Spider, and the *T. medicinalis*, the American, or the House-spider, whose web is officinal. There are several species, as the field, the red, and the diadem-spiders.

The vulgar impression is that Spiders are dangerous, and only worthy of instant death, whilst naturalists, who have studied their habits closely, view them in quite a different light. That their ingenuity in weaving their webs is among the most remarkable of animal instincts, cannot be denied, both for a structure of their homes and to entrap flies; that they seldom bite, leaving their virus behind, unless assaulted, which does not often prove dangerous. When attacked by superior power, they flee as fast as possible; but if there is no chance of escape, they at once assume to be dead, submitting to injury or death without moving a limb.

PROP., &c.—The web of the *Tegenerea Officinalis* of this country is considered officinal. They are found in cellars, houses, barns, and other dark places. By some authors, these webs are said to be febrifuge, sedative, and anti-spasmodic. These powers are not conceded by some writers, who aver the effect to be from imagination of the patient, instead of the therapeutical effect of the web.

Spiders' webs have been given for intermittent fever, periodical headache, hysteria, nervousness, and to induce sleep; also for nervous spasmodic affection. *Dose*—Grs. v. to vi, in pills, every two hours.

The web is also used as a styptic, to arrest bleeding from wounds. In domestic practice, the small silver-headed Spider has been given in dough-pills, to arrest intermittent fevers.

INORGANIC MATERIA MEDICA.

PART IV.

MINERAL AND CHEMICAL SUBSTANCES.

1. NON-METALLIC ELEMENTS.

With the view to aid the student in comprehending the language of these elements, we present their symbols and numbers:

NAME.	SYMBOLS.	NO.	NAME.	SYMBOLS.	NO.
Oxygen,	O.	8	Iodine,	I.	127
Hydrogen,	H.	1	Bromine,	Br.	78
Nitrogen,	N.	14	Sulphur,	S.	16
Carbon,	C.	6	Phosphorus,	P.	31
Chlorine,	Cl.	36	Boron,	Bo.	11

These and other inorganic substances unite in different proportions; and in such cases, figures are added to each symbol, thus, O.2, H.3, &c. Again, the mark of a cross is used. Thus for the natural combination of Hydrogen and Oxygen, without the figures, H.+O., meaning one equivalent in weight of Hydrogen, 1, with one equivalent of Oxygen, 8, found in water.

BORON.

The symbol of Boron is Bo.; the equivalent is 11: thus Bo.=11. It is not extensively found, and always in a combined

state. By Sir H. Davy, it was found to be the basis of Boracic acid. Boron is a dark olive brown substance, in powder, without taste or smell.

It is seldom employed in medicine, except when combined with oxygen, forming Boracic acid and the biborate of Soda.

Borax—Biborate of Soda. This is a salt composed of Boracic acid and Soda. In this form, it is sometimes found in a natural state, in some mineral springs, and found deposited in the lakes of Persia. It is semi-transparent, crystallizes in large colorless prisms; has a cool, refrigerant taste, slightly styptic.

PROP., &c.—Borax has diuretic, detergent, emmenagogue, sub-astringent powers. Its principal use is for apthea and ulcers of the mouth. *Dose*—Grs. v. to x. It is sometimes used as a lotion, three drachms to half a pint of water.

A very common formula is—Borax, powdered, ℥i; Sage Leaves, powdered, ℥i; Clarified Honey, ℥iss.

BROMINE.

Bromine, Br.=78, was discovered by M. Balard, 1826, in the uncrystallizable residue of sea-water, in very small proportions. Bromine is a volatile fluid, of deep orange-red color. It exhales a strong, disagreeable odor, and has a powerful, nauseous taste. It is soluble in alcohol, water, and ether. It removes vegetable colors.

Bromine is sometimes employed combined with potassa, and occasionally with iron and zinc. So seldom employed that its forms are not here given.

CARBON.

Carbon, C.=6, when found in its entire purity, is supposed to be in the form of the diamond, formed alone by the hand of nature. Carbon is an extensive element in the vegetable and animal kingdoms; also in some mineral substances, when heated to redness in closely-covered vessels, and combined with oxygen in the atmosphere.

Carbo Ligni—Wood Charcoal. Vegetable Charcoal for common use is procured by forming billets of wood into a cone-like pile, and covered over with earth and sods, leaving a partial ventilation at the top, and fired at the bottom. With this partial combustion, the water and most of the volatile portions

of the wood become dissipated, or set free, when solid Charcoal remains. For chemical purposes, Charcoal is again submitted to a red heat in the crucible, covered with sand. In this way it is prepared for medicinal use. It burns free in the air, giving light and heat, combining with oxygen, forming Carbonic acid gas, which has proved fatal to some persons in close rooms.

PROP., &c.—Disinfectant and antiseptic. It is employed in too much acidity of the stomach, to correct a bad breath; for spongy gums, for foul ulcers, and to absorb the fetor of cancers and effluvia of contagious diseases. *Dose*—Grs. x. to ʒi.

Carbo Animalis—Animal Charcoal. It is obtained by burning bones, horns, and hoofs of animals to a red heat in closely-stopped vessels, until all vapors have passed off, leaving powdered Charcoal or *Ivory Black*, chiefly composed of phosphate of lime.

Pure Charcoal is not soluble in water, and but little affected by any of the acids, except the nitric, nor by any of the alkalies. Animal Charcoal is seldom used as a medical agent. It is known to many as *Bone Black* and *Ivory Black*, and used in some chemical compounds in the manufactories.

CHLORINE.

Chlorine, Cl.=36, was noticed by Scheele in 1774, and declared by Sir H. Davy, in 1800, to be an elementary body. It is found always combined with metals, chiefly as chloride of sodium or common salt, in the waters of the ocean, and some in the organic kingdom.

Chlorine gas is of a greenish-yellow color, has an astringent taste, with a peculiar, pungent, suffocating odor. It destroys the color of all vegetable matter, when it is moist or in solution; but when it is perfectly dry, it does not destroy those colors. Chlorine is considered an incombustible gas, but partially a supporter of combustion, as a lighted taper will burn in it faintly. It is a non-conductor of electricity. It unites with several of the metallic agents, and dissolves the gold-leaf.

When inhaled, Chlorine is suffocating. It is considered a rubefacient and disinfecting agent. Its antidote is ammoniacal gas, carefully inhaled with the vapor of warm water.

Chlorine unites with other elementary agents, as oxygen and hydrogen, forming several compounds found in the Dispensatories of Old and New Schools of medicine.

HYDROGEN.

Hydrogen is another of the elementary substances. Its symbol is H., and its equivalent number is 1; thus, H.=1. It forms one-ninth part of the water of the globe, and is found a component part of almost every organic substance.

Hydrogen gas is the lightest body in nature. It has never been solidified or condensed, even into a liquid form; nor does it support combustion; but it is highly inflammable when it comes in contact with oxygen gas at a high temperature. When mixed with oxygen gas, even in common temperature, when fired, a violent explosion takes place.

Hydrogen exists in many medicinal agents in different proportions, as ammonia, hydrochloric, hydrocyanic and hydriodic acids; in alcohol, sulphuric ether and all vegetable acids; in piperina and wax; in fixed oils, camphor, gum, sugar, resins, balsams, and vegetable gluten; in nitric ether, volatile oils, arsenic, and solutions of oxides of iron, and with many other substances.

Animal life cannot exist in Hydrogen gas, but combined with the atmosphere, or oxygen gas, in due proportions, respiration and life is supported or sustained for a short period.

IODINE.

This elementary, non-metallic body was discovered in 1812, by M. Courtois, of France. Its symbol is I, and equivalent, No. 127, thus, I.=127. Iodine is found in the process of obtaining soda from sea-weeds. It is also found in sea-water, sponge, coral, in cod-liver oil, and some sea fish. In the United States, Iodine was discovered by Dr. Usher, in the Saline Springs of Saratoga; it has also been found in other springs of this country.

Iodine is a soft, friable, bluish or purplish-black, scaly, crystalline substance, of brilliant appearance and metallic lustre. Its odor is similar to chlorine, but less pungent; its taste is hot and acrid. It leaves a stain on the fingers of brownish-yellow. It is not a conductor of electricity. To water it yields but little of its properties; but in alcohol and ether it is readily dissolved.

Besides being found in sea-weeds and other marine plants, sea-water, and saline springs, small traces of Iodine are found in some of the mineral substances, as lead, arsenic, mercury, &c. Iodine is sometimes adulterated with plumbago and charcoal; yet its most frequent and troublesome admixture is mois-

ture, which may be noticed by its adhering to and coloring the sides of the bottle. It should always be kept in good glass-stopped bottles.

PROP., &c.—Iodine is a stimulant to the absorbent vessels, and alterative. When used internally it is excitant, entering the circulation and stimulating the capillary vessels, sometimes making its impressions on the skin by a reddish orange tinge. Pure Iodine or its tincture, in moderate doses, leaves in the mouth and throat an acrid sensation. Cases are reported where Iodine has been administered in small repeated doses with but little, if any effect, for a time, when suddenly the whole system is brought under its influence, as has been the case with Foxglove; this peculiar effect has often been noticed in giving mercury in repeated doses, until its accumulated force is felt on the system in a serious manner.

It has been proved that Iodine, when taken into the stomach, where it may be changed into an *iodide*, has in a short time after been detected in the blood, urine and perspiration. The whole glandular system may be brought under the influence of Iodine, by exciting increase of saliva, urine, and it is said, uterine secretion, whilst on the contrary it diminishes the secretions of the mammary glands and testicles, causing a wasting of those organs. Some authors have thought Iodine anaphrodisiac, to create feelings of love, with sexual desires, but this, if true, is in opposition to its assumed power to waste away the mammary and testicles.

The long continued use of Iodine is followed with emaciation and debility, which, by Dr. Coindit, was termed *Iodism.* In over-doses it causes fevers, thirst, vomiting, purging, dry cough, great depression, emaciation and death. Speaking of sudden deaths caused by Iodine, Professor Thomson, of London, in his valuable work on Materia Medica, says: "I have witnessed two cases of this description; and Sir B. Brodie met with one in which the patient died in returning from the night-chair to his bed. It is probable, however, that such cases are connected with some peculiarity of habit or idiosyncrasy, permitting the Iodine to accumulate in the habit to an extent which he termed saturation."

Iodine appears to operate as an irritant poison. Post-mortem examinations have shown inflammation of the mucus coat of the stomach, with the liver enlarged, and of a pale rose-color.

The dose, Gr. i, in pill form (with extract of liquorice), although seldom administered. The simple tincture is often employed, both internal and external. It is also used in several compounds.

In cases of poisoning, give freely of starch, or flour, or arrow-root, suspended in water, and soon follow with active vomiting.

Iodine in tincture, and in its various compounds, has attained much favor for the relief of several diseases, mercurial and syphilitic diseases; for bronchocele or goitre, scrofula and enlargement of the liver and spleen, mammary glands and testicles; amenorrhea and dysmenorrhea; for tumors, rheumatism, chorea, paralysis, and some other diseases, as using the tincture with a camel-hair pencil to circumscribe the inflamed edges of erysipelas, externally upon glandular enlargements arising from scrofulous taints.

But it seems that late authors must excel their predecessors by lauding its power in diseases not before mentioned. This is apt to be the case with the profession in praising remedies which become popular. I assert from experience, that in nine cases in ten the tincture will not arrest the spreading of erysipelas, nor the relief or cure of bronchocele. That Iodine in small proportions, whether alone or with elements of its affinity, has good effects on the absorbents and glandular system, there is no doubt; but to press its use to undue proportions in the circulation, is both unreasonable and injurious.

Tinctura Iodini—Tincture of Iodine. Iodine, ℥ss; Alcohol, fl℥viii. *Dose*—Gtts. v to x.

The internal use of the tincture has been objected to because of its supposed liability to precipitation in the stomach, and like Iodine in substance, produce irritation. The principal use of the tincture is for external application, by applying it outside the inflamed edges of erysipelas, to arrest the growth of bronchocele and other tumors.

Iodide of Amidine—Iodine of Starch. Iodine, Grs. xxiv, rubbed in the mortar with a little water; Starch finely powdered, ℥i, gradually added. Dry this by gentle heat to a dry powder, and keep in well-stopped bottle, from the light. *Dose*—℥ii to iv, three to four times daily, for diseases before mentioned. Mild in its action.

Ferri Iodidum—Iodide of Iron. This preparation may be formed by taking Iodine and pure Iron filings, and heating them together in water so they dissolve and combine, making a greenish solution, when it should be filtered, and in an iron vessel evaporated to dryness. *Dose*—Grs. ii to x.

This preparation gives the properties of Iodine and Iron, and may be prescribed in rickets, scrofula, chorea, syphilis, and other debilitated conditions of the system.

Potassii Iodinum—Iodide of Potassium. Decompose the solution of iodide of Iron with carbonate of Potassa; filter the fluid, and evaporate to the point of crystallization. It is very soluble in water, and dissolves in alcohol. It is a compound of one equivalent of Iodine, 126; and one equivalent of Potassium, 39.

Iodide of Potassium is sometimes adulterated with carbonate of potassa, which may be detected by dissolving it in alcohol, when the Iodine only will dissolve.

This form of preparation is generally preferred to the Iodine alone, whether for internal or external use, as in case of bronchocele and other tumors. In tumors having solid deposits, Iodine and its preparations are of questionable use. Iodide of Potassium is highly praised for the cure of bronchocele, when its internal use is greatly aided by applying it in ointment over the tumor.

For scrofula it has been much used, although with some the Iodide of Iron is preferred; both forms are excitants to the lymphatics and glandular system. The Iodide of Potassium and the Iodide of Iron, are esteemed of importance in the treatment of leucorrhea, amenorrhea, chlorosis, and syphilitic taints. It has also been given for enlargements of the liver and spleen; for phthisis and chronic bronchitis. In whatever form Iodine is used, its action should be closely watched, to prevent too much irritation and unpleasant constitutional symptoms, when it should be reduced, or withdrawn for a time. *Dose*—Grs. v to x, twice daily.

Iodini Tinctura Composita—Compound Tincture of Iodine. Iodine, ℥i; Iodide of Potassium, ℥ii; Rectified Spirits, Oii. When dissolved, filter. *Dose*—Gtts. v to x. Sometimes employed for purposes heretofore indicated.

Iodini Liquor Composita—Compound Solution of Iodine. Iodine, ℥ii; Iodide of Potassium, ℥ii; Water, Oi. *Dose*—fl℥ii to iv.

NITROGEN.

Nitrogen, N.=14, is an elementary substance known only in a state of combination. It forms seventy-nine to eighty parts of the one hundred of atmospheric air. One mode of obtaining it is, to burn phosphorus in a jar filled with air and inverted over water. The phosphorous combines with the oxygen in the air, that is converted into phosphoric acid, which is absorbed by the water. The residual gas consists of nitrogen, a minute portion of carbonic acid, and a little vapor of phosphorus in solution; agitate this in a solution with potassa, when nothing but pure nitrogen gas remains.

Nitrogen in form of gas, is invisible, insipid and inodorous. It is distinguished from oxygen because it does not support combustion, and from hydrogen gas, because it is inflammable. It is lighter than air. When by means of the electric spark it is combined with oxygen, nitric acid is formed. Nitrogen

is diffused into many of the vegetable substances, and most all of animal bodies. Nitrogen gas will not support animal life, because of the absence of a due proportion of oxygen gas.

Some of the compounds of Nitrogen are nitric acid, cyanides of mercury, hydrocyanic acid, volatile oils, vegetable oils, vegetable alkaloids, animal products, and the nitrates.

OXYGEN.

Oxygen, O.=8, was discovered by Dr. Priestly, 1774. It is the most important of the elementary bodies. It is the most widely diffused of all the elementary substances; composing twenty in every one hundred parts of the atmosphere; and eighty-eight parts in every one hundred parts of the water of the globe; it also exists in various proportions in the animal, vegetable and mineral kingdoms.

Oxygen is generally described as it is found, in form of Oxygen gas, which is an invisible, inodorous, insipid and gaseous substance, and always combined in the exhibitions of light, caloric and electricity. Thomson, a late English author, remarks—"Oxygen is essential for the vital existence of all animals and vegetables; hence the name of *vital air*. To animals it is essential for carrying on the functions of respiration, whether performed by lungs or through the medium of the skin; to vegetables, for aiding the faculty of respiration, and effecting the process of germination; and in some degree, for the performance of a function closely resembling that of insect respiration, which the leaves of plants perform in the absence of light. But Oxygen, as it exists in pure Oxygen gas, rapidly exhausts the excitability of animals, and death quickly supervenes; it is, therefore, seldom if ever employed in this form as a medical agent."

PHOSPHORUS.

Phosphorus, P.=31, is an elementary substance found in the animal kingdom, and chiefiy obtained from the bones by burning them into ashes. To these ashes diluted sulphuric acid is added, and with sufficient water to form the appearance of pap. The sulphuric acid takes up a portion of the lime of the bones, forming a gypsum, or sulphate of lime, and leaves the freed phosphoric acid with the remainder, in form of bi-phosphate. The phosphoric acid in this salt is then decomposed by means

of charcoal, and the Phosphorus distilled over into water contained in a copper receiver. During this process, carbonic acid gas, and carbonic oxide gas, are evolved, and phosphate of lime, with charcoal, from the residue of distillation. Phosphorus thus obtained has a flesh-red color; but when it is fused under a warm solution of ammonia, and again under alcohol, it is procured pure.

Phosphorus is soft, easily cut, without color, except a faint yellow tinge, and no taste or smell. It is insoluble in water, but in hot alcohol, ether, naptha, and fixed oils, it is dissolved. When exposed to the air, it gives off garlicky fumes; and in the dark it exhibits light, because of oxygen being combined with it, which causes combustion and heat, setting it on fire. To avoid this, it should always be covered by water in a well-stopped bottle.

For medicinal purposes, it is combined with sulphuric acid, phosphate of lime, and phosphate of soda.

Phosphorus is an active irritant poison. In minute doses, a stimulant. Its antidotes are thin demulcents in large draughts, and magnesia.

Acidum Phosphoricum Dilutum—Diluted Phosphoric Acid. Phosphorus, ℥i; Nitric Acid, fl℥iv; Pure Water, fl℥x. Mix, and put into a glass retort; in sand-bath apply heat, until eight fluid ounces are obtained. This remaining fluid is to be evaporated in a platinum capsule to two ounces and six drachms. When this is cold, add water sufficient to make twenty-eight fluid ounces.

In this process, the nitric acid is decomposed, and yields up its oxygen to acidify the Phosphorus. It is a compound of Phosphorus, oxygen and water.

Diluted Phosphoric acid is inodorous, colorless, and of strong acid taste. It has been recommended as a tonic and refrigerant; for impotency by masturbation, and to stimulate the sexual organs; for diabetes and leucorrhea, also to arrest phosphatic deposits in the kidneys and bladder, and also the morbid growth of bony matter. It is seldom employed by the Eclectic profession. *Dose*—Gtts. x, in one ounce of water, twice daily.

Soda Phosphas—Phosphate of Soda. It is prepared from the super-phoshate of lime that is obtained from calcined bones acted upon by sulphuric acid, carbonate of soda being afterwards added. A double exchange takes place; the sulphuric acid unites with a portion of lime, forming an insoluble sulphate and a soluble super-sulphate, whilst the soda of the carbonate attaching itself to the excess of phosphoric acid, forms a soluble phosphate, which, after filtration to separate the phosphate of lime, slowly crystallizes. To eradicate the traces of sulphuric

acid, it should be several times dissolved in pure or distilled water, and crystallized.

Solution of Phosphate of Soda—Made by dissolving eighty-seven grains in pure or distilled water, four fluid ounces. Seldom used.

Phosphate of Soda is a mild cathartic. Its taste is similar to chloride of Sodium, or common salt. *Dose*—℥vi to ℥ii.

Ferri Phosphas—Phosphate of Iron. Phosphate of Soda, ℥vii; Sulphate of Iron, ℥vi; Water, Oviii. Divide the water in two equal parts, and dissolve the above articles separately; then unite both solutions together, agitate well, and let stand ten or twelve hours to precipitate; turn off the liquor, and wash the remainder with two or three quarts of hot water; let this subside; turn off the water, and dry the Phosphate of Iron by gentle heat. This powder has the appearance of slate color, without smell, and but little taste.

Within the last few years, the Phosphate of Iron has been considerably employed in debilitated conditions resulting from tubercular affections, chorea, chlorosis, and other diseases where the chalybeates are indicated. *Dose*—Grs. v.

SULPHUR.

This is a non-metallic substance, although a mineral production; its symbol S., and equivalent 16—S.=16. Sulphur is found at the margins of volcanoes, and in beds in some parts of the world, which is called virgin Sulphur, and obtained from Italy and other countries, collected in large pieces or blocks. It is purified by submitting to heat and sublimation, and known in the shops as *roll Sulphur*, *sublimed* or *flowers of Sulphur*.

In small proportions, Sulphur is found in the animal and vegetable kingdoms; in the Virginia, and other Sulphur Springs. The Springs of Saratoga owe part of their medicinal properties to Sulphur.

Roll Sulphur has a greasy feel. When broken, has a shining and crystalline appearance. Flowers of Sulphur has a crackling feel when grasped in the hand. It has but little smell, an insipid taste, and bright yellow color, although of light yellow when long exposed to light. It is insoluble in water, but dissolves in ether and in boiling oil of turpentine. Sulphur is fusible; when burning, gives off a blue flame, causing evolution of Sulphurous acid gas, that is destructive to animal respiration.

Prop., &c.—Sulphur is an alterative, mildly diaphoretic, tonic, and gentle purgative. It has special action on the

mucous and muscular membrane of the alimentary canal, and upon the cutaneous surface. It has been employed for stricture, hemorrhoids, prolapsus of the rectum; also for pulmonary affections, for rheumatic and gouty affections, when the joints are in a swelled and painful condition; and it has been employed for the constitutional taints of syphilis and scrofula. Sulphur makes special display in its action in chronic skin diseases, particularly in itch and its kindred affections. By its special action upon the cutaneous surface, it is believed to destroy the *itch insect* which has been discovered by aid of the microscope, in the itch; although it is believed by the best authors that this so-called insect is not the cause of itch, but only a result of this disease.

However, the good effects of Sulpnur are clearly proved in skin diseases, and for itch is more used in domestic practice than by professional prescription. The physician should bear in mind that the free and long continued use of Sulphur will subject his patient to danger because of its relaxing effects upon the skin, especially when subjected to the influence of cold air. Sulphur is a decided alterative agent, which is not fully appreciated by the profession. *Dose*—℥ss, as a cathartic; ℥i, as an alterative, repeated.

Sulphur Precipitatum—Lac Sulphur, or Milk of Sulphur. Prepared by boiling sublimed Sulphur and slacked Lime in water, and adding Muriatic Acid to cause precipitation, which is dried by gradual heat. In former years, lac Sulphur was much employed, but now seldom. It is alterative and cathartic.

Sulphur Vivum—Horse Brimstone, Black Sulphur. This is the refuse or dregs left in the process of preparing sublimed Sulphur. It is seldom employed.

Sulphur Sublimatum—Sublimed Sulphur. Submit coarse powdered Sulphur to a powerful heat in an iron retort; the vapor passing out is condensed in a powder that is washed in boiling water. It is then dried by gentle heat.

Unguentum Sulphuris—Sulphur Ointment. Flowers or Sublimed Sulphur, ℥iii; Lard, lb. ss; Oil of Bergamot, Gtts. xxv; mix thoroughly. For skin diseases.

Unguentum Sulphuris Compositum—Compound Sulphur Ointment. Sulphur, ℥iv; powdered Root of Veratrum Veride, ℥v; Nitrate of Potassa, ℥i; Oil of Bergamot, Gtts. xviii; Lard, ℥xii. This has been employed as a substitute for the above in stubborn cases of the itch.

Acidum Sulphuricum—Sulphuric Acid, Oil of Vitriol. A compound of Sulphur, oxygen and water. It is a fluid that is heavy and colorless, with nearly the consistence of oil. It is without smell, and so intensely acrid that it cannot be applied

to the tongue with safety. It quickly chars all animal and vegetable substances, and its affinity for water is so great that it imbibes one-third of its own weight from the air in twenty-four hours. It is found in an impure state near the craters of volcanoes. Pure Sulphuric acid is not used for medicinal purposes.

Acidum Sulphuricum Dilutum—Diluted Sulphuric Acid.—Sulphuric Acid, fℨiss; pure or distilled Water, fℨxv. *Dose*—Gtts. x to xxv.

This preparation has long been held in estimation by the Alopathic practice as a tonic of importance in continued and eruptive fevers, when accompanied with extreme debility. To arrest great perspiration in phthisis pulmonalis it has been esteemed one of their reliable remedies; for which cases, Thomson, a late English author says: "It is the appropriate remedy; and in combination with aromatics, it removes many of the urgent symptoms of dyspepsia; and is altogether a tonic of the highest value when judiciously employed." It has been ascertained to produce injurious effects on women who are nursing or pregnant.

Diluted Sulphuric acid combines with vegetable infusions and decoctions, whilst it will not with some of the elementary and mineral agents.

The *strong* or *Sulphuric acid* is a corrosive irritant poison, causing violent pains in the stomach and chest, a burning sensation in the mouth and throat, and an icy coldness over the whole body, and death.

PROP., &c.—Diluted Sulphuric acid is tonic, refrigerant and astringent. Besides its employment for diseases above noticed, it is used externally upon edges of sore eyelids, and as a gargle for ulcerated sore throat. It is seldom given by the Eclectic profession. *Dose*—Gtts. x to xx, in a little thin mucilage. To avoid its action on the enamel of the teeth, the mouth should be washed after its use.

Acidum Sulphuricum Aromaticum — Aromatic Sulphuric Acid, Elixir of Vitriol. Sulphuric Acid, fℨiiiss; Rectified Spirits, Oiss. Mix. In a well closed vessel, digest two or three days. Then take an ounce each of powdered ginger and cinnamon, and add enough of the above acid spirits to cover the powder, and let stand fifteen hours, transfer this into a percolator, and slowly pass through the remainder of spirit acid.

This is a frequent substitute for diluted Sulphuric acid, and a more agreeable preparation. *Dose*—Gtts. x to xxv.

Ether Sulphuricus—Sulphuric Ether. Prepared by distilling over a sand-bath equal parts of rectified spirits, or alcohol, in a sand-bath that has been already heated to 200 degrees Fah-

renheit continue until white fumes appear in the retort, when the sulphuric acid is disengaged, and oil of wine is generated. This sulphuric ether may retain some little acid, water and alcohol; to move these, a minute portion of carbonate of potassa may be added, which unites with the acid and water, when the ether is re-distilled, that produces pure ether, or the *ether rectificatus* of the dispensatories.

Ether is a volatile colorless liquid, of penetrating odor and pungent taste.

PROP., &c.—A powerful diffusive stimulant, and has special action on the brain and nervous system, so that in over-doses it has caused gastric irritation, vomiting, and increased action of the heart and arteries, and other symptoms, as spasms, insensibility and death. As a narcotic nervine, for spasms, epilepsy, neuralgia, rheumatism, and in surgical operations.

Externally employed as a rubefacient, for neuralgia and other painful affections; the relief of toothache, when inserted in its cavity; or by applying to the jaw, holding the hand over it to arrest its rapid evaporation; it is also applied in this way for earache.

Ether has been used to stimulate the gastric nerves in dyspeptic cases depending upon debility, in small doses. In full doses, it has some reputation to arrest the paroxysms of intermittent fever. Full dose, fℨi, in water, fℨiss.

Sulphuric Spirit of Ether is composed of one part of ether and two parts of alcohol. Useful in low forms of fevers; to allay thirst and vomiting.

Aromatic Spirit of Ether is prepared by adding to Sulphuric spirit of ether, some aromatic oils, as cinnamon, cardamon, and ginger. These last two agents used occasionally.

Letheon—Some few authors speak of Letheon as being the Sulphuric ether of the shops, to be inhaled for allaying pains and sensibility in surgical operations; but this is a mistake. Letheon is simply washed ether. It may be done by adding together one pint of Sulphuric ether and one of pure water; agitating a few minutes in a half gallon bottle, then allowing it to stand a short time until the water and Sulphuric ether have separated; then turn off the water, throwing it away, adding another pint of water, and repeat the process until the ether is reduced to half a pint. In this way the water abstracts the alcohol, when the *ether* becomes the *Letheon*, which is less liable to act as a stimulant to the brain and nervous system.

PROP., &c.—The object desired in surgical operations is to produce a direct sedative and narcotic effect, whether it be to extract a tooth or amputate a limb.

About the year 1846, this anesthetic agent appeared as a secret agent to allay pain in surgical operations. In a little

time the mystery became known; and some years later, application was made to Congress for compensation to the person claiming its introduction to the profession as an anesthetic agent. It was certainly a discovery of importance both to the profession and the public.

The most suitable mode to administer Letheon, is to procure a piece of sponge, one side of which is adapted to cover the mouth, and applying it when well saturated with the Letheon, directing the patient to inhale from the sponge. Some persons not being so susceptible to its action as others, it may become necessary to add a little the second or third time. Sometimes one ounce, or two may be required, as it rapidly evaporates in the air.

Occasionally it stimulates the patient to violent gestures, when it should be quickly withdrawn. The patient's eye is the proper index. If it becomes unusually bright and brilliant, withdraw the agent; if it becomes dull and heavy, as it usually will, let the patient hold the sponge, if convenient. When he drops it, the operation may commence. It may be necessary to renew the inhalation several times in some operations.

Its effects are not always the same upon all persons. It has been known to produce hallucinations and strange impressions on the brain, so that charges of an unpleasant character have by females, after its use, been made against the operator. A third person, at least, should always be present when it is administered.

METALLIC ELEMENTS.

THE metals are all now considered as simple elementary bodies. They possess certain properties that characterize them. They are fusible, and even become volatilizable at a very high heat. They exhibit lustre and even opacity, when reduced to extreme thinness. Potassium and Sodium are lighter than water. Potassium and Sodium are metallic elements.

	SYM.	EQUIV.		SYM.	EQUIV.
Potassium (Kalium),	K.	40	Sodium (Nitrium),	N.	24

POTASSA.

Potash.

Potash is found in the inorganized or mineral kingdom, and freely in rocks of some particular kinds. It is an element of the animal structure, and abundant in the vegetable kingdom.

Potash is obtained in large quantities in the Northern States and Canada, from the ashes of wood. These ashes are placed in large tubs, which answer as large percolators; when filled, water is poured upon them, which takes up the alkaline properties of the ashes, passing down and out into suitable reservoirs. In this way the water is added, until the alkaline principle is extracted from the ashes. This solution, or *lye*, as it is called, is then put in large iron kettles, set in a furnace, beneath which is applied strong heat, until, by boiling, the solution is reduced to a thick consistence, called Potash, salts of Potash, and sometimes black salts of Potash. It is an extensive article in the commerce of this country. Used much by the soap makers.

Potassa Carbonas Impura—Impure Carbonate of Potassa, Pearl-ashes. Prepared by placing Potash in an oven so formed over a furnace, that when the fire is applied the flames can

pass into the oven and over the Potash. In this way, the impurities are burnt out, and the results are caustic salts of a white color, sometimes tinged with blue—the Pearl-ashes of commerce.

Patassa Carbonas—Purified Pearlash. This is prepared by adding pure water to Pearlash, so as to hold it in solution, and then evaporate the water. When it thickens, stir with a spatula until it concretes, and becomes a dry white powder, to be preserved in a well-stopped bottle.

POTASSIUM.

Potassium is the metallic base of Potash or Potassa. One of the modes of obtaining Potassium is by fusing Potash in such a way as to make it pass over clean iron-filings heated to whiteness in a gun-barrel. The hydrogen of the water contained in the Potash, and decomposed by the hot iron-filings, re-acts upon the Potassa, abstracts its oxygen, and sets free the metal, Potassium. It should be preserved in naptha, as this substance contains no oxygen.

Potassium is an opaque cyrstalline metal, resembling steel or lead in color and lustre. Its chief characteristic is its powerful affinity for oxygen. It is rapidly decomposed in water; when heat and light are extricated, hydrogen gas is evolved, and the metal, being oxidized, is converted into Potassa. Potassium is not employed alone as a medicinal agent, but aids in forming several compounds.

Potassa Caustica, Potassa Fusa—Caustic Potash, Stick Potash. This is a compound of the metal Potassium and oxygen. It may be obtained by holding Potassa in solution of water, adding lime, and in a clean iron vessel reduce to nearly a dry powder, and run it into small, cylindrical moulds, when it becomes hardened on cooling. Cut into short pieces, and keep in a well-stopped bottle, excluded from dampness and light.

PROP., &c.—This form of Potash is frequently resorted to, because of its great power to destroy animal matter, and is considered a caustic poison It is stimulant, irritant, escharotic, and in minute doses, antacid. The sticks of Caustic Potash are solid, brittle, and nearly white. Its affinity with moisture of the air is so great that when admitted into the bottles, these sticks or pieces are decomposed, and fall in a moist substance, deliquesce.

It is employed upon tumors, cancers, chancres, and other fungus growth. To avoid its rapid spreading upon healthy parts, adhesive plaster should surround the parts to which it

is to be applied. Its violent action may be controlled by applying vinegar or weak acetic acid.

Patassa Bi-carbonas—Bi-carbonate of Potash. Prepared by dissolving pure Carbonate of Potash in water, passing carbonic acid through the solution; filter, and evaporate to crystals. This is milder in its action than the Carbonate.

Sesqui-carbonas, Saleratus of the shops, so extensively used by brewers, bakers, as well as in culinary purposes, is said to be in strength and purity between the Carbonate and Bi-carbonate of Potassa. It is probable that most of the *Saleratus* is but the Bi-carbonate of Potassa—a colorless, crystalline salt.

Saleratus is available when there is too much acidity of the stomach, and preferable to Soda. Its solution in Grs. ii to v, is an excellent remedy in febrile diseases—neautralizing acids, stimulating the secreting organs, especially the cutaneous vessels. Try it.

Liquor Potassa Effervescens—Effervescing Solution of Potassa. This is prepared by dissolving Bi-carbonate of Potassa, ℥i, in pure water, Oi, and transmitting through this solution carbonic acid gas. It should be kept in well-stopped bottles.

This effervescing solution may be imitated by pouring a bottle of soda-water into a tumbler containing Grs. xx of the Bi-carbonate of Potassa. The effervescing solution, in moderate doses, is a cooling antacid, with marked diuretic action. In repeated over-doses, it has acted as an irritant poison. Both this and the solution of Bi-carbonate of Potassa have antilithic and resolvent powers.

Pulveris Effervescentes—Effervescing Powders. Bi carbonate of Potassa, one ounce and one hundred and sixty grains, reduced to a fine powder; Tartaric Acid, powdered, one ounce. Divide each into sixteen powders. Dissolve each one in about four ounces of water; unite the two; effervescence takes place, and take the draught. A refrigerant antacid.

Seidlitz Powders, so-called, is another effervescing draught, by uniting two drachms of Tartrate of Soda with two scruples of Bi-carbonate of Soda, put in a blue paper, and half a drachm of powdered Tartaric Acid put in a white paper. Dissolve the first in about three ounces of water, the second in two ounces; unite the two solutions, and when effervescence takes place, take the draught. It is a cooling aperient, and mildly cathartic.

Another form of Seidlitz Powder is, by taking Rochelle Salts three parts, and Bi-carbonate of Soda one part. Mix thoroughly in the mortar; then put Grs. 138 in a white paper. Tartaric Acid, Grs. xxx, in a blue paper; dissolve each one separately, in about two ounces of water each, then unite the

two solutions; so soon as effervescence takes place, take the draught. Cooling aperient, and mildly cathartic.

Potassa Bi-sulphas—Bi-sulphate of Potassa. This is formed during the decomposition of nitrate of potassa by sulphuric acid in manufacturing nitric acid; the Bi-sulphate being the result of the combination of the sulphuric acid with the potassa of the nitrate. It crystallizes irregularly, sometimes in slender hexangular prisms, at other times in right rhombic prisms, so as to be tubular. Its taste is extremely sour, and slightly bitter. It is soluble in two parts of water at sixty degrees of heat. When exposed to a moderate heat, it melts and assumes the appearance of oil, but again becomes white on cooling. A colorless salt, without odor.

This salt should not be combined with the alkaline, carbonates, nor with lime-water. It may be combined with the sulphates of iron and zinc. It has been prescribed, combined with rhubarb and other mild vegetable purgatives; also with the sulphate of morphia. It is combined with rhubarb in dyspeptic cases, depending upon a torpid condition of the stomach; sometimes added to aromatic bitters. *Dose*—Grs. x to ʒii. Gentle purgative. Effervescing when added to its equal weight of the crystals of the carbonate of soda. When given alone or combined, it should be dissolved in a little water.

Potassa Sulphas—Sulphate of Potassa. When the bi-sulphate of Potassa is dissolved in a large quantity of boiling water, and the carbonate of Potassa is added, sufficient to saturate the super-abundant acid, the result is a solution of the Sulphate of Potassa, which on evaporation yields the crystallized salt of Sulphate of Potassa. It is found near volcanoes, also in some mineral springs, in several plants, and in some of the animal secretions.

This is a colorless salt, without odor, and generally in crystals of six-sided angular prisms. These forms vary. It is insoluble in alcohol, and partially soluble in water. It is deobstruent, and mildly cathartic. *Dose*—Grs. x to xxv. Seldom employed.

Potassa Nitras. Nitrate of Potash—Saltpetre. Saltpetre is the spontaneous production of nature in many parts of the world. It is supposed to have been known to the ancients, and for many centuries past used by the Chinese in the preparation of fire-works. In some parts of India, the soil is so impregnated with it that the earth is lixiviated to obtain it, and sometimes found nearly pure upon the surface of the ground. It is in small proportions, found in the vegetable kingdom, as ginger, borage, tobacco, &c.

The Saltpetre of commerce has generally been that from India. It exists to considerable extent in Mexico, also in

several parts of the United States. Since the revolt of the Southern States, 1861, from this Government, they have been compelled by the stringent effects of blockade, to depend in a great measure upon their own manufacture of Saltpetre for gunpowder, from 1861 to 1865.

Pure Nitrate of Potassa or Saltpetre, is in six-sided prisms; white, semi-pellucid, brittle, inodorous; a bitterish, sharp taste, occasioning a sensation of cold both in the mouth and stomach. Nitre is not altered by exposure to the air; it contains water mechanically lodged with the salt; it dissolves in five times its own weight of water, at sixty degrees, and in its equal weight of boiling water. Cold is generated during the process of dissolving

PROP., &c.—Saltpetre may act as a refrigerant, sedative or diuretic, according to the amount of dose administered. In moderate doses of Grs. xv, by its sympathetic effect on the nervous system, it may reduce the pulse both in fulness and frequency, when the patient becomes pale, with a feeling of languor. In larger doses it at first gives a refrigerant sensation, that may be followed by re-action. In large doses of four to six drachms, it has caused gastritis, vertigo, tremors, low pulse, cold sweats and insensibility, that may terminate in death.

As a diuretic this salt has some celebrity, although not so reliable as some other agents. It is said to pass unchanged to the kidneys, which are stimulated to increased action, thus increasing the flow of urine; and for this purpose it is often administered to good effect.

Dose, as a refrigerant and sedative, Grs. xv, repeated; as a diuretic, ℈ii to ℥i, dissolved in water. Saltpetre is used as a preservative to pork and beef.

I have seen some remarkably good effects of Saltpetre, where used alone, in doses of Grs. x, repeated twice daily, thus relieving inflammatory rheumatism in a few days. The patient to be well covered and excluding cold air, so as to aid the medicine to act on the kidneys and all secreting organs.

Potassa Chloras—Chlorate of Potassa. This salt is obtained by passing chlorine through a solution of carbonate of Potash. When this solution is exposed to the air, free chlorine passes off, and the crystals of chlorate of Potassa are deposited. This salt appears in small brilliant scales, of pearly lustre, inodorous, cooling, austere taste resembling nitre.

PROP., &c.—Chlorate of Potassa has tonic, stimulant and diuretic powers. Has been employed to support the system in typhus and other low forms of fevers; and in eruptive diseases, small-pox, scarlet fever, &c.; as a diuretic, to increase the secretions of the kidneys. It passes unchanged to the

kidneys, and has been detected in the kidneys. It is less active than nitrate of Potassa. *Dose*—Grs. x to xx.

Potassa Tartras—Tartrate of Potassa. Formed by adding carbonate of Potassa to a solution of the bi-tartrate of Potassa. This solution is boiled, then filtered, and again boiled until pellicles begin to float on the top, when it is set aside to cool and crystallize; then dry the crystals.

This salt of tartar is colorless, of a bitterish saline taste, and without odor; although a crystalline, is generally found in form of powder. It is soluble in fifty degrees Fahrenheit of water, and completely in hot water of its own weight. Sometimes it is imperfectly prepared, containing bi-tartrate of Potassa, which is detected by litmus.

PROP., &c.—Mild cathartic; sometimes added to active purgatives, to modify their griping effects. *Dose*—℥ii to ℥i.

Potassa Bi-tartras.—Bi-tartrate of Potassa—Cream of Tartar. This is one of the products of grapes in its fermentation during the process of making wine, which is precipitated, and found adhering to the tubs or wine vats. It is purified in boiling water, with the addition of charcoal.

The cream of tartar of commerce is a salt of fine white crystalline appearance; a little gritty to the teeth, and dissolves slowly in the mouth, of a cooling and rather pleasant taste. This salt as found in the shops is often impure, containing the tartrate of lime.

PROP., &c.—A cooling hydragogue purgative, with marked diuretic powers. It acts on the serous tissue of the alimentary canal, causing watery stools, and indicated in dropsical effusions. A cooling aperient in fevers. It is a useful agent, not only in febrile diseases, but in urinary obstructions; and for gonorrhea, with two parts to one of powdered cubebs. Cream of Tartar, ℥ii; Powdered Cubebs, ℥i; twice daily, in cold water. *Dose* of Cream of Tartar, ℥ss, in a wine-glass of water, twice daily.

Potassa Acetas—Acetate of Potassa. This salt may be prepared by taking carbonate of Potassa, lb. i, and Acetic Acid, fl℥xxvi; diluted with distilled or pure water, fl℥xii; then evaporate the solution on a sand-bath, until the salt be dried. Potassa has a powerful affinity for acetic acid; therefore, when carbonate of Potassa is added to acetic acid, the carbonic acid is driven off in a state of gas, and the solution being evaporated until a pellicle is formed, the acetate of Potassa is procured.

PROP., &c.—In small doses, the acetate of Potassa is a diuretic. In full doses a purgative; although one of an indifferent character. As a diuretic or purgative, it is advisable to keep the surface of the body warm. It is incompatible with the sul-

phates of soda and magnesia, the bi-chloride of mercury, and nitrate of silver.

This and other purgatives of Potassa, like those of soda, affect the serous tissues, so as to produce watery evacuations. *Dose*—℥ii to iv. As a diuretic, one half less.

NATRIUM SODIUM.

Sodium, or Natrium, Na.=24, is an elementary substance, and the metallic basis of Soda. It is of soft consistence, yielding and spreading; it is very light, and floats on water: and has a powerful affinity for oxygen; when placed on water, it becomes oxidized, causing effervescence. In hot water it produces a few scintillations of light. Sodium, in combination with chlorine, is found in rock-salt and sea-water. To preserve it, it should be covered with naptha.

Soda Fossil, or *Mineral Alkali*—Soda is a compound that is found in the mineral, animal, and vegetable kingdoms. It was first noticed in 1736. It may be obtained by adding caustic of lime to a solution of the carbonate of Soda, when carbonate of lime is precipitated; the Soda is left free in solution, and evaporated, producing Soda, which is found in four-sided prisms, of grayish-white color.

Soda, in its pure state, is seldom used as a medicinal agent. Potash is its substitute, and preferred.

Soda Carbonas—Carbonate of Soda. Carbonate of Soda is found in the plant Salsola, that is found in great abundance on the shores of the Mediterranean, and other plants peculiar to the sea-shore and salt lakes. It also exists in some earths and mineral springs. Carbonate of Soda is obtained from the ashes of sea plants. The most common and cheap mode is to procure it from sea-salt.

Pure carbonate of Soda is found in beautiful octohedral crystals, white, and nearly transparent; its taste is acrid, urinous, and disagreeable. It is soluble in twice its weight of water at sixty degrees of heat. It is incompatible with acids; also metalic salts.

PROP., &c.—Antacid, anthilithic and diuretic. In over-doses an irritant poison, when acids become its antidote. *Dose*—Grs. xv to ℥ii.

Soda Bi-carbonas—Bi-carbonate of Soda. Obtained by holding carbonate of Soda in solution, and passing carbonic acid gas through it. Also by the decomposition of chloride of soda and carbonate of ammonia.

PROP., &c.—This preparation has properties of, and may be

used as a substitute for, the bi-carbonate of potassa. Its action. however, is milder than the bi-carbonate of potassa. It is indicated when there is too much acid in the stomach; and for this reason its use is frequently indicated, and never amiss, previous to the administrationof emetics; it is specially advisable in summer complaints, to neutralize acidity of the stomach.

Bi-carbonate of Soda stimulates the secretions of the kidneys, and is considered an antacid, anthilithic, and diuretic; to relieve an undue amount of uric acid, and to prevent and arrest some forms of calcareous deposits.

Soda Powders (Pulveris Efferventes) may be prepared by taking Tartaric Acid, Grs. xxv; Bi-carbonate of Soda, Grs. xxx. Finely powder each, and dissolve each in about two ounces of water; add the two thus in solution, and when effervescence takes place, take the draught. A little syrup may be added, simple or aromatic.

Cake Soda—Bi-carbonate of Soda is frequently employed in culinary purposes, for making various kinds of cakes.

Yeast Powders—Considerably in use. Is a combination of Bi-carbonate of Soda and Bi-tartrate of Potassa.

Soda Chloridum—Chloride of Soda, Common Salt. This Salt is found everywhere, in the wonderful provisions of nature. It is in the animal, vegetable, and mineral kingdoms. It is indeed essential to animal and vegetable life—a wise provision of Providence, found in every division of the globe. In Spain, there is a mountain of Salt five hundred feet in height, and about three miles in circumference. In America, there are many mineral springs, especially in the Middle and Southern States, that yield common Salt in abundance. Sea-water also produces this Salt. Salt works are erected both inland and on sea-coasts, by boiling, precipitation, and drying to crystallization, &c.

Chloride of Sodium, or common Salt, when pure, is in white, semi-transparent, cubical crystals. It is inodorous, with a taste purely saline, perfectly free from bitterness. It is soluble in cold and hot water, that is, by weight—one part of Salt and two and a half of water—and not soluble in alcohol. It is decomposed by nitric and sulphuric acids, and nitrate of silver.

The constituents of common Salt are, according to Berzelius, a celebrated chemist, one equivalent of Chlorine, 35, and one equivalent of Sodium, 23.

PROP., &c.—Chloride of Sodium is tonic, anthelmintic, disinfectant, preservative. The animals have a strong instinctive desire for Salt. Hunters understand the attraction of Salt, in the form of "deer-licks." Horses, cattle, and sheep come up at regular intervals to the farm-yards for Salt. All this but

demonstrates the instinctive desire for Salt, and proves its use in animal economy.

With man, when food contains no Salt, the body becomes cachectic, and falls into a disease resembling sea-scurvy, which soon disappears if Salt be administered. It is a tonic, essential to human life.

As an anthelmintic agent, it has some reputation. A weak or debilitated condition of the stomach and canal is supposed to aid the increase and generation of worms; and all thus afflicted are benefitted by the free use of Salt. A weak solution of Salt thrown into the rectum aids to remove and prevent the accumulation of seat-worms.

It is a valuable disinfectant and depurative agent, in diptheria and other forms of ulcers of the mouth and throat. For cancers and ulcers, it is very important, both for its cleansing and tonic effects. Used in solution, as a wash.

Chloride of Sodium in solution, is an irritant externally. The Salt-bath is of use in debilitated conditions of the system. In one-ounce doses, in solution of cold water, it is a cathartic; in warm water, it is an emetic. The real value of Salt is but little understood by the profession. Gentlemen, give more attention to Salt.

Soda Biboras—Borate of Soda, Borax. This salt is a compound of Boracic acid and Soda, found in some mineral springs, and deposited in some lakes of Persia. It is said to have been known to the ancient physicians, the Hindoos and Arabians. Borax is also produced by saturating Carbonate of Soda with Boracic acid. The Dutch have enjoyed a large share of supplying Borax thus prepared.

Borax is semi-transparent, colorless, and in crystals of flattened, hexahedral prisms, slightly effloresecent, inodorous, with a cooling, styptic taste, and alkaline re-action. It is soluble in six parts of boiling water and twenty-four of cold water. This crystallized Salt consists of Boracic acid, Soda, and water.

PROP., &c.—Borax is much used in domestic practice, for apthea, or ulcers of the mouth and throat. The usual formula is—Borax, ℥i, mixed with Clarified Honey, ℥i, given in half-teaspoonful doses. It is also much used in the mechanical arts, especially by blacksmiths. It is considered sub-astringent, detergent, and mildly diuretic and emmenagogue.

Soda Phosphas—Phosphate of Soda. This is found in some mineral springs; also a constituent of human urine. It is prepared from the Super-phosphate of lime; obtained from calcined bones acted upon by sulphuric acid, Carbonate of Soda being afterwards added.

It is found in oblique crystals, rhombic prisms, irregular and

transparent. The taste of this salt is cooling, a little like that of common Salt. When exposed to the air, it falls into an opaque, white powder. It is incompatible with the chloride of magnesia and calcium, acetate of lead and nitrate of silver. It is sometimes adulterated with sulphate of Soda.

PROP., &c.—A mild saline cathartic. Useful in debilitated systems, and for children. Has been given in broths, to avoid the idea of medicine. Of late years, it has some celebrity as chemical food, to supply the osseous structure. *Dose*—℥iv to ℥i.

Soda Potassa Tartras. Tartrate of Soda and Potash—Rochelle Salt. This Salt is formed by saturating the excess of acid of Bi-tartrate of Potassa with Carbonate of Soda, which is decomposed, and its Soda combined with the tartaric acid, and its carbonic acid dissipated. The acid unites with two bases, forming a double Salt, the *Potassæ et Sodæ Tartras*, or Rochelle Salt. It has also been prepared by dissolving Carbonate of Soda, ℥xii, in boiling water, Oiv, gradually adding Bi-tartrate of Potash, ℥xvi. Filter, and concentrate till pellicles form.

Rochelle Salt is colorless, without odor; taste bitterish and saline. When first prepared, is in large crystals; but when exposed, breaks down into fine powder. It was first introduced by an apothecary of Rochelle, in 1672; hence the name of Rochelle Salts. It was for a long time kept a secret, and the discoverer made a large fortune by it. In 1731, another chemist discovered it, and presented it in an essay before the Academy of Sciences, in Paris.

PROP., &c.—This Salt is a mild hydragogue-cathartic, acting on the whole length of the alimentary canal; also moderately diuretic. It is a good substitute for Epsom Salts, and much more pleasant to the taste. It is a cooling or aperient cathartic, causing but little debility to the patient; hence indicated in low fevers. A mild and not unpleasant saline purge. It is incompatible with salts.

Dose—℥ii to ℥i, in water.

Pulveris Seidlitzenses—Seidlitz Powders. Take Rochelle Salts, ℥ii, and Bi-carbonate of Soda, ℈ii. Mix, and put in a white paper. Tartaric Acid, ℥iss; put in a blue paper. Dissolve them separately, each one in about three ounces of cold water; pour either one into the other, and when effervescence takes place, take the draught while foaming.

This is a cooling and grateful aperient, frequently acting as a mild cathartic.

METALS PROPER.

THE metals here to be noticed are characterized by certain properties; and, with the exception of Mercury, all become hard or solid at ordinary degrees of heat; and they are fusible, and even volatilizable, in powerful heat. They possess lustre and opacity, and may be reduced to extreme thinness.

The metallic elements (*Potassium* and *Sodium*) are lighter than water, whilst the metals are much heavier, Platinum being twenty times heavier than water. They possess tenacity, or the power of resisting the influences which tend, mechanicaly, to separate their particles from one another. Some of them possess also malleability, or the property of being expanded under the hammer. Their ductility, or the capacity of being drawn out into wire, is very great. Gold is the most malleable.

All of these metals are conductors of electricity. Most of them are insipid and inodorous, whilst a few, Copper, Iron, Tin, acquire both odor and taste when rubbed or heated. They differ in color. Silver, Tin, Lead, Iron, have a whitish or grey-blue tinge; Bismuth is reddish; Gold is yellow, and Copper red. Some of them are always found in a state of combination; others frequently, as Gold, Silver, Copper, Bismuth, and Mercury, are found in a pure state.

NAME.	SYMBOLS.	NO.	NAME.	SYMBOLS.	NO.
Argentum,	Ag.	108	Arsenicum,	As.	38
Aurum,	Au.	200	Bismuthum,	Bi.	72
Cuprum,	Cu.	32	Ferrum,	Fe.	28
Hydrargyrum,	Hg.	202	Mangnesium,	Mu.	28
Plumbum,	Pb.	104	Stannum,	St.	56
Stibium,	Sb.	65	Zincum,	Zu.	32

ARGENTUM.

Silver.

This metal, Ag.=108, is found on this continent, and other divisions of the globe. It occurs in pure crystallized masses, and in combination with gold, antimony, arsenic, bismuth, lead, iron and copper; sulphur is also found in Silver ores. The separation of Silver from its various combinations, is by mechanical and chemical processes which are not essential to notice here.

Silver, when pure, is malleable, ductile and tenacious; of clear white color; inodorous, tasteless, and susceptible of a high polish. Silver is one of the standard coins of this country, or was so until 1862, when the administration of Abraham Lincoln, who had been elected President in 1860, created an Act of Congress making paper issues a legal tender. The old Mexican Silver coin is pure. The British coin is alloyed with copper, eighteen parts to two hundred and twenty-two of Silver. That of the United States is about ten parts of copper to ninety of Silver.

Silver is used for plates to insert artificial teeth (it should be pure, to avoid the action of acids), and equal to gold for this purpose. Also employed for various purposes of useful and ornamental ware.

The only preparations for the medicinal use of Silver, are the *protoxide*, which is seldom employed, and the *nitrate* of frequent use.

Argenti Nitras. Nitrate of Silver—Lunar Caustic. This is prepared by pure Silver, ℥i; Nitric Acid, ℥iss; diluted with Water, fl℥ii; which makes a complete solution, when by heat the whole of the water is expelled, fusing and forming the result into a salt that is run into small cylindrical moulds that are greased, thus forming the *sticks*, lunar caustic, nitrate of Silver.

Prop., &c.—Nitrate of Silver is considered to be tonic and sedative, whilst its most prominent action is externally, as an efficient eschoratic. Internally it has been used as a tonic, largely diluted with water. As a topical application, in one grain to one ounce of water, with the camel-hair pencil, it has been applied to ulcers of the mouth.

The stick of nitrate of Silver is frequently employed upon chancres; being a powerful caustic astringent, it at once destroys the unhealthy fungus growth of the chancre; its action of destruction is so quick, that it is thought the absorbent vessels cannot take it up nor carry it into the general circulation, thereby injuring the animal economy. In applying it to chancres, its destructive powers are so great that it is liable to leave a depressed eschar that remains for the life of

the patient, a sad memento of folly. The nitrate or caustic potash does not produce this depressed eschar, although it is more likely to spread and inflame the healthy parts. The nitrate of Silver acts directly, and destroys the chancre upon which it is applied. For this purpose it is frequently applied in substance, and sometimes in Grs. x to Water, ℥i.

The internal use of nitrate of Silver is disapproved by our profession; it does not assimulate with, nor is it a component part of the human system. With the Old School, it has been given for epileptic fits and a few other diseases. When thus given, there are numerous lamentable living records of its effects, by producing a blue discoloration of the skin; disgraceful monuments of professional ignorance. Eclectics should only use it as a powerful destructive escharotic upon chancres.

ARSENICUM.

Arsenic.

Arsenic, As.=38, is sometimes found in a pure metallic state; yet most always in diffused combination with iron, copper, cobalt, silver, gold, and some few other substances. It is chiefly obtained from Germany, yet found in Italy and Hungary. It was somewhat understood by ancient physicians, Dioscorides and others; and first distinctly noticed in Europe by Brandt, 1733.

This metal is of a bluish-white or steel-gray color, of crystalline structure, brilliant, inodorous, insipid; when submitted to a powerful heat of 356 degrees, it emits the odor of garlic, by which it is distinguished from other metals.

This metal alone exerts no action on the living animal bodies. The arsenious acid is the chief combination for medicinal use, although we have the sulphuret and iodine of Arsenic.

Acidum Arseniosum—Arsenious Acid, Arsenic. Arsenious acid, or the white Arsenic of the shops, has been known for many ages, having been thus formed by nature nearly pure. It is also prepared from other refuse ores, in which Arsenic is found. In commerce it is found in flattened masses, of vitreous fracture, and white color. Most of it that is found in the shops is a white fine powder of very heavy weight. This powder has been adulterated with lime and chalk. To detect this, it is put in a suitable vessel and submitted to very great heat, sufficient to evaporate the acid, leaving the impurities as the remainder. Water holds Arsenious acid in suspension, yet some of the vegetable acids aids its solubility in water.

PROP., &c.—This dangerous and often fatal poison has been used as a medical agent for many years. As a tonic and anti-periodic, it has been administered for intermittent and other fevers, by dissolving it in water, in Fowler's solution, and other forms.

Pareira recommends Arsenic in chronic skin diseases, as lepra, psoriasis, eczema, and particularly for impetigo, carrying it if necessary to its constitutional effects of fever, thirst, and heat in the throat, stiffness of the face, itching of the eyelids, when its use should be suspended.

Arsenic has been employed for its action on the nervous system, epilepsy, neuralgia, and tetanus; for syphilis and other diseases.

Applied externally, it is a powerful caustic; and for this reason it has, by the profession (Old School), been applied to cancerous affections, to destroy the unhealthy growth of this disease, when it sloughs off. It is more especially employed by empirics, or cancer doctors, combined with morphia, in form of salve, to allay pain.

Arsenic is a leading remedy in the Homeopathic practice for skin diseases; and Hahneman, the author of this system, largely comments upon its use, and seems to have understood its direful effects upon the human economy in ordinary doses, and wisely concludes to use it in the decillianth part of a grain.

This poison has fallen into disuse to a great extent; and yet records are made to prove that in Bohemia and other sections, the natives use it as a tonic, both to the nervous system and the organs of digestion, beginning with the sixteenth part of a grain, increasing it to several grains at a dose; that the system becomes habituated to it, so as to call for its use. This, however, is denied by some writers.

Arsenic is not employed by the intelligent Eclectic physician. We have substitutes for all diseases in which it is said to be indicated. The public understand it to be an agent destructive to life; hence it is occasionally taken to commit suicide, and given by those who wish to take life. The symptoms of Arsenic in destructive doses are, a burning sensation in the stomach, reaching to the throat and mouth, with dryness and inflammation of the tongue and mouth; nausea and vomiting; insatiable thirst, diarrhea, and tenesmus coming on at intervals; pains in the stomach and bowels; cold and prickling sensation of the surface; cold sweats on the body; sometimes eruptions on the surface, and ptyalism; sometimes aversion to food and water; general prostration, delirium, at intervals; quick, faint pulse, oppressed breathing, dry cough, great anxiety and restlessness, utter prostration, death.

The dose necessary to produce death is variously estimated.

Some authors mention four and a half grains, others two, and some that one grain, repeated, will destroy life. The solution is thought to be more fatal than the powder, causing less pain and inflammation, since the solution is sooner taken into the circulation. The powder is most likely to produce inflammation of patches in the stomach; and in one case I found, by post-mortem, that the walls of the stomach, in patches, were so nearly eaten through that I could readily press my fingers through the wall. In this case the victim had vomited bloody matter, with many of the symptoms above mentioned.

The physician should bear in mind that all of the symptoms mentioned do not always occur in the one patient, and that others, not noticed, may occur. Large doses are less liable to prove fatal than small doses; because the large dose of six or more grains very soon so irritates the stomach that vomiting quickly ensues, and thus throwing off nearly the whole dose, the patient may be saved.

Although Arsenic is a destructive agent to the living animal structure, it is known to be a preservative to the lifeless body; hence it has been injected into subjects of the dissection-room, and in solution applied to the surface of the body to prevent putrefaction, and preserve the features of the dead before burial.

By some authors, it is related that Arsenic, taken in small and repeated doses, acts upon the system so as to require its continued use, similar to influences of opium and liquor; others doubt this assertion.

Arsenic is one of the mineral agents that does not assimilate with the blood; and for this reason Eclectic physicians object to its use.

The antidotes for Arsenic are numerous, at least by authors. In over-doses, the first indication is to free the stomach of the Arsenic as much as possible, by giving freely of demulcents, as flour mixed with water or milk, warm gruels and broths, until the stomach is full, which should be done in as short a time as possible; then cause vomiting by tickling the throat and giving the most active emetics at hand. Next a cathartic is necessary to carry off the poison that may have passed into the bowels, and for this purpose some advise Castor oil, with the view to shield and protect the canal. This may be the best plan, yet I incline to the practice of giving a brisk hydrogogue purge, to cause large watery discharges, to wash out the whole length of the bowels; then to be followed with oil, white of eggs, and mucilages, to shield and heal the irritation produced by the Arsenic. The next object is to relieve the system by giving diaphoretics to excite free perspiration, by adding vapor and warmth to the surface, to aid the poisonous particles float-

ing in the blood circulation to pass off through the skin, lungs and kidneys. *Dose*—Sixteenth to one-eighth of a grain.

Liquor Potassa Arsenitis—Solution of Arsenite of Potassa, Fowler's Solution. Arsenious Acid and Carbonate of Potassa, each, eighty grains; distilled Water, half a pint; add and boil in a glass vessel until the acid and potassa are dissolved; when cool, add to the solution five fluid-drachms of the compound tincture of Lavender; then add as much distilled water as will make of the whole one pint. The object of the Lavender is merely to give color to the solution.

By the Old School, this solution is considered an admirable anti-periodic and tonic, and may be given in divided doses every two hours during the intermission of the paroxysm. It determines to the surface, equalizes the circulation, excites the cutaneous capillaries, and improves the general action of the skin. When it increases the pulse, and excites an itching of the skin, with stiffness of the eyelids, followed by weakness and depression of spirits, its use should be stopped, as these are signs of the poisonous effects. *Dose*—M. v to x, increased to xx; but its action should be watched. This solution is considered preferable to the Arsenic in powder.

AURUM.

Gold.

Gold, Au.=200, is a metal of remote antiquity, and thought to be the first with which mankind became acquainted. It is found pure and mixed with silver and other ores. It is obtained in Europe and Asia. On this continent it is found in great abundance; South America, Mexico, and the Southern States to some extent; and the mines of California yield it in profusion. It is freed from impurities by stamping and washing; then fusing it with lead, and submitting the compound to cupellation; also by amalgamating it with mercury, and distilling the compound. To separate it from silver, the alloy is treated with nitric acid, which dissolves out the silver.

Gold has a rich yellow color, although some of the California metal is of reddish-yellow color. It is ductile and malleable, fusing in 1016 degrees Fahrenheit. When found pure in the mines, it is in form of cubical crystals. Air and water does not act upon it, nor will any of the acids, nitric, muriatic, &c.; but nitro-hydrochloric acid will hold it in solution.

Gold unites with chlorine and oxygen. There are but few of its therapeutical preparations—the chlorides, iodides, cyan-

ides, and the double salt of terchloride of Gold and Sodium. The preparations of Gold are powerful stimulants, resembling the mercurial salts in their influence as medicinal agents.

PROP., &c.—The above-named preparations form different salts of Gold, acting with more or less acrimony upon the living body. When internally administered, they are liable to excite irritation of the mucus surface; and being absorbed, set up fever in the system, even in doses of one-tenth of a grain, causing gastric irritation, a dry, red tongue, soreness of the fauces, colic, and diarrhea; and yet it is stated, that when rubbed on the tongue, they operate upon the capillaries, independent of any local irritation. In minute doses, they are said to improve the digestive functions of the stomach, whilst they are liable to cause constipation by their augmented absorption.

On the nervous system, the preparations of Gold are said to augment the mental faculties; also to increase uterine secretions.

There are some creditable physicians who esteem the preparations of Gold to be of great importance in the treatment of tubercular affections, and diseases peculiar to females.

The *Gold-pill*, a secret nostrum, is but a disguise that is sold by druggists, some of whom desire the public to believe they are model saints, advertising them as a remedy to restore imperfect menstruation, with the view to offer them to produce abortion. These pills are covered with the Gold-foil—the pill itself only an emmenagogue-cathartic, which has the desired effect to humbug females out of their money—one dollar per box.

Gold is but seldom used by the profession. Its different preparations with chlorine are undoubtedly active enough to effect changes in the human structure. It is not acknowledged to be a creditable remedy in the Eclectic profession; yet some few have much confidence in its remedial influence in tubercular diseases.

BISMUTHUM.

Bismuth.

This metal, Bi.=72, was discovered in 1520; but previous to this time it was confounded with lead. It is found in Europe and America, both in its pure state, and combined with several ores and substances.

Bismuth is a reddish-white metal, brittle, with some lustre, and of lamellated structure. It is malleable, and fuses at a

heat of 476 degrees Fahrenheit. It is acted upon by diluted nitric acid, forming an oxide that unites with the acid, composing the *Bismuthi Subnitras*, or the majestery of Bismuth of authors of the last century. The nitrate of Bismuth has been employed in some diseases as a tonic and anti-spasmodic. Seldom used as a medicinal agent.

CUPRUM.

Copper.

Copper, Cu.=32, is a metal of reddish color, found in all divisions of the world, and sometimes in crystallized form; and Copper ores are mixed with sulphur, as the Copper pyrites or sulphuret, combined with iron, from which Copper is separated by long-continued roasting in reverbrating furnaces, when sulphur and sulphuric acid are driven off.

It is a hard, elastic sonorous metal, insipid and inodorous; yet when hard rubbed, it gives off a peculiar odor, and has a nauseous, styptic taste. It admits of a high polish. It is tenacious, ductile, malleable. It fuses at a bright red heat, and gives off a flame of greenish tinge. In moist air, it oxidizes, forming a carbonate.

Pure Copper-metal does not act on the animal structure; and to prove this, cases are known where Copper coin have been several days passing through the alimentary canal without causing inconvenience to the person.

The medicinal compounds of Copper are the sulphate, carbonate, and acetates.

Cupri Sulphas—Sulphate of Copper, Blue Vitriol. This salt is usually seen in oblique, rhombic crystals, yet varies by the process of obtaining it. It has a strong, styptic taste, but without odor. Soluble in four parts of water, at 600 degrees Fahrenheit, and in two parts of boiling water. It is soluble in alcohol. It is decomposed by alkaline solutions; by lime-water, liquor potassa, bi-borate and phosphate of soda, astringent vegetable decoctions and infusions.

This salt is obtained by evaporating the waters of Copper-mines down to crystallization. Another mode is to sprinkle sulphur on sheets of Copper; then heat them to redness, and plunge them into vessels of water, which is evaporated to procure the salts.

PROP., &c.—Sulphate of Copper is used as an irritant, tonic, emetic, astringent, escharotic. It has been employed as a tonic and astringent in diarrhea and Asiatic cholera—one-fourth of

a grain, combined with opium. As an emetic, it has been in great use with the Alopathic profession until within a few years. In full doses, its action is quick and powerful, without producing nausea. It irritates the stomach, causing severe, hard vomiting. Rejected by the Eclectic profession.

Its escarotic powers are considerable, and applied to sores and ulcers. It is also an astringent to dead animal matter.

Dose—Grs. i to iii, in a little water, as an emetic.

Di-acetas Cupri Impura—Cupri Sub-acetas Verdigris. This is prepared by the wine-makers of France, by laying plates of Copper in the marc of grapes from the wine-vats. It is also prepared by moistening Copper plates with vinegar, or with pyroligneous acid. Verdigris is usually found in adhered masses. It is dry, easily powdered, and pea-green color. It has a nauseous, styptic, coppery trste.

PROP., &c.—Considered to be tonic, emetic, and escharotic. *Dose*—Gr. ss. Seldom employed.

Cupri Acetas—Acetate of Copper. Formed by dissolving Verdigris in pyroligneous acid, decanting off the solution, and evaporate to crystallization. It is of deep green colored crystals, which if long exposed to the air, changes to a bluish-green. Soluble in water, but not in alcohol. It is more virulent in action on the system than Verdigris. Not used.

There are several other preparations of Copper; but as they are not used by our profession, it is not important to notice them. Copper sheets are used in the tubs or vats for preparing pickles, to set the green color, to harden them, so as to have their appearance and hard, crisp taste, more acceptable to those who delight in this indigestable food.

There are other preparations, as the *liquor Cupri*, *unguentum Cupri*, &c.

FERRUM.

Iron.

Ferrum, or Iron, Fe.=28, is sometimes found in its pure or native state, and in its combinations found in all divisions of the world; with sulphur and iron pyrites, with earths and saline bodies; it also exists in vegetables and the blood of animal creation. Iron is abundantly found on the American continent, mixed with various ores and the earths; it is also found pure.

Iron is extracted from ores by rendering to coarse powder, mixing them with charcoal and lime, and submitting them to an intense heat in a furnace. In this way pure Iron is separated from its impurities.

Pure Iron is a hard, ductile metal, malleable and tenacious; of gray color, and susceptible of high polish. It is scarcely fusible, and never volatillized. Both in its pure and combined state it is employed as a medical agent, yet it exerts no physiological action on the animal economy, unless it meets with acid in the stomach. Iron is an acknowledged agent in the Eclectic profession.

There are over forty different preparations of Iron noticed by some authors; yet but few of these are of much practical importance to the physician, and such only will be noticed here. Iron, in its various forms, has been denominated Ferruginous preparations.

Ferri Ramenta.—Iron-filings. This may be obtained by filing the pure iron wire. The magnate has been used to separate the pure from impurities that may be found in these filings.

PROP., &c.—Tonic. It is believed that it produces no medicinal action until it is oxidized in the stomach. Not much employed.

Doss—Grs. v to xv, in honey or thick syrup. In compound pills, to meet indications.

Ferri Oxydum Rubrum.—Red Oxide of Iron. Formed by decomposing four parts of sulphate of Iron in solution with nearly five parts of carbonate of soda, washing and drying the precipitate. The carbonic acid is driven off as the protoxide attracts oxygen from the air, and is converted into the sesquioxide.

Red Oxide of Iron is of a reddish-brown color. When properly prepared, it is soluble in the juices of the stomach, and easily taken into the circulation.

PROP., &c.—Has been employed as a tonic in emaciated conditions of the system, to give strength and color to the blood; also for neuralgia. It is incompatible with acids. *Dose*—℥ss to ii. Considered an antidote to arsenious acids.

Emplastrum Ferri.—Iron Plaster. Red Oxide of Iron, ℥i; Olive or Sweet Oil, fl℥iss. Mix and add Litharage Plaster, ℥iii; Resin ℥v; Beeswax, ℥iv, which has been melted by gentle heat, and while both mixtures are warm, mix them thoroughly together, and form them into rolls of convenient size; then as desired, with a hot knife, cut off thin layers, and spread on sheep-skins for plasters, which are strengthening and irritating. This is more acceptable to the skin of some delicate persons than is the common irritating plaster known to Eclectic physicians.

Hydrated Sesqui-oxide of Iron.—Rust of Iron. Formed by the action of moisture and air upon Iron. The rust thus formed is scraped off the iron. This is washed in water, when the water yet holding the fine particles is poured off, and the rust, being the remainder, is dried, forming the Rust of Iron.

This preparation is of a yellowish-brown color. This is frequently called the carbonate of iron.

PROP., &c.—Tonic. Used in form of pills, generally combined with other agents, as aloes and myrrh. It is one of the ferruginous preparations for enemic conditions of the system. It has also been employed for poisoning by arenious acid *Dose*—Grs. v to xxv.

Ferri Sulphas.—Sulphate of Iron. This salt of Iron is prepared by dissolving Iron-filings, ℥viii, in Sulphuric Acid, ℥xiv, mixed with water, Oiv. In these elements effervescence takes place, forming a protoxide, which combines with the sulphuric acid, and forms the sulphate. Sulphate of Iron is decomposed by alkalies, and thus carbonates.

PROP., &c.—A tonic with some irritant power. When given alone, which is seldom the case, it should be in form of pills. *Dose*—Grs. i to v.

Pilula Aloes et Ferri.—Pill of Aloes, Iron and Myrrh. Three parts of Sulphate of Iron, two parts of Barbadoes Aloes and Myrrh each, eight parts of Confection of Roses, divided into three grain pills, three or four daily.

Pilula Rhei et Ferri.—Pills of Rhubarb and Iron. Four parts of Sulphate of Iron, ten parts of powdered Rhubarb, and five parts of Confection of Roses, divided into three-grain pills; one three to four times daily. The first pill is well adapted to uterine derangements, as amenorrhea, and atonic condition of the system. The second to dyspepsia, or weakened conditions of the digestive functions.

Ferri Acetatis Tinctura.—Tincture of Acetate of Iron. Take two parts of Acetate of Potassa, one part of Sulphate of Iron, and twenty-six parts of rectified Spirits. Mix well in a porcelain or glass mortar, pour into a suitable bottle, and let it digest for several days, and filter; when the acetate of Iron and sulphate of potassa are formed. It has the color of claret and the odor of vinegar.

PROP., &c.—Tonic, astringent, and refrigerant. Indicated in scrofulous and enemic conditions. *Dose*—Gtts. xx to ℥i.

Ferri Percyanidum.—Ferro-prussiate of Iron—Prussian Blue. This was discovered in 1710 by Driesbash, of Berlin. One mode of preparing this is by fusing animal matter with carbonate of potassa, and treating the solution with sulphate of Iron and alum, then digesting in diluted sulphuric acid, before it can be used as a medicinal agent. Its color is a deep indigo-blue, insoluble, inodorous, and tasteless; but decomposed by strong acids.

PROP., &c.—Prussian Blue is not recognized as officinal by English authors. In Germany, and especially in the United States, it is officinal, and deemed an article of some importance

as a tonic and for intermittent fevers. It is, however, seldom administered alone.

Pulvis Ferri Compositus.—Compound Powder of Prussiate of Iron, Quinine and Capsicum. Prussian Blue, Quinine and Capsicum, each one drachm. Mix thoroughly in the mortar. *Dose*—Grs. iii to v, every hour, commencing four hours before the expected chill, repeated every day until the chill and fever is arrested; and again renewed at the end of seven or fourteen days. This formula, or one similar, has been much used and highly esteemed by the Eclectic profession. It is well adapted to cases of weak and debilitated condition. It is of unpleasant taste, and sometimes ejected when the stomach is irritable. It may be given in water or thin mucilage.

Pilula Ferri Compositus.—Compound Pills of Prussiate of Iron. The above formula of powder may be formed into pills, by adding simple syrup, or syrup of acasia, sufficient to form into pill-mass. Divide into three-grain pills, and observe the rule given for the powder above. These pills will be retained in the stomach when the powders will be ejected.

Whether the powder or pills be employed, it is advisable to precede them by cathartics or emetico-carthartics, to make an impression on the portal circulation, and carrying off any abundant secretions of biliary matter.

Liquor Ferri Per-sulphatis.—Solution of Per-sulphate of Iron—Monsel's Solution. This solution is formed by adding Sulphuric and Nitric acid to Sulphate of Iron. The two acids are mixed with boiling water, when the Sulphate of Iron is gradually added until effervescence takes place. This formula is found in the United States Pharmacopea (Old School), published by J. B. Lippincott & Co., Philadelphia, 1863.

This preparation was brought to my notice before the above work appeared, by Joseph P. Fitler, Professor of Chemistry in the Eclectic Medical College of Pennsylvania.

PROP., &c.—It is an efficient astringent for hemorrhoidal piles and bleeding of the rectum. It should be diluted; one drachm to two ounces of water, thrown up the rectum by a small glass female syringe. In my experience, it is superior to any of the vegetable astringents.

It is an astringent tonic, with but little, if any, caustic or irritating powers. It is indicated in five drops to fifteen of water for hemorrhage of the stomach, lungs, and kidneys. Try it.

The chalybeates, or preparations of Iron, are numerous; but those above noticed will, we think, answer all indications. The *citrates* of Iron may possibly possess some advantages; but as this is doubtful, and they are acrid in many cases, it is thought best to omit them.

Iron is admitted into the Eclectic Materia Medica upon the principle that it is known to be one of the constituent elements of the animal economy. It is admitted that it has much to do in coloring the red corpuscles of the blood; and that it is of value to impart color, strength, and quality to that fluid, especially in long standing cases of amenorrhea, chlorosis, and scrofulous conditions.

These preparations increase the digestive powers of the stomach and intestines, being dissolved in the gastric and intestinal juices, are taken up by the absorbent vessels, enter the blood, and stimulate the whole system. It has been disputed that Iron is absorbed into the blood. But experiments have been made upon dogs by feeding them on Iron, killing them and an equal number of others, when by analyzation, those taking the Iron proved to have the most in the blood.

By experiments, it has also been shown that Iron increases the pulse; the heat and thirst of the body augmented, and the countenance rendered more florid. It seems plausable that this agent, in small doses, is of service in the diseases referred to. But it is quite evident that physicians administer much more than is essential to the system: for even in health there are but small traces of Iron in the blood, so that if the stomach or the blood contains it in excess, mischief is done, when its good effects are expected. The administration of much Iron causes dark colored feces, and unpleasant eructations.

HYDRARGYRUM.

Mercury—Quicksilver.

Hydrargyrum, Hg.=202, or Mercury, was known to the ancients, and used in the arts of gilding. The Hebrew and Egyptian magicians used it in wooden wands to imitate the miracles of Moses, some 1300 years before Christ. Aristotle speaks of a wooden Venus, made to move by means of Mercury. Dœdatus is specially mentioned as having been active in these mysteries before the people; and it is supposed that he was taught this art by the priests of Memphis. It is related that Avacina, an Arabian physician, was one of the first that used Mercury, and only externally, against vermin and cutaneous diseases.

To Paracelsus is accorded the credit (or disgrace) of using Mercury and its preparations internally, in the early part of the seventeenth century. He was a bold empiric, and the first to fill the chair of Medical Chemistry in the Medical School of Europe. With him dates a revolution inaugurating the inter-

nal use of Mercury, and other mineral remedies. Before him the Galenic practice had chiefly prevailed for about five hundred years. Paracelsus, being a bold, energetic fanatic, with the aid of followers, so pressed the then new, or chemical practice, that by the middle of the seventeenth century it took possession of the medical schools of Europe. Mercury or Quicksilver was the leading agent in the new chemical practice; and from this fact arose the name of *quack*, which was with great vehemence applied to Paracelsus and his followers; and thus on to the present day, were, and truly are, the legitimate *quacks*, at least so far as the term is applicable.

Paracelsus became popular, and so elated that he supposed himself the embodiment of medical knowledge. Before his class he burned the writings of Avacenna, Galen, and other great men, declaring himself the achmea of medical knowledge. He invented a medicine to prolong life indefinately, yet he died in the street, an outcast, with a bottle of his "Immortal Catholican" in his pocket," aged forty-nine years.

This new chemical, or mercurial practice, held direful sway over the schools, physicians, and the civilized world, all bowing to its terrible effects, through sickness unto death; or in life-lingering mercurial diseases, passing its taints from parent to child.

But a counter-revolution in medicine appeared in the first quarter of the present century. Discarding Quicksilver and other mineral and fatal agents, thus the Eclectic practice stands out in bold relief to suffering humanity.

Mercury is found in various parts of Europe; in China, South America, Mexico, and in California. It is found pure in some of the mines—in a state of amalgum, mixed with silver and other agents; yet in Cinnabar, it is most frequently found a sulphuret of Mercury. The metal is extracted by submitting the ore, mixed with lime or iron, to the action of heat; the lime or iron, combining with the sulphur, sets the Mercury free, to be volatilized in the metallic state.

Quicksilver is an odorless, tasteless, heavy, liquid metal, of whitish color, like silver or tin. When thrown on a table or floor, it separates into innumerable small particles, that will readily unite again. It quickly unites with lead and tin. To ascertain the impurities of Mercury, it may be placed on white paper or on an earthen plate; and when moved about, it leaves dark traces behind.

Amalgum of Mercury with Tin—Take about half an ounce of Mercury, and dissolve in it one sheet of Tin-foil used by dentists. Place this in a small piece of buckskin; bring its outer edges together, holding it firmly so as to admit of no escape, and press out all the Mercury through the skin, thus

leaving the tin in a semi-solid state, so that it can be quickly empacted in the cavity of a tooth which has been already cleaned out and prepared for its reception. In this common way, many teeth are filled, preserving them for many years.

In the Alopathic cathartics are to be found a long list of mercurial preparations; but as none of them are used by the Eclectic physician internally, and but one or two, if any, are used externally, only a few of them will be noticed in this work.

PROP., &c.—Mercury, in its preparations, is reputed to be a an alterative, cathartic, sialagogue, and excitant. The most of these preparations are in forms of sulphurets, chlorides, cyanides, iodides, oxides, &c. In whatever manner they are introduced into the system, they accumulate in it, and set up a febrile action, evidenced both by the state of the pulse and the nerves. They are taken up by the absorbent vessels, affecting to a greater or less extent the whole system. Their action on the glandular system, especially the salivary glands, is marked and powerful.

The temperament and idiosyncrasy has been noticed to have some bearing in administering these remedies. Persons of a sanguine temperament are more succeptible than others. By authors of the Alopathic practice, women are more easily brought under the influence of mercurials than men, as they operate specially on the uterine organs, and should be suspended during the catamenial flow. In pregnancy, their use demands caution. It is also asserted by the above authority, that when the mother having syphilis, using mercurials, this agent is likely to be communicated to the child, whether in utero, or during lactation. This position may be true; and it is equally true that mercurial taints are transmitted from the mother to the child, thus imparting heridatory mercurial diseases to the offspring, which, by the physician, is ascribed, too often, to syphilitic and scrofulous taints, through policy or ignorance.

One of the best and late authors of the Alopathic practice says: "In a therapeutical point of view, there is scarcely a disease in which mercurials may not be employed as useful aids to other plans of treatment;" "and as alteratives, mercurials are more commonly employed than any other medicinal agents." Again: "In almost every chronic disorder of the liver, and in other organs connected with the digestive functions, Mercury is the remedy most frequently resorted to."

As an alterative and sialagogue, mercurials have marked effects on the mucus folicles of the mouth and salivary glands, with tenderness and tremefaction. Its salivating effects are remarkable, and in some patients carried to the extent of spit-

ting three or four pounds in twenty-four hours; and Turner says from two to three quarts are "a good and sufficient discharge.

By analyzation, mercurial ptyalism, or saliva, has been found to contain—coagulated albumen, mucus, with a little albumen, chloride of sodium, and water. This differs from saliva in a healthy state.

But while mercurials are or have been employed in all forms of disease by the Alopathic school, there are some special diseases for which they are recommended.

1. Fevers. It is contended that salivation diminishes the succeptibility to the contagion of fevers, and yet not an absolute preventative, because patients under the full influence of mercurials have caught fever and died; althouth death after salivation is less likely to occur. Some authors (Dr. Graves) "declare the use of Mercury in fevers to be injudicious and unnecessary, unless there be inflammation in some particular organ."

2. Inflammation. Mercurials have been much employed to combat inflammation; hence termed *anlipthologastic.* Yet it is admitted they may prove injurious in erysipelations, scrofulous, malignant, and gangrenous inflammation. It is said to be usefnl in adhesive inflammation, to control and prevent the adhesion of coagulated lymph. Here much uncertainty exists, owing to the organ affected, and the kind of inflammation. But it is admitted that much uncertainty exists in its use for rheumatic, scrofulous, and scorbutic inflammation.

In hepatitis, (after blood-letting), mercurials are specially recommended. In inflammation of the lungs, (after bleeding), they are advised. If hepatization has taken place, the blue pill and opium. In acute cases, calomel and opium; and so on, much depending on the ability of the physician in diagnosing his case.

3. Venereal diseases. For many years it was believed by the Alopathic physician that this disease could not be cured without the use of mercurials; but finally the army surgeons arrived at a different conclusion, especially those of Europe; and that many of the bad cases of this disease arose from the use of mercurials. And although many good results followed its use, serions results frequently followed. But this was *the* remedy of this disease, whether *popular*, *pastular*, *phagedenic*, or *scaly*. Yet the most respectable authorities admit that much uncertainty attends its use, much depending on the physician in diagnosing the case.

The fact is, that many good physicians would gladly have avoided its use in this disease, yet they were locked up in the ignorance of their education. They knew nothing of the

effects of Podophyllum, Iris Versicola, Leptandra, and other efficient alteratives, until the Eclectic profession brought them to light.

4. Dropsy. In this disease they are still in doubt, for Pareira says "they may either do good or harm," as when dropsical effusion depends on inflammation, mercurials may be given with good effect, if hydrocephalus "arises from menengitis, or hydrothorax from pleuritis." If ascites occurs from enlargement of the liver, which compresses the vena portæ, mercurials are sometimes beneficial. On the contrary, when dropsy occurs in old persons, with general debility, salivation is almost always hurtful. In albumenous discharges, it is considered hurtful. "It is of no service in primary disorder, while its effect on the mouth is often very violent and uncontrollable. "In this disease, calomel is often employed in conjunction with squills.

5. In chronic diseases of the viscera, it is specially employed. Here it is recommended for the enlargement of the liver and hepatization of the lungs; but if attended with cancerous and fungus hematoides, it is not advised.

6. Chronic diseases of the nervous system. Mercurials are here specially advised for hemiplegia, impaired vision, headaches, after purging and bleeding have failed. Mercurials have also been given in mania, tetanus, hysteria, epilepsy, paralysis, and other affections of the nervous system; yet in all of these uncertainty is admitted to exist.

7. In scrofula, primary ulcers, and in extreme debility, it is admitted to be of doubtful utility by Alopathic authorities; but, as before stated, mercurials have been employed for almost every disease.

8. For relief of Asiatic or spasmodic cholera, physicians of both America and Europe have advised its use in form of calomel. In this disease, the system is rapidly drained of the watery parts of the blood; and yet this agent is advised to salivation. What a horrible practice!

Of the theory of the physiological action of Mercury, there is a variety of opinions by authors. In fact, several of its advocates frankly admit, that owing to the varying forms and stages of disease, with the peculiarities of different constitutions, there is so much uncertainty regarding its action that much doubt is expressed concerning its beneficial effects.

It has been established by creditable European authors, that by external use, Mercury may be absorbed, and deposited in the solids of the body, or through the excretions pass out of the body. Thus Buckner and other investigators have disdiscovered it in the blood. It has also been found in the secretions; in saliva, perspiration, bile, urine, &c.

Mercury, in substance, has been discovered in the organic solids of the system; the bones, pleura, synovial capsules, brain, and some other solids of the body. This article, when taken into the stomach in its metallic state, has caused some difference of opinion. Some authors assert that two pounds have been given daily without bad effects, for constipation; another, that a man retained seven ounces for fourteen days, followed by ulceration of the mouth, paralysis, and profuse salivation. It is believed, however, that this metal, when taken, does not produce any effect until it becomes changed by oxidization in the stomach or bowels.

Mercurial diseases. The advocates of mercurials, with all of their false theories on the subject, have, some of them, had the magnanimity to investigate and publish the many diseases engendered by their use; and the unprejudiced student will inquire why it is that professional men could have, for nearly two centuries, persisted in the use of a remedy that can produce more diseases than it is (by their own showing) capable of curing. The best Alopathic authorities admit that the preparations of Mercury will produce the following diseases:

Mercurial Fever—Febris Mercurialis—Will be noticed by dryness of the mouth, headache, hot, dry skin, loss of appetite, nausea, red gums, quick pulse, swelled tongue, sordes of the teeth, profuse salivation, sweating, purging, and sometimes an eruption of the surface, followed by great anxiety, loss of strength, trembling, frequent sighing, small, quick pulse, nausea, contracted countenance, extreme debility, utter prostration, death.

Mercurial Salivation or *Mercurial Ptyalism.*—Besides the above symptoms of salivation by Mercury, the following effects are noticed in this disease: From the extent of Mercury used, or from the peculiar idiosyncrasy of the constitution of the patient, the mouth is seriously affected, the gums swelled and ulcerated, the tongue swelled and hanging out of the mouth, preventing eating or speaking; the salivary glands painfully swelled, with copious flow of salivation. Pareira relates that in one case sixteen pounds were thus evacuated in twenty-four hours. Then the gums slough off, the teeth loosened, and necrosis of the alveola process takes place; the system becomes exhausted, and the patient dies. These may be considered extreme cases, yet many have thus died, and many have recovered by the recuperative powers of nature; or partially so, leaving the body of the patient a living thermometer to indicate the change of the temperature. It is a living disgrace to the medical profession to have persisted so long in the use of mercurial preparations.

Mercurial Diarrhea.—Violent diarrhea or purging is not an

unfrequent consequence of the use of mercurial preparations, with frequent gripings, and bloody discharges from the bowels. Sometimes fulness of the left hypocondria, burning of the region of the pancreas; evacuations frothy and tough, or greenish intermixed matter, with bile.

Excessive secretions of the kidneys sometimes occur from the use of mercurials.

Excessive sweating is a disease that occasionally occurs from the use of mercurials.

Mercurial Skin Diseases.—Several forms of this disease have been noticed in the course of mercurial exhibitions, which extend over the body in minute vessicles, with a little redness; with vessicles the size of a pin-head, with an opaque and milky serum, that may terminate in disquamation; yet sometimes the epidermis falls off in flakes, or the hair and nails fall off, and the eyes and eyebrows are denuded; the respiratory organs affected, with dry cough, and tightness of the precordia.

Chronic Skin Diseases.—This is sometimes noticed from the long continuance of mercurials.

Mercurial inflammation of eyes and fauces have been mentioned by several authors.

Mercurial Inflammatiou of the Periostium.—This form of mercurial disease is occasionally noticed. This most remarkable case of inflammation of the direct covering (periostium) of the bone which I have seen, was the wife of a special friend, who had been put under a mercurial course of salivation for fever. After the fever had subsided, she found the nasal bones seriously affected to exfoliation, thus greatly deforming the before handsome features. She partially recovered, with a broken constitution. Every change of the atmosphere induced deep-seated neuralgic pains in the limbs and head, with swelling and intense pain; when after a few years of agony, the periostium of the bones of the head took on the mercurial inflammation, that was followed by swelling and suppuration, forming large abcesses of matter, that discharged in large quantities, with lessened pain, but great prostration, until death closed the scene of suffering.

Mercurial enlargement of the messenteric, axilary, and inguinal glands have been noticed by some authors.

Mercurial sloughing and ulceration have been noticed in the treatment of venerial diseases, by the attacks of mercurials upon the absorbent glands and fibrous membranes.

Mercurial Nervous Diseases.—The damaging effects of mercurials upon the nervous systen have been observed in a trembling condition of the muscular fibre, epilepsy, stammering, paralysis, and shaking palsy.

Mercurial Cachexia has been noticed by a general wasting

of the system, loss of appetite and exertion, with increased flow of the salivary glands.

Mercurial Poisoning.—By the advocates of mercurials it is admitted that they produce inflammation of the stomach and bowels. The patient feels a tightness of the throat, with a styptic and burning taste; the stomach rejecting everything, the face swelled, vomiting and purging, sometimes of bloody matter; urinary secretions partially or wholly suppressed; difficult respiration; contracted pulse; cold extremities; followed with drowsiness, twitchings, convulsions, and death. There are other symptoms of the fatality of mercurial poisoning, the notice of which will not be of any practical use.

Our profession studiously avoids the internal use of mercurial preparations. Although educated in the Alopathic school of medicine, we are happy to say we have never administered, internally, a single grain of these destructive preparations. We are free to admit that all we have written has been gathered from the best Alopathic authorities, and from personal observation of its effects, where it has been advised by others.

For the Eclectic physicians and students we feel that too much space has already been given to the effects of mercurial agents. These preparations are numerous; but we will only refer to those in most general use by its advocates.

Metallic or *Liquid Mercury* has been used to dissolve silver coins taken into the stomach; also to relieve intus-susception of the bowels, although admitted by its advocates to be of doubtful utility. The *dose* varies in the opinions of authors and physicians. Some administer ten grains in a crumb of bread, to relieve obstructions of the bowels. Pareira puts the dose at one ounce, increasing to one pound.

Hydrargyrum Cum Creta.—Mercury with Chalk. Mercury is rubbed together with powdered chalk sufficient to have the globules disappear, and produce a gray powder. It is considered by its advocates as a mild mercurial for children, to arrest diarrhea and excite secretions. *Dose*—Grs. v to xv.

Pilula Hydrargyri.—Blue Pill. Mercury, ℥ii; Confection of Roses, ℥iii; rub well in the mortar until the globules disappear; then add ℥i of powdered liquorice root, or its extract, rubbing all well together, forming a mass to be divided into five-grain pills. This pill is advised in hepatic diseases, for affections of the spleen, pancreas, and kidneys. Its use is advised in the evening, to be followed in the morning with a mild purgative. This pill has been employed for its general alterative action.

Hydrargyuri Chloridum.—Hydrarg. Chlo. Mite—Colomel. We omit the formula of calomel because it is not essential to the student, physician or druggist. It is a combination of two

equivalents of Mercury with one of chlorine. It is a fine white powder, odorless, and tasteless. Its advocates have for a long period of years employed it for almost every form of disease, especially for hepatic and other glandulous disorders; and it has long been the great remedy in venereal diseases.

Calomel is yet considered by many of the Alopathic physicians as the alpha and omega in the treatment of diseases. The sad lessons daily presented in its effects upon their patients have not yet induced them to lay it on the shelf, although they have greatly modified its use. Mercurial ptyalism, with swelled and protruding tongue, spongy gums, and loosened teeth, is enough to cause any honorable physician to stop and reflect in its use.

Calomel, in full doses, acts as a purgative, although it is advised to be accompanied with, or followed by a purgative. In years gone by, the celebrated Dr. Rush, of Philadelphia, advised ten grains each of Calomel and jalap. His profession took the hint, and the universal practice was, "*ten* and *ten*." How long and terribly have the people suffered from professional ignorance. *Dose*—Grs. i to xx, varying according to the age and condition of the patient. To produce salivation, small and repeated doses are advised. To let it alone is the most advisable. In the course of sixteen years' practice I have not used one grain.

Hydrargyri Bi-chloridium.—Corrosive Sublimate. This preparation is produced by a combination of Mercury, sulphuric acid, and chloride of sodium. It is found in small crystals, in mass, white, with metallic taste. Its action is similar to other mercurials, with an increased power of irritation.

In small doses, corrosive sublimate has been used as an alterative for secondary syphilis, cutaneous and other chronic diseases. It is one of the most powerful and poisonous agents. Its solution in water or alcohol is often used to destroy bedbugs and other vermin. *Dose*—One-fifteenth to one-eighth of a grain.

Venereal Sores or *Chancres.*—Corrosive sublimate (by some authors, muriate of Mercury), has been advised to destroy venereal chancres. Here is one of the forms: Solution of Borax, fℨviii; Corrosive Sublimate, ℨss. This forms a solution of yellowish color. It is applied to the chancre with camel hair pencil. Being a powerful caustic it destroys the unhealthy parts. If, however, it should occur that the Mercury, being absorbed and taken into the circulation, the remedy may be as bad as the disease. This is a question of doubt and uncertainty. It will destroy the diseased parts. Some few Eclectics have used it.

Unguentum Hydrargyri.—Blue Mercurial Ointment. Mer-

cury, lb. i; Lard, ℥xviii: Suet, ℥ss. Add the Mercury with the suet and a little of the lard, and rub in the mortar until the globules of the Mercury disappear, and add the balance of the lard. This should be long and thoroughly rubbed, so as to divide every particle of the Mercury. It is not used internally.

This ointment is chiefly employed externally to destroy the different vermin that adheres to the skin of the human body, as crabs, lice, and body-lice. It should be used with some caution, for the Mercury may be absorbed into the system, so as to produce constitutional effects.

Hydrargyri Nitrico-Oxydum.—Red Precipitate. This is effected by dissolving Mercury in diluted nitric acid, then evaporating to dryness, forming fine red or orange-red scales.

This powder is an irritant and stimulant, and has been used as a caustic upon ulcers and granulated sores. A *yellow wash* may be formed by the precipitate, corrosive sublimate, and lime-water. Applied to indolent ulcers and chancres.

Unguentum Hydrargyri Nitrico Oxydum.—Red Precipitate Ointment. Red Precipitate of Mercury, ℥i; White Wax, ℥ii; Lard, ℥vi. Incorporate well in the mortar. This is at first of bright scarlet color, but fades. It has been used upon ulcers, chancres, and inflammation of the eyelids. There are some forty different preparations of Mercury mentioned by Alopathic authorities. To notice them would be consuming space and time unnecessarily to the Eclectic profession; although each one must exercise his own judgment in the selection of remedies. Externally, the *yellow wash*, the corrosive sublimate in the borax water, and the Blue and Red ointment have been used. The question in doubt is, will the Mercury in this way be so absorbed into the system as to produce mercurial diseases? We think it may be, in some cases.

PLUMBUM.

Lead.

Plumbum, Pb.=104, is occasionally found in a pure or native state, sometimes in a saline form, but generally in ores of sulphurets, or *Galena* ores, found in all divisions of the world. Lead ores of sulphurets are abundant in this country, especially in the State of Missouri and on to the Pacific ocean. To separate lead from its various ores, it is submitted to the reverbrating furnace. The lead of commerce generally contains more or less of silver, copper and iron, which are extracted from lead that is used for medicinal purposes.

Lead is a soft, malleable, ductile metal, of bluish-gray color.

There are several preparations of Lead, only a few of which will be here noticed.

Plumbi Oxydum.—Oxide of Lead—Litharage—Vitrified Lead. It is usually found to be a powder of palo yellowish color, yet sometimes white or yellow. These various colors depend upon the modes of preparation. They combine with alkalies and earths.

Litharage is only used externally in form of powder on ulcers, and combined in simple and compound ointments. (Emplastrum plumbi), *plumbite of lime*, has been used in hair-dye.

Plumbi Carbonas.—Carbonate of Lead. This is sometimes formed by nature, but generally prepared by artificial means. That which is employed medicinally (by the Alopathic School), is procured by exposing plates of lead to the vapor of vinegar, which oxidizes the surface of the lead, and converts the oxide into the di-acetate of Lead. It is also procured by transmitting carbonic acid through a solution of the di-acetate of Lead.

This preparation of Lead is found in white heavy, inodorous, insipid powder. It is never used internally, and but seldom externally, in form of ointment.

Colica Petoneum.—Painter's Colic. From the extensive use that is made of Lead in painting, arises that formidable and often fatal disease of painter's colic. House painters are the most liable to these attacks, by constantly inhaling the fumes that arise from it. Its first effects are felt in the stomach, similar to some forms of dyspepsia, followed with costiveness, pain and tormina; with a sensation of twisting at the navel; the stomach irritable, rejecting food, and violent griping; sometimes diarrhea occurs; the amount of urine is diminished; the countenance dull, anxious and gloomy, with general nervous depression; the saliva of a blueish color; the pulse is noticed to be small and hard; respiration laborious. If relief be not obtained, nervous apoplexy or paralysis of the extremities may follow, that sometimes terminates fatally. If palsy supervenes, it is first noticed at the fingers and wrists, by affecting the extensors of the parts, with inability to straighten these organs; then the lower limbs may be affected. These symptoms are generally found after the pain from the attack has abated.

We believe that much of the bad effects thus attributed to Lead, often result from the influence of spirits of turpentine, so freely used in painting.

The antidotes recommended for painter's colic, are a purgative dose of castor oil, or the sulphate of magnesia or soda; and the solution of alum has also been advised. For paralysis, the extract of nux vomica has been employed, or the acetate of

strychnia, in the sixteenth part of a grain. But active emetics and cathartics, followed with diaphoretics and tonics, should be employed, with magnesia.

Plambi Acetas.—Acetate of Lead. This salt is prepared on a large scale in some parts of Europe, by the action of pyroligneous acid upon litharage. The London College, for medical purposes, directs this salt to be prepared by dissolving four pounds and two ounces in four pints of acetic acid, diluted with four pints of distilled water, filtered while hot, and with gentle boiling reduced to crystalization.

Pure acetate of Lead is inodorous, with an astringent, sweetish taste; in small, glossy, needle-shape crystals, that sometimes adheres in small lumps. It dissolves in twenty-five parts of pure soft water, in which form it is frequently employed externally as "*Lead-water of the shops*," to allay inflammation of the body in erysipelatous and other forms of inflammation.

In the Eclectic practice, none of the preparations of Lead are admitted for use internally, (although used externally, in solution, for erysipelas and local inflammation), because of its poisonous effects heretofore noticed.

Plumbi Di-acetatis Liquor.—Solution of Di-acetate of Lead. A solution that is formed by boiling two pounds and three ounces of the Acetate of Lead, with one pound and four ounces of Litharage, in six pints of water for half an hour, filtering.

Plumbi Di-acetas Dilutas.—Diluted Solution of Di-acetate of Lead. Take of the Solution of Di-acetate of Lead, fℨiss; Distilled Water, Oi; Proof-spirits, fℨii. Neither of these solutions are used internally by the Alopathic profession, and certainly not by Eclectics. They are only employed locally for inflammation of eyes, swelling of the scrotum, erysipelas, vegetable poisoning, &c. All preparations of Lead, when given internally, are either poisonous or injurious to the human system.

Opiated Lead-pills, with other forms of Lead, are laid down in the Alopathic authorities; but as the internal use of Lead is entirely excluded, it seems useless to give them further notice, only that the solution of the acetate will answer for the di-acetate solution.

Ointment of the Carbonate of Lead.

Ointment or Cerate of the Acetate of Lead.

Emplastrum Plumbi Litharage.—Lead-plaster. Take of good Sweet Oil, Oi; Beeswax, ℨi; Resin (powdered), ℨss; Litharage, (Red Lead will do), ℨiv; Powdered Camphor, ℨii; Canada Balsam, ℨi. Dissolve the first three articles together by gentle heat, then raise to nearly a boiling point, and add the Litharage and balsam; continue the heat until, by cooling a little of it, the consistence is thick enough to form a plaster

to spread on leather or muslin; then take it off the fire, and add the Camphor, stirring until it is cool, and place in an earthen vessel, covered. This formula must be carefully watched in the process of making.

Beach's Black Plaster.—The above formula is very similar to the one laid down by the celebrated Dr. Wooster Beach, who has long been a laborious pioneer in the cause of American medical reformation, and to whom our profession stands greatly indebted, He advised it as a superior remedy for burns, fever-sores, fistulous, scrofulous, and all ulcers. It is well known and highly esteemed by the profession.

STANNUM.

Tin.

Stannum, St.=59, is noticed in the earliest records of the world. Mentioned by Moses, and afterwards by the Egyptians, Greeks, and Romans, when an article of trade in the East Indies, from which region it is still obtained. It is also obtained in Cornwall, England. This metal is found in ores with oxides and sulphurets, and may be extracted, when mixed with charcoal, by the action of powerful heat. In commerce, it is usually in form of block Tin; sometimes grain Tin. It is of bluish-white color, of peculiar odor when rubbed. By its malleability, it is beaten into Tin-foil.

PROP., &c.—A mechanical anthelmintic. When administered, it has but little medicinal effect, except when occasionaly it combines with acids and fatty matter, having poisonous effects.

Stanni Pulvis—Tin-filings. In this form, it has been used as a mechanical agent to destroy worms by its sharp, cutting edges. The mode of exhibition by some authors is—first a full purge with infusion of senna; then twenty grains in simple syrup or molasses, twice daily for three days; then followed with the decoction of senna or some other anthelmintic purgative. This process has been specially advised to destroy tape-worm. It is not now often resorted to.

Tin-foil.—This is much used by the dentists for "plugging teeth," although they give the public to understand that it is "silver-foil." It is not so valuable as the gold-foil.

Tin is employed in mechanical departments, especially by "Tin-smiths," in their manufacturing arts, for making "solder," &c.

STIBIUM ANTIMONIUM.

Antimony.

Antimony, Sb.=65, is a metal found in native form in Sweden, Germany, Hungary, Bohemia, and France. From sulphuret ores it is chiefly obtained. There are several modes of separating this metal from its impurities. The pure metal is heavy, bluish-white color, and brittle. It melts in 800 degrees of heat; above this it will volatilize. At a white heat, exposed to the air, it burns, giving a white light.

Its first definite description was by Bazil Valantine, a monk, although some forms of it are said to have been known to the ancients. Its use was further extended in the time of Paracelsus, who was a chemist, and founder of the mineral practice.

The metal of Antimony is not officinal by the Alopathic authorities, whilst a number of its preparations are recognized as important remedies. Our profession does not recognize it in any form; therefore only a brief notice of a few of its forms can be of any importance.

Antimonii Ter-sulphuretum.—Crude Antimony—Black Antimony. This is said to have been known to the ancient Greeks and Asiatics, and used by the ladies for coloring the eyebrows. It is found in commerce in loaves and cakes; and when powdered, it has a lead or dark steel color, with some metallic appearance. It has sometimes been mixed with a little of the sulphurets of copper, arsenicum, lead, and iron. It is not considered officinal; hence it is of no advantage to give its physiological action or therapeutical indications.

Antimonii et Potassa Tartras.—Tartrate of Antimony and Potassa—Tartar Emetic. Tartar Emetic of the shops is found as a white powder, without smell, nauseous, styptic taste, imparting a little acridity to the throat. It is soluble in proof-spirits and wine, and boiling water.

PROP., &c.—Emetic, cathartic, and diuretic in full doses, and nauseant, diaphoretic, and sedative in small doses. By its advocates, it has been used for many diseases, and has long been esteemed as the remedy *par excellence*, to expel the contents of the stomach, to arrest sudden attacks of febrile and other diseases, when carried to full emesis. But in emergencies, some authors prefer blood-letting, followed with calomel. It has been praised for its action in inflammation of the lungs, bronchitis, rheumatism, synovial effusions, continued fever, Asiatic cholera, and other spasmodic complaints; also for many other forms of disease. As a local irritant, applied to the skin,

for chronic catarrh, pnemonia, pleurisy, and chronic diseases of the chest; it has been employed in solution, ointment, and plaster. By some, it has been ranked with blood-letting and calomel as an antipthlogistic remedy.

By its advocates, Tartar Emetic is admitted to be a corrosive and violent poison, causing vomiting, with violent straining, inflammation, and ulceration of the mucous membrane of the æsophagus, stomach, and bowels; griping, diarrhea, pain and tension of the stomach, swelling of the body, delirium and death. Its antidotes are infusion of nut-galls, and the infusion or tincture of cinchona bark, and other vegetable astringents; but the first indication is bland mucilaginous drinks, followed with active emetics, as ipecac, lobelia, &c. *Dose*—Grs. ii, as an emetic; diaphoretic, one-twelfth of a grain, repeated; nauseant, one-fourth of a grain, in mucilage or simple syrup.

This article, in emetic doses, acts by its direct irritant power on the stomach, generally causing hard straining, although some of its advocates believe that it first acts on the nervous system, followed by relaxation of the muscular system. This view is far-fetched. In the progress of the Eclectic practice, its advocates are diminishing its use, and following the advance of our profession, who exclude the use of Antimony as a dangerous and useless remedy, for reasons given in this work.

Vinum Antimonii Potassio Tartratis.—Antimonial Wine. Tartar Emetic, ℈ii; Pure Sherry Wine, Oi. If the salt be pure, and the wine good, no precipitate is formed in the solution. *Dose*—As an emetic, half a fluid-drachm; as a diaphoretic or expectorant, ten to thirty drops, repeated. It is sometimes used as an expectorant, to allay coughs. For an emetic for children, from thirty drops to a fluid-drachm.

ZINCUM.

Zinc.

Zincum, Zu.=32, is found in the sulphurets, and some other ores, which, like several other metallic agents, is only found in a state of combination. This metal is of bluish-white color, and some brilliancy of lustre, hard and tough; but at a temperature over 210 degrees, it becomes malleable. Under a heat of 300 degrees, it may be beaten into thin sheets, or drawn into wire. It becomes so brittle that it can be powdered when heated to over 400 degrees. It is probable that Paracelsus, whose teachings in chemistry revolutionized medi-

cine, inaugurating the Alopathic practice of the last two centuries, was the first to describe Zinc as a remedial agent.

Zinc is obtained in Bethlehem, Pennsylvania, where there are one or two companies actively engaged in blasting rock ores from which it is obtained, and preparing both the oxide and sheets of Zinc.

Zinc, internally, is not recognized by the Eclectic profession, although its external use is employed and highly praised by some. We shall only notice a part of the several preparations of this agent.

Zinci Sulphas.—Sulphate of Zinc—White Vitriol. For medicinal purposes, this salt may be prepared by adding two pints of diluted Sulphuric Acid to five ounces of pure Zinc, straining the solution, and by gentle heat reduce it to crystallization. This salt is colorless, without odor, astringent and metallic taste.

PROP., &c.—By the Alopathic profession, the sulphate, and other preparations of Zinc, are reputed to be emetic, tonic, escarotic, astringent, and antiseptic or disinfectant. With a few pseudo Eclectics, it has been employed internally for diarrhea, as an astringent remedy, to arrest excessive mucus discharges. But because it cannot assimilate either with the fluids or solids of the human economy, it is an unsafe and sometimes fatal remedy. In over or repeated moderate doses, it becomes an irritant poison, causing vomiting, purging, febrile excitement, restlessness, coldness of the body, feeble pulse, prostration, death.

We speak of Zinc, therefore, as an external remedy. In solution, it may vary from one grain to one scruple, in one ounce of pure water. This leaves a considerable range at the discretion of the physician. In this form, it has been employed as an antiseptic and disinfectant, and astringent agent, for indolent ulcers, cancerous and styphilitic sores, and in some varieties of erysipelas.

R. S. Newton, M. D., of New York, is a special advocate of this solution in mortification and cancerous diseases, and other ulcerated conditions of the system. He relates several cases of its favorable effects externally; and by mixing a little of the fine powder with sufficient flour and water to form a paste, using it on a piece of thin, soft leather, for mortification of the palatine arch and the gums.

The powdered Zinc has been applied to cancerous diseases of the breast, even when the whole gland is involved, sprinkling it over the whole diseased part, covering it with a slippery-elm poultice, both to prevent a hardened crust and to allay inflammation. By the powerful escarotic action of the Zinc, the whole of the diseased part is destroyed and sloughed off, at

times suspending the Zinc to subdue inflammation, if necessary. The paste of Zinc, by flour and water, has been employed upon encysted tumors and indolent ulcers.

Emplastrum Zinci Composita.—Compound Plaster of Zinc—Cancer Ointment. Sulphate of Zinc, finely powdered, Grs. xxx; Extract Red Clover, ℥ii; Balsam of Fir, ℥ii. By gentle heat first applied to the balsam, add the extract and the Zinc; then in a mortar thoroughly incorporate the whole. Upon a piece of thin, soft leather or muslin this is applied to the affected part until it is destroyed and sloughed off. Should constitutional effects supervene, such as great pain, inflammation of the surrounding parts, or general fever, then the application should be suspended, applying external emollients and arterial sedatives internally. When these symptoms are subdued, renew the plaster, and so continue until the affected part is eradicated.

ALUMINUM.

Alumina.

Aluminum, Al.=14, is the elementary metallic base of all earths of clay and many rocks, from which it can be separated. In quite pure form it is found in sapphire, emery, &c. By the action of potassium upon the chloride of Aluminum, it is found in form of a grayish powder, or in very small scales, resembling tin in lustre; insipid, insoluble in water, and requires a high temperature for fusion. At a red heat, it takes fire in the open air; in pure oxygen gas, the combustion is brilliant, and the emission of heat is intense. For its great affinity with water, it has been used as a plastic agent in pottery.

Aluminous earths have been known for many centuries. Those mixed with silica and iron were administered in alvine fluxes.

Lemnos earth was used in religious ceremonies—dug up once a year in the presence of priests and magistrates in the Island of Lemnos, after reading prayers,

Fuller's earth was known in several parts of England, for some purposes, and years past was known in this country. It has been employed externally, to relieve the acrid effects of urine, &c.

Sulphas Alumini et Potassa.—Alum. This is manufactured in large quantities, both for medicinal purposes and the arts, coloring, &c. It is a double salt of sulphate of Alumina and sulphate of Potassa, with a small portion of water. It was known to the ancients for dyeing purposes, and now by some

writers known as the salt of the oxide of Aluminum and Potassium.

Alum is formed by the hand of nature near Naples and other parts of the world; yet the great part of Alum, by chemical process, is separated from pyrites and other natural productions. The process is not essential to the profession.

PROP., &c.—Alum is employed as an astringent agent, both internally and externally. Internally, it is liable to produce nausea and vomiting, hence it has some reputation as a remedy for croup, whilst it is liable to produce colic and purging. In small doses, it produces constipation; and used for internal hemorrhage, diarrhea, leucorrhea, and diabetes; but when ulceration of the mucus membrane has taken place, mischief may follow its use.

The solution of Alum is employed occasionally by the syringe for prolapsus of the uterus and rectum; and as a gargle for relaxed uvula; and by injecting it into the nose for epistaxis, or by saturating lint with it, introducing it into the nose to arrest bleeding; per vagina, by injection, for uterine hemorrhage. It has been used in former years as a gargle for diptheritis and other forms of sore throat, as scarletina and smallpox, and spongy gums.

For all of the above enumerated diseases, the active vegetable astringents are preferable, as tannin, geranium, nutgalls, &c.

Some rocks and ores containing Alum are of reddish color; hence in Europe the red Alum is found, but seldom seen in this country. We find Alum in white, clear crystals of various sizes. It is used by wool and silk dyers to set their colors, and in some forms of making writing ink. *Dose*—Powdered Alum has been given internally in Grs. x, in a tablespoonful of cold water. Much larger doses have been given to induce vomiting.

Serum Aluminosum.—Alum Whey. Take two drachms of powdered Alum and one pint of milk, submit to a boiling heat, and strain through thin muslin. *Dose*—One-half to a wineglassful; for hemorrhages and diarrhea.

Alumen Exsiccatum.—Burnt Alum. Take Alum and put on an iron or porcelain vessel, and submit it to an active heat until ebullition takes place and entirely ceases, so as to throw off all its watery parts; then remove it, and in the porcelain or Wedgewood mortar reduce it to a fine powder. This is applied to remove fungus and unhealthy granulations, or "proud-flesh;" also can be used for epistaxis.

Compound Powder of Alum.—Alum, ℥iv; Kino, ℥i. In the mortar reduce to a fine powder. Applied to indolent or flabby ulcers; suspended in a little water, for external hemorrhages.

Alum Poultice.—Alum, powdered, ℥i; the white of two eggs;

thoroughly mix; for chronic inflammation of the eyes, and for chilblains, &c. For the eyes, it should be in two folds of soft, thin linen.

There have occurred cases of poisoning from over-doses of Alum. So soon as this difficulty arises, large doses of warm water or mucilaginous drinks should be administered, followed with active emetics. There are no positive antidotes for poisoning by Aluminum or its preparations. The Eclectic profession recognizes its use externally.

BARIUM.

Barium, Ba.=69, is the metallic base of Baryta, one of the *alkaline earths.* When separated from the earthy substances, Barium is a silver-white, heavy metal.

Baryta is a heavy earthy substance, porous, and grayish-white appearance, caustic taste, without odor, with alkaline re-action. There are several preparations of Baryta, although seldom employed in medicine. It is a very acrid caustic and virulent poison. Some of its chemical formulas are:

Chloride of Barium, *solution* of chloride of Barium, *sulphate* of Baryta, *nitrate* of Baryta, and *solution* of nitrate of Baryta. It is only thus briefly noticed to show that it is one of the alkaline earths having a metallic base. Useful in some chemical experiments; but not recognized by the Eclectic profession as a medical agent.

CALCIUM—CALX.

Lime.

Lime was known to the ancient Hindoos, Egyptians and other nations, as a useful substance in preparing mortar for buildings. Calcium, Ca.=20, is a metallic element, of brilliant white appearance. It is of the alkaline earths, and especially some alkaline rocks from which Lime is obtained in great abundance in all divisions of the world. Hippocrates employed this alkaline earth as a medicinal agent.

Calx.—Lime. Lime is found in the mineral kingdom, with sulphates, carbonates, phosphates, &c., and its base is Calcium. It is found in sea-water; whilst from certain kinds of rocks it is almost entirely obtained, both for arts and medicine.

Lime is found in the vegetable kingdom (or its base, Calcium); in oxalic, mallic, and citric acids, &c. In animals it is found in the bones, its carbonates and phosphates. For the

arts, Lime is obtained from limestone, that is abundantly procured in this and other parts of the world, by submitting the stone in a suitable furnace, so as to throw off all else but the lime itself.

Calcis Hydras.—Slaked Lime. When water is thrown upon Lime, they combine, causing heat, when a part of the water is thrown off in vapor, a part is absorbed in the Lime, which swells and cracks, falling into powder. Water does not hold Lime in solution to any great extent. More soluble in cold than in hot water.

The common Lime, so much used in the arts, is seldom pure enough for medicinal purposes, as it generally contains some oxide of iron, carbonate of alumina, &c. Pure white marble, chalk, and calcareous spar, will yield pure Lime when submitted to a heat sufficient to expel all the carbonic gas; and the Lime is left pure, which should be kept in well-stopped bottles.

PROP., &c.—Lime is an alkaline caustic, escharotic and poison. It is powerful to produce decoposition of animal matter, and for this purpose has been used on the dead bodies of those who have died of contagious diseases; to destroy animal matter on the ground after the conflict of battles; in the dissecting room, and by tanners, to remove the hair and cuticle from their skins. The irritant action of Lime is often noticed on the hands of persons handling it, and especially if a little of it be introduced into the eye, causing opthalmia. Internally, Lime is a poisonous irritant, destroying the surfaces with which it comes in contact. It is officinal only in its preparations.

Liquor Calcis—Aqua Calcis.—Lime Water. This may be prepared by taking Lime, half a pound; water, six pints. With a little of the water slack the Lime, and presently add all of the water. Cover the vessel containing it (earthen), and let stand a few hours, and remove into a well-stopped glass bottle. The Lime falls to the bottom; the solution is clear, which should be turned off as needed. It has an unpleasant alkaline taste.

PROP., &c.—Lime water is antacid, neutralizing the free acids of the stomach; hence in some forms of dyspepsia, combined one part to three of milk, it is often an available remedy. It has been found to be beneficial to gouty and rheumatic persons, to prevent excess of uric acid. Also employed to allay nausea and vomiting dependant upon irritability of the stomach; the addition of milk is often useful, especially when food is rejected.

As a desiccant, it has been used as a wash upon ulcers and excessive discharges. Its astringent action has been noticed when administered for diarrhea, and checking other mucus secretions of the body; by injection for gleet and leucorrhea,

it has been of much service. *Dose*—fl℥ss to iii. The addition of milk is often advisable. Over-doses of Lime-water have caused irritation and pain of a serious character.

Linimentum Calcis.—Liniment of Lime. Take equal parts of Lime-water and Linseed oil (or olive oil); mix and agitate. This forms a Lime soap. When allowed to stand, a white, soapy substance is noticed at the bottom, and an oily appearance at the top. This liniment is chiefly used for burns and scalds.

Calcis Chlorinata.—Chloride of Lime—Bleaching Powder. This article is obtained by the action of diluted hydrochloric acid upon chalk. It is prepared on a large scale for bleaching purposes. Chloride of Lime is a whitish powder, having a faint odor of hypochlorous acid, with a strong, acrid and bitter taste.

PROP., &c.—For internal use, chloride of Lime may be given in doses of Grs. iii to vi, in one or two ounces of water. It has been given to reduce the enlargement of absorbent glands, and to stimulate the lymphatic system. Some writers advise its use in epidemic diseases, to abate fever and delirium, and cleanse the tongue. It has also been recommended for dysentery, to arrest the bloody discharges, and to relieve pain and tenesmus. It is said to act favorably on the cutaneous system, and to exert a tonic action. In its use some considerable caution is required, as it is liable to produce irritation, inflammation and other dangerous symptoms.

Externally, the solution of the chloride of Lime is applied to ulcers and other running sores, to prevent putrefaction and destroy putrid odors. As a wash for the surface in itch and other skin diseases, it is thought by some to be superior to sulphur. Opthalmia has been cured by a weak solution, and so perulent opthalmia of children.

In small-pox, pitting, it is said, may be avoided by frequently washing the face with the solution.

As a disinfectant, and to prevent the putrefaction of dead bodies, one pound of the chloride of Lime may be dissolved in three gallons of water; introduce a sheet into this solution, and wrap it around the body. It is frequently employed in dissecting-rooms, in houses where dead bodies are lying, in hospitals, back-houses, drainings, and where there is going on decomposition of animal matter.

In sick rooms, the powder may be put on an earthen vessel, set in the fire-place, or by the door or window, where a portion of the evolved chlorine gas may escape from the sick room.

When entering rooms where the air is loaded with contagious substance, as small-pox, or in places where exist vapors of hydro-sulphuric acid; in wells and caverns where the air is

dangerous to life, a cloth wet with the solution is a protection when applied to the mouth.

The antidotes for poisoning by chloride of Lime are mucilaginous drinks, the white of eggs, milk or flour, to be followed with active emetics.

Gangarisma Calcis Chlorinata.—Gargle of Chloride of Lime. Chloride of Lime, ℥i; Water, fl℥viii; Honey, ℥ss. Triturate the Lime and water well together in a mortar, and filter; then add the honey, and mix by agitation. This is a disinfecting mouth wash and gargle for ulcers of the mouth and throat.

Dentifricum Calcis Chlorinata.—Dentifrice of Chloride of Lime. Chloride of Lime, ℥i; Prepared Chalk, ℥xx. Incorporate well in a mortar, with twenty drops of oil of neroli. Used for bad breath, arising from diseased teeth and gums, and to whiten the teeth.

Enema Calcis Chlorinata.—Enema of Chloride of Lime. Add Chloride of Lime, one drachm, and Olive Oil, half an ounce, to one pint of warm water. Used to neutralize the unpleasant and offensive discharges from the bowels.

Calcis Carbonas.—Carbonate of Lime. The pure carbonates of Lime are prepared from Limestone or rocks of Lime and marble.

Creta Alba.—Chalk. Chalk is obtained as one of the products of marble and Limestone, and in large deposits of calcareous shells. It is ground in large mills for the purpose, then introduced into vats of water, well agitated, and allowed to settle, and the water poured off, when the powder is dried. It is found in large pieces, pure and white, and breaks with an earthy fracture; soft to the touch, and adheres to the tongue.

Creta Preparata.—Prepared Chalk. Take one pound of Chalk, add sufficient water to moisten, and form a thin paste-consistence, aud put this into a vessel containing ten gallons of water, agitate a short time, and let stand a few minutes; then pour off into another vessel, except the coarse powder that has fallen to the bottom. The solution in the second vessel is allowed to rest until the particles of Chalk have fallen to the bottom, when the clear water is poured off, and the powder dried for use. In bulk, it is found in powder, and and adhered together in various sized pieces. When pure, it should be nearly white; with impurities, it is often found of grayish white.

PROP., &c.—Antacid and absorbent. *Dose*—Grs. v to xxx. Sometimes used for diarrhea and sour stomach; often combined with opium and aromatics. Externally, upon ulcers and burns.

Mistura Creta.—Chalk Mixture. Prepared Chalk, ℥ii; Simple Syrup and Mucilage of Gum Arabic, each fl℥ss; Cinna-

mon Water, fℨvii. Rub in a mortar until thoroughly mixed. This is pleasant, and often available in mild cases of diarrhea. In difficult cases, a few grains of powdered kino may be added to the mixture. Opium has sometimes been added. *Dose* of the mixture, ℨss to i.

MAGNESIUM.

Magnesium, Mg.=12, is a metal found in the mineral, animal, and vegetable kingdoms. It is seen in solid state, and in solution in sea-water and some mineral springs, from which it is chiefly obtained; in the vegetables, in sea-plants, in animals, in the urine and urinary calculi. This metal was first discovered by Sir Humphrey Davy, of England.

Magnesia—It is the oxide of the above-named metal. For a time it was supposed to be nearly identical with lime; but Dr. Black, in 1756, established the difference between the two articles. It is prepared by applying heat to the carbonate of Magnesia, so as to drive off the carbonic acid. Magnesia is without odor—a white, fine, tasteless powder, varying by the mode of preparation.

Calcined Magnesia.—Common Magnesia. This is a light preparation, with its particles sometimes adhering in small lumps, and is the common kind of the shops, which frequently deteriorates. Magnesia is often designated by several prefixed names, as:

Irish and *Scotch Magnesia.* These are superior to the *calcined*, being whiter and lighter.

Henry's and *Husband's* are the best specimens of powdered Magnesia, being whiter, purer, and heavier—a very white, fine, palpable powder.

PROP., &c.—Magnesia is a gentle laxative, with mild antacid action, when it meets free acid in the stomach. It is indicated in some cases of indigestion depending on too much acidity of the stomach. Some cases occur where there is too much uric acid in the urine, especially with rheumatic and gouty persons, when by antacid action, Magnesia becomes of considerable service. For irritation of the bowels, it is frequently employed. In diarrhea, especially for children, a common mode of its exhibition is by combining equal parts, by weight, of Magnesia and powdered rhubarb, in ten to twenty-grain doses, for adults.

Dose—For infants, two or three grains; children, five to twenty; adults, one-half to one drachm.

Magnesia Carbonas.—Carbonate of Magnesia. Carbonate and bi-carbonate of Magnesia has been found in some mineral waters, and in the Magnesian limestone. It is prepared by a combination of sulphate of Magnesia and carbonate of soda. It is often prepared in square moulds, so as to present the *square lumps*, commonly hnown as lump Magnesia. These lumps are some four inches square, are found in our markets, of white color, soft to the the touch; of slight earthy taste, without odor.

Its therapeutical action and its indications similar to the calcined magnesia.

Magnesia Citras.—Citrate of Magnesia. The Citrate of Magnesia in *solution* is prepared by taking the Carbonate of Magnesia, three drachms; Citric Acid, five and a half drachms; Syrup of Citric Acid, one and a half ounces. Dissolve the acid in three ounces of water; hold the Magnesia in solution with two and a half ounces of water, and add the two together; then pour them into a bottle containing the syrup before mentioned, held by a well-fastened cork. But a few bottles of this preparation need be prepared at one time.

PROP., &c.—This is in taste similar to lemonade, a pleasant aperient and gentle laxative.

Magnesia Sulphas.—Sulphate of Magnesia—Epsom Salts. This salt was first noticed in England in the salt waters of Epsom, hence the common name of Epsom salts; it is also found in some limestones, and in Magnesian rocks in Maryland, Pennsylvania, and other parts of the United States, as well as in caverns of our Western States. We have some large Epsom salt works, as well as the works of chloride of Sodium, orcommon salt.

Epsom salt is found in acicular prisms, varying in size, colorless, transparent, and very bitter in taste. By efflorescence they slowly diminish when exposed to the air. They dissolve in their own weight of cool water, and in three-fourths of their weight in boiling water. There is but little inducement for adulteration of this salt, because of its cheapness, yet it is sometimes so by the sulphate of soda.

PROP., &c.—A cooling or refrigerant purgative, with marked action on the serous tissues, becoming a hydragogue-cathartic in full doses; it is one of the saline purgatives, and sometimes termed as an *antiphlogistic* remedy, reducing the amount of the blood circulation; indicated in febrile diseases, and some forms of dropsy. It is the most common purge in domestic practice. By tradition, many people resort to its use every spring, to cleanse the system, whether sick or well. A very common form is senna, salts, and manna.

One great objection to the use of this salt is its great bitter-

ness. To obviate this objection, aromatics are sometimes added. This salt has diuretic action, and indicated in partial suppression of the urine, and some dropsical effusions. *Dose*—ʒss to i; held in solution with water, flʒi to ii.

Epsom salts are sometimes combined with muriate of soda, in solution.

The solution has been employed for injections in constipation of the bowels. It is the most efficient of any of the *saline* purgatives.

APPENDIX.

PART V.

ATMOSPHERIC AIR.

THE air we breath is not generally considered a medicinal agent; but since it is one of the most essential of vital agents, upon which life so much depends, especially in sickness and great debility of the system, often of far more service than any other medicinal means, it should here receive a passing notice.

The Atmosphere is an invisible, elastic fluid, covering the face of the globe, and extending upwards some forty miles; somewhat compressed by cold, and much expanded by heat. The air near the surface of the earth may be cool, or comparatively so, whilst extending upwards it is warmer, to a certain height, when it is felt to be cool, and even cold. These different degrees are called *stratas*.

The permanent elements of Atmospheric air, ascertained by French and English authors, are found to be by weight: Oxygen gas, 23 parts; Nitrogen gas, 77–100. This is pure, dry air. But the usual components of air are found to be in parts by weight: Nitrogen, 75–55 parts; Oxygen, 23–32 parts; Aqueous vapor, 1–03; Carbonic acid, 0–10. The two last elements materially vary in the air on land, in rain storms, or on the surface of water.

By the labors of Leibeg and other chemists, it has been ascertained that other elements exist at intervals in the Atmos-

phere, as the effluvia from the decomposition of animal matter, of small-pox, &c.; the decomposition of vegetable substances, causing chills and fever; also that the Atmosphere along sea-shores contains muriatic acid. Pure air may at times become impregnated with various impurities, also effluvia of animal and vegetable substances; yet such being injurious in the economy of nature, they are quickly decomposed, disengaged or neutralized from Atmospheric air.

Oxygen, however, is the great vitalizing element of the air, being essential for both animal and vegetable life, and combines with all elementary bodies. The action of air on vegetables decomposes carbonic acid, and throws off oxygen; on animals, it produces carbonic acid, and absorbs oxygen. This is illustrated in the blood circulation of the lungs, when oxygen is absorbed and carbonic acid thrown off. In the process of breathing, a kind of combustion is believed to take place.

The air holds in suspension the effluvia of animal decomposition, thus spreading small-pox and other contagious diseases. And from the decomposition of vegetable matter, the air may hold miasma, imparting or causing chills and fever. On the purity of the Atmosphere life and health most essentially depend.

AQUA.

Water, Ho.=9.

Aqua, Water, H.1, O.8, or Ho.=9, is not only diffused throughout the world, but covers a large portion of the surface of the earth; consists of Oxygen 8, and Hydrogen 1, by weight. But as water is the most extensive and important solvent agent, it may receive or hold in suspension innumerable agents. By Fahrenheit's thermometer, it freezes at 32 degrees, and boils at 212 degrees, being converted into steam.

Water is one of the essential elements of life for the family of man, the brute creation, and vegetable structure. The two elements, as above stated, form pure water, but by its great solvent powers it is usually found with other substances, as lime, potassa, or with some of the chalybeates, sulphur, iron,

&c. This solvent power is illustrated by the sea-water, which contains a large amount of chloride of sodium or salt. According to Pareira, pure water was not correctly understood until 1783; and for the honor of this discovery, Watt, Priestly, and Lavoisier contend.

For medicinal and other purposes, Water often requires purification. *Decantation* is performed by placing Water in a vessel, allowing it to stand undisturbed for a few hours or days, when many of its impurities fall to the bottom, and the clear Water is decanted off.

Filtering is another process of obtaining clear Water, by folding white bibulous (or filtering) paper suitably into a glass funnel, allowing the Water to pass through, falling into clean vessels; this mode also applies to the filtering of tinctures, &c. There are several forms of the filtering apparatus. "The filtering paper" and white printing paper answer in most cases.

Ebullition, or *Boiling Water*, is divested of some impurities by precipitating lime in Water, or destroying any anamalculæ it may contain. Boiling Water is a powerful irritant and vesicant, at once destructive to living animal tissues. The ordinary forms of Water may here be noticed.

Aqua ex Flumine.—River Water. The sources of this water are from springs and rain. This is pure, except in the spring of the year, when it contains impure wastings and earthy substances, or when it passes through thickly inhabited parts or cities. Clear river Water may be selected for medicinal purposes.

Aqua ex Puteo.—Well Water. By sinking wells, and raising Water by pumps. It is sometimes soft, and nearly pure, when for washing purposes, it readily unites with soap; but is often found to be "hard" or "brackish," containing more or less of lime and other impurities.

Aqua Pluvialis.—Rain Water. Said to be the purest of natural waters; yet is found to contain other elements, as salts, carbonic acid, and organic matter. Leibeg, a celebrated chemist, found ammonia in rain Water. Other chemists have found in rain Water other substances not here enumerated. But rain Water, secured in the latter part of rain-storms, is the most pure and suitable for medicinal use. When collected

from the roofs of houses, especially in towns and cities, it contains various impurities of metallic, vegetable, or animal matter; when it should be boiled or filtered, and then allowed to stand and deposit its impurities.

Aqua Fontana.—Spring Water. The source of this Water principally depends upon rain Water that is filtered through the earth, finds its way by avenues into, and forming the resources of springs; yet often another source is found by river and lake Waters so penetrating the earth as to form springs. Spring Water, not impregnated with mineral or alkaline agents, is usually soft and pure.

Pure Water is without color or odor; yet creditable authorities aver that the camel can smell Water at some miles distant. The color of Water depends upon the various substances that it may hold in solution. The Waters of the ocean and some large lakes, are of bluish-green color. It is almost incompressible under the force of weight; it does not support combustion; but when in an open vessel, potassium is thrown upon it, it is decomposed, and its hydrogen burns. It becomes a vapor in combination with caloric, which is lighter than the atmosphere, ascends, forming vaporous clouds, which coming in contact with a cool strata of air, loses its caloric, and is condensed into Water, producing rain, which falls to the earth as rain Water. By this process it becomes greatly purified and soft, clear, and nearly pure Water.

PROP., &c.—It has not been established that Water does possess medicinal *properties* abstractly; that it acts as a medical *agent* in numerous diseases there is no doubt. It is a most essential diluent for the solids of the body, and forms about 80 in 100 parts of the blood. Nature calls for it in sudden loss of blood, in large watery discharges from the bowels, as diarrhea; and in diabetes, when the watery particles of the blood are thrown off by the kidneys, and in high grades of fever.

Water, in its uses, becomes a cooling or refrigerant agent; emollient, diluent, evacuant; also a solvent to many medicinal agents. Again, it is the great agent for generating steam, for the execution of many mechanical purposes; and upon the bosom of Water floats the commerce of the world.

As a dietetical agent, it usually accompanies the use of food, aiding digestion and assimilation, or a solvent to the substance in the canal; on the other hand, if taken in excessive and repeated quantities, it may dilute the gastric juices, causing pain and vomiting, impairing the digestive functions. The too free use of Water may excite the secretions of the cutaneous surface, kidneys, &c., thus throwing off too much of the solid elements of the blood, allowing too large a proportion of Water in, and thinning or diluting the blood.

Warm Water. —In fevers, Water is an adjuvant that should never be omitted by the physician. To the fevered throat and parched tongue and lips, nature furnishes this most unequalled and delightful beverage. When the skin is hot, warm bathing of the whole surface gives relief sooner than any other known agent, by relaxing the cutaneous vessels, allowing the elimination of the watery particles of the blood, and allays nervous excitement. Long experience has convinced me that warm bathing is far superior to cold in all febrile diseases, especially in cutaneous fevers, as erysipelas, scarletina, &c. As an ordinary ablution or bath, tepid water is much better than the cold.

Cold Water.—How delicious is the draught of pure cold water; no fluid can equal it. When the body is consuming by the fire of fever, when in terribly hot strife on the battle-field, or when the life-blood is running freely from the wounds of balls or the cuts of sabres, then it is that the sufferer cries, (often in vain), Water, water, water! On the battle-field, it is never denied by friend or foe. But how different has it been with the Alopathic profession, during part of the seventeenth, all of the eighteenth, and part of this, the nineteenth century! During these long ages, the constant, continued use of the ever-present calomel, in all fevers, excluded Water from the lips of tortured victims. What a disgraceful practice! What greater cruelty can be exercised than bleeding and drawing off one to three pints of blood, thus lessening the volume of circulation, when, by nervous impression, the stomach, throat, and mouth calls for water? To this is added the torture of mercurial salivation, when, in form of saliva, is carried off one-half to four or more pints of Water from the blood in twenty-four hours. Now to restore both the loss of blood

and Water, the heart calls for it, the whole of the blood-vessels, the nervous system, the cutaneous vessels, all of the secreting organs, the serous and mucus tissues, the dry throat, the cracked lips, and the tongue, speaking loud, in whisper or in broken accents—all, all call for Water! Thus rode in triumph, over the civilized world, the Alopathic profession. Whether by ignorance or any other cause, it is not here material. The bodies of the sufferers are gone from sight, with occasional exceptions; but enough remains on record to establish the truth that the Alopathic practice, for bigotry, superstition, and cruelty, has never had its parallel in any age of the world.

Cold Water, when taken in large draughts, especially in warm weather, by its impression on the nerves of the stomach, causes immediate perspiration, thus acting as a revulsive agent. It is of great temporary relief in congestions, especially of the head, by saturating towels or cloths, and applying to the parts; but for febrile diseases, the warm Water is preferable.

Cold Water is invaluable for dressing wounds, discussing inflammation, and aiding to prevent suppuration; but when puss has been established, then it should be omitted, or changed to warm Water. The cold Water dressing may be applied to allay pain and inflammation, to prevent the formation of fungus granulations or "*proud flesh.*" Ablutions and local application to the body, whether in sickness or health, becomes of invaluable service.

Cold Water, locally, or by full bath, suddenly contracts the capillary vessels, causing an unpleasant nervous "shudder," repelling the blood from the surface into the larger blood-vessels. Re-action (except in very weak constitutions) soon occurs, forcing the blood with renewed impulse back to the surface, imparting a warm glow, usually followed with ellimination of perspirable matter.

Aqua Distillata.—Distilled Water. This is procured by boiling spring or soft well water, or river water, in a copper boiler, having a block-tin worm through which the steam is carried off, and again condensed into pure Water, and repeated until the Water is pure, flat and mawkish to the taste. Many

works call for Aqua Dist. in formulæ, but which cannot always be had. Pure soft spring, well, river, or rain Water will do, or they may be filtered before using.

Aqua Medicata.—Distilled Waters—Essences. Distilled Waters are prepared by distilling any leaves, flowers, or plants containing essential oils.

Essences may be prepared by any desired vegetable oil, one drachm; carbonate of magnesia, two drachms. Triturate these well in a clean white or porcelain mortar; then add pure Water four pints, stirring well, and strain through flannel, or filter through paper in a funnel or displacement apparatus. This gives the common or cheap essences.

Infusa.—Infusions. Water, being a solvent agent, is employed to extract and hold in solution certain properties of many vegetable articles. It is the pouring of boiling Water upon any desired article that will yield its properties to Water, allowing it to stand for a time in an earthen or other suitable vessel. Whenever an infusion is ordered, it is understood to be by adding boiling Water.

Cold Infusions.—Whenever a cold infusion is desired, it is specially noted by the physician. There are some vegetable agents that require cold Water, for when hot, is rapidly thrown off the volatile principle that should be retained, as the peppermint, &c.

Hot infusions are sometimes administered hot, or warm or cold, as desired or directed.

Decocta.—Decoctions are prepared by boiling suitable articles in Water, until medical properties are extracted or held in solution; then strained for use. Sometimes preservative agents, alcohol or sugar, are added. In this process, agents having principles that are volatile are not thus to be treated, because the volatile or essential oils are thrown off in the aqueous vapor or steam.

Extractum.—Extracts. This process is to take any desired vegetable article (not depending upon its volatile principle for its medicinal action) and extract its properties by boiling Water; then strain, and again replace on the fire, boiling until it begins to thicken; then reduce the heat gradually, until, when cold, the extract is of the consistence of thick cream, and trans-

fer into earthen pots which can be closely covered. This form of extract is liable to become mouldy and useless. To avoid this, a little alcohol, for a time, put on the top of the extract, is useful.

Extracts in Vacuo are prepared in an air-tight heated stove, made for the purpose. The object of this is to obtain the extract with a less degree of heat than ebullition or boiling. The philosophy of this is said to be, that when these agents are prepared at the boiling temparature, or degree, they retain a "*latent heat*," that may afterwards be developed, and destroy the preparation. Tilden & Co., and other establishments in the State of New York, prepare extracts in vacuo, that generally give satisfaction.

Alcoholic Extract—This is effected by *water-bath;* putting the alcoholic tincture of any desired article into a tin, earthen, or porcelain vessel, and place this into another larger one, containing Water, placing it on heat so as to bring the Water to a boiling point. In this way the alcohol is rapidly thrown off, and continued until the result is an extract of the consistence desired. Another plan is to cover tightly the vessel holding the tincture with a tight cover, and a pipe or tin tube, or leaden worm, leading from the top of the cover into and through a wooden or tin vessel holding cold Water. By this the vapor of the alcohol is condensed, and falls into a vessel at the bottom of the Water-tub. The pipe should be coiled around many times in the tub, and passed through the tub near the bottom, projecting out a little, so as to let the alcohol fall into the vessel outside. This plan may be resorted to when extracts are prepared to any great amounts, especially when alcohol is sold at five dollars per gallon. But it should be remembered that the boiler holding the tincture must be placed in another and much larger one, holding water, which is placed over the fire.

Water Externally.—The external use of Water is seldom too highly prized by the physician, whilst it is generally too much neglected. We cannot here enter into a lengthy review of the curative powers of Water externally, and only give a condensed view of the several modes of its use. Pritznits, of Germany, we believe, was the first to give shape and action

to cure diseases by the use of Water alone, employing it, however, both externally and internally. He had many followers on the continent of Europe, especially in Germany. In this country, several "Hydropathic," or "Water-cure" establishments have been erected, and obtained notoriety. They have frequently been of much service to the patients. Some few have benefitted only the pockets of the "proprietors."

We direct the attention of our profession to the works of Pritznitz, or any respectable author on the subjent, who is not directly interested in one of the "establishments." The advocates of "Hydropathy" have endeavored to establish a system for the cure of all diseases; but they have signally failed. So it has been with other efforts to establish peculiar dogmas in medicine. They may partially succeed, and be of great service to the sick.

For external use, *soft* Water is always understood to be preferable; that is, river Water or spring Water—not hard Water. Some of the modes are the

Plunge-bath, which gives a "shock" to the nervous system. It is effected in large bodies of Water, or in pools fitted for the purpose. It repels the blood from the surface to the larger blood-vessels, producing a sudden chill or shock upon the whole system, when in a short time the blood returns to the surface in full and increased force, producing a glow upon the whole body. This operation does very well in patients of full habit, having febrile chronic diseases, and haviug sufficient vitality to withstand the shock, and the power for the necessary re-action upon the surface. It is not suitable for persons of low or debilitated vitality, as consumption, dropsy, and other enemic conditions. The temperature of the Water should not be lower than fifty-five degrees, and be followed by rubbing the whole body with dry towels.

Douche.—This is effected by pouring Water in large or small streams upon the patient, either upon the head, shoulders, or other parts of the body, as desired. The Water may be cold, tiped, or warm. The operation may be performed with an open vessel, a large watering-pot, or a shower-bath. When applied to any particular part of the body, it should be by means of a pipe, so as to fall on the part diseased. The indi-

cation for the use of the douche, or dash of Water, we leave entirely at the discretion of the physician. If applied to the head or surface of the body, rubbing should follow. If the Water be cold, the physician should estimate the power of the patient to withstand it. The warm douche is applied to relax the whole or any particular part of the body. These varied degrees of this form of application of Water are of essential importance in the treatment of disease. In febrile diseases, especially when the head and face are painfully congested, the application of cold Water becomes a grateful boon to the sufferer. We every day see the calls for pure cold Water in febrile diseases, which our profession always allow; yet they moderate its use, to avoid any bad effects by filling the stomach faster than the absorbent vessels can dispose of it, causing, perhaps, distention of the stomach and vomiting.

Warm-bath.—The usual form of the warm-bath, is by immersing the body in "bath-tubs" partly filled with Water. In large cities, every house should have one of these invaluable aids for health. In the summer season, many lakes and rivers are warm enough for this purpose. The public, as well as many physicians, do not comprehend the great value of the *tepid* or *warm-bath.*

The warm (at about ninety degrees) is decidedly preferable to the cold bath for cleansing the skin, to cool the surface, and to moderate the heart's action. It relaxes the cutaneous vessels, and allows the elimination of water out of the pores. Warm water, general or local, is vastly superior to any other form for febrile and inflammatory diseases. This has been my experience for the last fourteen years.

Hip-bath.—This form of bath may be effected in shallow tubs made for the purpose, or by the ordinary washing-tub, and the temparature not over ninety to one hundred degrees. The water should be sufficient to cover the hips and lower part of the abdomen. Its utility is in suppressed and difficult menstruation, stranguary, painful and rheumatic affections of the hip, inflammation of the urethra and neck of the bladder; for prolapsed rectum and piles. For the two last, many prefer the cold Water.

The *foot-bath* is of common use in fevers, for colds and obstructed menstruation.

The *hot-bath* is seldom resorted to, as the temparature of 100 to 112 degrees admits of danger to the patient, although recommended to restore the blood circulation in paralysis and collapsed and suddenly sinking conditions of the patient.

Warm Fermentation and Poultices.—Warm water, and sometimes hot as can be borne, by saturating towels or cloths, becomes of service in suppressed menstruation, inflammation of the kidneys and bladder; for relaxing the whole urinary organs in gravel diseases, and for inflammation of the bowels. *Poultices* are of common use, and too well understood to require explanation.

Warm Drinks.—Warm (tepid) Water is used to produce vomiting, but often as an adjuvant or aid to other agents. It is indicated in any case of poisoning, both as a solvent agent, and to protect, in some degree at least, the walls of the stomach until vomiting can be effected. Warm drinks frequently allay irritation of the throat, trachea and larynx.

Injections of Warm Water.—Warm water, with the addition of very little oil or lard, is specially indicated in constipation, empacted fæces of the rectum and colon; for the accumulation of scibila or fecal balls in the bowels, and to relieve irritation and inflammation of adjacent organs of the pelvic cavity. Injections of warm Water, with one drachm of powdered lobelia and two of powdered slippery-elm, are of the greatest importance in bilious colic.

Injections of warm Water per the vagina, aid to restore the menstrual flow, to relieve pain and irritation from acrid discharges. Warm Water may be injected into the urethra.

Boiling Water (at 212 degrees) is a powerful irritant and vessicant. In past ages it has been employed in some diseases as a counter-irritant. The liability of accidents from boiling Water makes the treatment for scalds of some importance. This, however, is very simple, as all that is necessary may be found in a mucilage of slippery-elm; dipping into it pieces of cloth continually, or every few minutes changing them, so as not to allow any dryness of the parts. This application will remove the inflammation of scalds better than any other remedy.

Vapor-bath.—The means or appliances for a vapor-bath may

be several. 1. A box sufficiently large to allow the patient to take a sitting posture, and to have at the bottom a vessel of hot Water, into which hot stones are thrown to create steam or vapor. The heat may range from 100 to 160 degrees. In this process, the heat should be at about 100 degrees, gradually increasing, as the patient may bear it, and continue ten to sixty minutes. Before the patient leaves the box, the heat should be diminished somewhat, and followed by rubbing the surface with a towel.

2. *Hydro-alcoholic Vapor-bath.*—A square tin box, of ten inches, and six high, having a boiler for water to sit on the top, and under this boiler an alcoholic lamp (with three tubes), that will hold about three ounces of alcohol. By setting fire to the wick in these tubes, it will soon boil the Water in the boiler, directly above the lamp. This gives a hydro-alcoholic vapor-bath. Any ingenious tin-smith can make this apparatus. It is better to have the bottom of the boiler made of copper. The four sides of the main box should be perforated in many holes, both to ventilate and allow the vapor of the alcohol to unite and act with the vapor of the boiling Water. In this process the patient should sit in a chair, the box placed on the floor, and the patient completely surrounded with a large blanket up to the neck, or if proper, include the head.

3. The vapor-bath may be applied in a more common way, by heating bricks to a hissing heat, then cooling them off by means of water, or vinegar and water, lapping them in cloths, and placing them to the patient in bed, and to such particular parts as desired, or for a general vapor-bath. The patient may or may not have the head enveloped. This is a common and useful mode.

Local or Vapor-bath.—It is of importance sometimes to apply vapor to the head, as in earache, &c., to the feet, as in dropsical effusions, or for painful affections of the joints of the feet, knees and hips. In this process, for the feet or knees, the limbs may be placed over a half bucket of warm water, and hot stones or bricks put in to create the steam or vapor, the parts being covered by a blanket raised a few inches above the feet and limbs.

The vapor-bath has frequent indications for the relief of the

sick, when the blood has receded from the capilliary vessels, cleansing the skin, inducing perspiration, equalizing the circulation, thus relieving fevers, as well as internal congestion of the lungs, kidneys, stomach, bowels, and other like attacks. In rheumatism it is of great importance, and for checked perspiration, causing attacks upon any of the internal organs, the uterus, &c. The vapor-bath is not employed in more than once in a hundred cases where it should be, by the profession.

This was one of the important and leading agents in Samuel Thomson's system; a system rough and crude indeed, yet in some particulars surpassed any other practice extant. We desire to perpetuate the name of Dr. Samuel Thomson, of New Hampshire, by asserting the fact that he was *the* medical revolutionist of America. In this assertion we by no means disparage the invaluable services of Dr. Wooster Beach, of New York; nor of Dr. Newton, Vermont; Dr. Sperry, Rhode Island; Drs. Cooke, Sweet, Sites, Smith, and Comfort, Philadelphia; Dr. Simms, Delaware; Drs. Morrow, Newton, Howard, King, Kost, Curtis, Ohio; Dr. Morrow, of Georgia. We have not the space to enumerate the very many other physicians, both living and dead, who have been engaged in the great cause of medical reformation.

Vapor Inhaled.—The mode of inhaling or breathing vapor is easily arranged. It is a valuable emollient remedy for irritation of the nose, tonsils, throat, larynx, trachea, and bronchial tubes. With the addition of vinegar, or a little acetic acid, it gives relief in croup and quinsy.

Vapor Medicated.—It has been the practice of some to impregnate Water with medical agents, and then convert the water into vapor, applying by inhalation. Vegetable agents have sometimes thus been used; but more frequently the vapors of sulphur, iodine, and sometimes chlorine gas, sulphurous acid gas, and some other remedies. In some large cities, medicated vapor-baths have been established; but have not met with long-continued support from the public.

CHALYBEATE AND MINERAL WATERS.

The limits of this work does not admit of a detailed exposition of this class of agents; and this seems to be the view of most authors on the Materia Medica. Pareira is the most elaborate writer on this branch of medicine.

Mineral Waters are natural compounds of nature, and may be prepared by artificial means. In nature they are generally found in springs, in many parts of the world, combined in various combinations of soda, sodium, lime, magnesium, and sometimes small proportions of iron, &c.

Chalybeates are the waters of natural springs, containing more or less of the agents heretofore noticed, with iron largely predominating. They are sometimes denominated *ferruginous waters.*

In the early ages of the world, waters that were impregnated with mineral agents were noticed and employed for the cure of diseases and the restoration of health; and it is supposed were known to Esculapius, one of the most ancient of medical teachers and authors; of a later date they were noticed by Hippocrates. The mineral and Chalybeate waters have been classified, to which we only make a brief reference, and to those found in America.

The *saline mineral waters* of this country are found in the springs of Virginia, and Saratoga, N. Y. They contain chlorides of sodium, magnesium, and calcium; and carbonates of lime, soda, magnesia, with small proportions of iron and some other elements.

These waters all possess medicinal properties, with more or less purgative action; and generally give relief to those troubled with constipation, plethora, piles; increasing the powers of the serous tissues, exciting to action the skin and kidneys. They have been employed for acute pains in the head, glandular enlargements, rheumatism, skin and liver diseases.

Acidulous Mineral Waters.—These waters have a marked acidulous taste, depending upon a large amount of carbonic acid gas, with a bright sparkling action when the water is poured from one vessel into another. Besides, carbonic acid

is found in large proportions, sulphuric acid, sulphate of lime, and iron, with magnesia, alumina, &c. The most noted is the Orchard Spring, of New York. From the acidulous taste, depending upon carbonic acid, these are the most acceptable of any of the mineral and chalybeate waters. They become cooling and refrigerant in febrile diseases; useful in some forms of indigestion; in gouty and rheumatic affections, and to change and throw off an undue amount of uric acid. The artificial mineral waters depend chiefly upon the carbonic acid in forming a pleasant beverage.

Chalybeate Waters.—They are found in natural springs in different parts of the United States, having a large proportion of the oxide of iron, with different parts of chloride of sodium, calcium, and magnesium, with sulphate and carbonate of lime, traces of silicia, &c.

These springs are represented in the springs of Bedford, Pa.; Balston Spa, N. Y.; and Schooley's Mountain, N. J. It is the amount of iron that characterizes these waters, which gives a styptic or inky taste, and imparts a black color, by adding tannic acid or nut-galls.

The waters of these springs are indicated for persons who are pale, enemic, weak, and need a supply of the coloring element of the blood.

Sulphureted Waters.—These waters contain a large proportion of the hydro-sulphuric acid gas, or sulphureted hydrogen, characterized by the taste and smell of sulphur. They are predominent in some springs at Nashville, Tenn.; in Saratoga, N. Y.; in Davidson county, Ga., and some other places.

These waters become tonics, and in some degree stimulants. They are specially indicated in cutaneous diseases, increasing the secretions of the skin. They have been employed for gout and rheumatism; for weakened conditions of the uterus, and other chronic affections. Several Water-cure establishments have been erected in the neighborhood of these springs, purporting to cure various diseases.

ALCOHOL.

The component parts of Alcohol consist of two of carbon=12, three of hydrogen=3, one of oxygen=8; thus, C.2, H.3, O.1=23. It is obtained from many vegetable substances, the chief of which are barley, sugar-cane, or its product, molasses, and rye and corn. Grapes produce Alcohol; but they are principally used for the making of wine and brandy. Apples are also included in the category; but the chief element is the sugar or saccharine principle, and with more or less of water, with the application of heat at seventy to eighty degrees, so as to produce *fermentation*. From these articles, by the fermenting process, several beverages are produced which, by the alcoholic principle, will cause intoxication.

Fermented liquors were made and used in the early ages of the world. The best proof of the early use of fermented liquors is found to be 2348 years before Christ, in the book of Genesis, chap. ix, v. 20, 21: "And Noah began to be a husbandman, and he planted a vineyard." "And he drank of the wine, and was drunken; and he was uncovered in his tent." Historians of a later date, as Homer, 900 years before Chirist, and Heroditus, 445 years before the Christian era, speak of fermented liquors, and the effects they produce on the animal economy. The ancients of Europe and Asia understood the process of fermentaion, whilst the art of distilling wine to obtain ardent spirits cannot be traced farther back than the twelfth century, when for this purpose, the *alembic* was invented, and afterwards improved, and known as the still now in use, consisting of the furnace; the boiler, tapering at the top, so as to receive the worm or pipe leading into the large tub of cold water, the condenser; the pipe leading out near the bottom of the tub into a suitable vessel to receive the spirit or Alcohol which has been condensed from the vapor created in the boiler. The late improved liquor-stills are much more complicated, for which see a useful little work—"Complete Practical Distiller," published in Philadelphia, by H. C. Baird.

Brandy is made from wine by the process of distillation. Generally it is colorless; but age gives it color, as well as

burnt sugar that is frequently added for this purpose. Most of the pure brandy is imported, particularly from France. It varies in strength, according to the amount of water that is allowed to remain in it in the process of distillation. The flavor of brandy depends on the presence of an etherial spirit formed by the action of the tartaric and acetic acid of the wine on the Alcohol in the brandy.

Gin (*Holland*) is distilled from fermented juniper berries, but more frequently from fermented malted barley, with often ground rye being added, with sufficient water to promote fermentation until the liquid becomes transparent, hot and acrid to the taste; then it is submitted to the distilling process. This gives the crude spirit, which is re-distilled. When properly prepared, it is by flavoring the pure diluted Alcohol with the essential oil of juniper. Much of the gin sold in this country is the diluted Alcohol rectified with the spirits of turpentine—a poor and cheap article, sold to every-day drinkers and inebriates, both for stimulating effects and its action on the kidneys, and for gonorrhea.

Scotch and *Irish Whisky*.—These two articles are quite similar, and have been referred to as national spirits of Ireland and Scotland. They are prepared from the fermented malt of barley and rye by distillation; and in the process there is imparted to them a peculiar smoky flavor, which is always a test of genuineness. This flavor is imparted to the malt when drying it by turf fires.

Rum.—Much of this is prepared from fermented, uncrystallizable sugar or molasses, and also from the refuse material matter of the cane when making sugar. When much of the cane is thus employed, the rum contains a large proportion of an essential oil, which imparts a considerable of stimulating and diaphoretic action, with more or less deleterious effects upon the nervous system, especially in the use of new rum. Age modifies this peculiar flavor, and gives a more agreeable taste.

Good rum is often employed to advantage for sudden colds. measles, &c., when added to warm water. It is known as New England, Jamacia, and West India rum.

In England, these are the chief forms of recognized spiritous liquors, composed of water, Alcohol, volatile oil, and some coloring matter. In every one hundred parts of these liquors, brandy contains fifty-five parts of Alcohol; rum, forty-four parts; gin, fifty-two parts; Scotch or Irish whisky, fifty-four parts. These are all considered ardent spirits.

The vast amount of Alcohol, and various grades of spiritous liquors, are made from rye and corn, and from potatoes, to some extent. They all go through the process of malting, mashing, and fermentation, by the addition of heat, to be fitted for distillation. A knowledge of this process is only of pracal use to those who are manufacturers. See Baird's work, before noticed.

When Alcohol is the object to be obtained, the process commences with the malted liquor, which, being passed through the still, is called *low wines*. This replaced in the still, and having passed through, thus being divested of more water, is called *high wines*, or *ardent spirits*. The next step is to separate all the water and coloring matter from the Alcohol; when, to effect this, slacked lime or carbonate of potassa is added to absorb the water, when it is submitted to the still, and the Alcohol is converted into vapor that is condensed in the process. This may then be re-distilled, so as to produce in one hundred parts ninety of Alcohol. But there is yet some of the volatile oil that gives the rank odor of the Alcohol. To take off this strong volatile odor, it is passed through animal charcoal, when the result is pure, *de-odorized* Alcohol.

One of the ordinary tests of pure Alcohol, is that it will cut or dissolve the essential oils, as cinnamon, lemon, neroli, &c. Another, is that when put in a lamp, it entirely burns out, without any residue, and that it burns with a *blue flame*, and without smoke. In proportion as Alcohol contains water or other impurities, the *yellow flame* and *smoke* will be noticed. The hydrometer is much in use to test Alcohol, especially with wholesale dealers. The ordinary druggist's Alcohol gives a rank and unpleasant odor, showing that it may be sixty-five, or seventy-five, or eighty-five per cent. of Alcohol in one hundred parts, thus containing more or less of water and oil. The oil gives it the rank odor. The amount of water it contains

diminishes its strength and value accordingly. Druggist's Alcohol should contain seventy-eight per cent. of Alcohol.

Commercial reports in the newspapers of the day are of importance to those who wish to purchase Alcohol: thus, if whisky is reported fifty cents per gallon, Alcohol is double this price, $1, with ten per cent. added, making the price of Alcohol $1.10 per gallon. At whatever may be the price of whisky, this price is doubled, with ten cents added, and the price of Alcohol is known.

In purchasing Alcohol, for either medicinal or mechanical purposes, there is a lamentable uncertainty as to its strength or purity, because by unprincipled dealers, water may so easily be added: and there is no law to regulate this difficulty, even if it were possible to do so.

Ardent Spirits is, by good authorities, computed to consist of in one hundred parts—forty-nine of Alcohol and fifty-one of water; hence when the Alcohol has less than forty-nine, it is *under proof*, and if over forty-nine, it is *over proof*.

Spiritus Vini Gallici.—This is but pure French brandy, and often called for by physicians in their prescriptions. It does not contain any of the volatile oil that is found in the liquors from rye, corn, &c.

Spiritus Vini is usually understood to be Alcohol (deodorized, ninety to ninety-five per cent.) and pure water, equal parts.

Alcohol Dilutum.—Diluted Alcohol is equal parts of Alcohol and water.

Apple Whisky.—This is prepared by the grinding or mashing of apples, and submitting the pulpy mass to the press, and the liquid received into large tubs or vats; then placed in large casks for fermentation, when it is fitted for the still. It is known as *strong* or *reduced* whisky, according to the amount of water it contains. When pure, it is less deleterious and acrid than most other kinds of whisky.

Monongahela Whisky is chiefly prepared from rye. When pure, and having age, it is soft and bland; by many it is preferred to other kinds.

Corn Whisky has a poor reputation, and is sometimes used to adulterate other liquors.

Low Wine is sometimes called *sweet liquor*. It is generally the first running of the still, and may contain thirty or forty per cent. of Alcohol. It is used for adulterating brandy and other good liquors.

PROP., &c.—Alcohol will act as a powerful irritant, stimulant, excitant, and narcotic. Externally, its effect is to condense or contract the skin; hence to relaxed muscular fibre of limbs or body, or in too free perspiration or night-sweats, Alcohol is beneficial. When applied with the aid of friction, by the hand, it causes irritation, heat and redness. Used in this way, the fumes that arise, being inhaled by the patient, generally become an anodyne, aiding the patient to rest and sleep. When largely diluted with warm water, is generally its most available form for painful affections.

Internally, Alcohol exhibits various effects, according to its strength and several forms of combination, depending on the less or frequent use that has been made of it. Its first effect is usually upon the brain, that is, when exhibited in small doses; then the nervous and vascular systems; the face a little flushed, the pulse a little faster, the mind a little brighter, and the tongue runs free; pains are relieved, and cares are driven away, when happiness reigns for a time. It is the different forms of Alcohol, or spirits, we thus refer to, as brandy, whisky, &c. Thus it is, when once fairly begun, that the habit gradually steals upon so many, until its increased use has enthralled them. It is the small and often repeated dose that frequently leads to trouble.

The frequent large drinks of spiritous liquor lead to more marked exhibitions, deranging the functions of the brain, nerves, heart, the secretions and excretions of the system, causing a high state of excitement and delirium, or stupor, lethargy and coma. These effects may in a few hours terminate in sleep, with perspiration, unless they be cut short by free vomiting, which gives relief to the victim. It is often noticed that some eject the contents of the stomach when they have taken a certain amount, and they lay down to sleep off the remaining effects, to awake with pain in the head, lassitude, and horrible feelings.

Spiritous liquors, in large and frequent doses, may soon

induce lethargy, or profound insensibility, coma, and death; similar to apoplexy. On the approach of these symptoms, the pupil of the eye is usually dilated, the pulse is slow, with impaired breathing, and death ensues by paralysis of the glottis and other organs of respiration.

A not unfrequent result of the excessive use of Alcoholic liquors is known as *delirium tremens*, or *mania potu*. The symptoms, although somewhat varying, are well understood by the profession, and by the public generally. In these cases, the walls of the stomach have taken on inflammation; the brain and its membranes are more or less inflamed; the nerves of sensation are more or less paralyzed, and the nerves of motion have lost their equilibrium. Usually this disease is first noticed by the "dim sights of fearful things" which appear to the patient. The second stage is paroxysms of spasms of a severe character, following each other at varying intervals, which frequently terminate in death. The most efficient treatment is known to be full, free, and efficient emetics; as powdered Lobelia, three drachms; Ipecac, two drachms; San. Canad., one drachm, in boiling water, one pint. *Dose*—Four ounces every ten minutes. This is to be followed closely with gelsemin, in one-fourth grain, every hour, until the whole body is well relaxed; then given at further intervals until the attack is subdued. The author claims to have first introduced this remedy for this formidable disease, in the Eclectic Medical Journal of Pennsylvania, 1863. The saturated tincture of gelsemin will serve the same purpose.

The alarming extent of intoxication, degradation, and crime that follows the use of spiritous liquors, is a terrible blight upon the people of America. Many arbitrary laws have been enacted in several of the States to suppress its use, which have been of little or no avail. It is home instruction, the example of the parent, and by making impressions upon the child, imparting a full knowledge of the danger that follows the frequent use of ardent spirits.

Ardent Spirits (which by some authorities is laid down to be about the strength of equal parts of pure water mixed with pure Alcohol) when long continued, has been found to produce several diseases, as insanity, affections of the liver, inflamma-

tion and thickening of the walls of the stomach; palsy, dropsy, epilepsy, and many other symptoms, indicating serious effects upon the whole system.

By post-mortem examination of the bodies of confirmed drunkards, some few cases have been found with inflammation of the stomach, and a schirrous state of the pylorous. By absorption, Alcohol has been found in the fluids of the body; in serous membranes of the brain, in the blood, bile, and urine.

The medicinal uses of Alcohol are more numerous than any other one agent in the Materia Medica. It would be difficult, and probably impossible for the profession to lay it aside, even to avoid the unlimited extent of misery and crime that follow in its perverted use.

Alcohol, or spirits of wine, is seldom employed internally, although it may be used by diluting it with two parts of water, adding sugar and lemon to give it flavor, to stimulate the muscular and nervous systems. The nerves of the stomach receive the first impression, which is communicated to the cerebro-spinal centres, and spreading the effects through the whole system, followed with varying symptoms in different individuals; for it is every day observed that the same kind and amount of liquor will stimulate both the physical and mental energy of some, while upon others it will cause depression and stupor. Upon some are exhibited social and friendly feelings, and upon others a wicked and dangerous spirit is predominant.

Pure spirits, though of different degrees of strength, in moderate doses, has its many legitimate indications, with no bad effects upon the system. It is generally the adulterated liquors that make destructive work upon the human economy.

Officinal Preparations.—Here pure, or ninety-five per cent. Alcohol, is not so frequently employed as other and weaker forms of ardent spirits, although sometimes its pure state is requisite in the preparation of some extracts and tinctures, ether, etherial oils, and for obtaining the alkalies, alkaloids, and resins of the vegetable agents.

That Alcohol is of most essential importance to the profession, is observed in the fact that it is a solvent of many substances—camphor, iodine, balsams, resins, volatile oils, castor oil, sugar, manna, pure potassa, ammonia, soda, &c.

Spiritus Vini Gallici.—Brandy. Obtained from the distillation of wine. France supplies more than any other part of the world. The most celebrated are the Cognac and Annagnac, with many other brands. The French brandies are much reduced and adulterated in this country. The object of this is a double purpose—to make large profits, and to sell cheap brandies.

British Brandy finds its way into the markets by taking diluted Alcohol or proof-spirits, 100 parts; argol, one half pound, dissolved in water, a little acetic acid, some bruised French plumbs, and flavoring with the material used for Cognac brandy; then submit this mixture to the liquor still. The spirit which comes over may be colored with burnt sugar or carmel, and roughened in taste with a few drops of tincture of catechu or oak bark. The above can hardly be called *adulterated brandy.*

False brandies are prepared in this country and in Europe. It is effected by taking *low wines* or soft liquor; also with de-odorized Alcohol, reducing it with water, adding grapes, burnt sugar, and other flavoring substances, and sold at low prices. A cask of pure French brandy is sometimes so adulterated with water and low wines as to double the amount of pure brandy.

BLOOD.

A brief notice of this important element of the human body may with propriety be admitted in this work. The ancients justly considered the Blood to be the "*pabulum of life.*" And what to us seems remarkable now, is the fact that as late as the seventeenth century, the profession then used human blood in treatment of various diseases: thus, "*sanguis*, Blood. Some say that Blood, drank hot, cures epilepsis, but sometimes brings great tremblings upon them that take it; the powder, or ashes of it, applied to any flux of Blood, stops it."

But the Blood is of primary importance, and its quantity is greater than any other fluid in the body. It is the resource of all the solids of the body, and the source of every secretion,

with the exception of the epidermis, the enamel of the teeth, the body of the crystalline lens; and generally diffused over every part of the system. It first passes through a series of gradually diminishing tubes, the *arteries*, propelled by the action of the heart; then it is again returned to the heart, through another series of gradually enlarging tubes, the *veins*.

The average proportion of Blood in the whole body, is one pound in every five. When the amount of Blood is greater than this by average proportion, an unnatural state, or *plethora*, almost always exists. When the Blood is suddenly abstracted, a series of phenomena occur, which display a diminished degree of vitality; and if the quantity taken away exexceeds a certain proportion of the whole, death immediately ensues. The abstraction of a certain amount, therefore, produces a sedative effect on the habit; and from this deduction the profession (Old School), for nearly two centuries, has enforced the terrible delusion, "*a Will-o'-the-wisp*," that bloodletting was the great panacea in the treatment of most all diseases.

The action of the heart commences the third week after conception, and continues to the last moment of existence. The structure of the heart is well adapted to its perpetual motion during the life of each human body. The contraction (systole), and relaxation (diastole), of the heart are states of action and repose; the first propels the Blood into the arteries, the latter permits it to be poured from the contiguous veins into the cavities of the breast. This peculiar action of expelling out and receiving Blood into the heart, can be distinctly heard by placing the ear over the fifth, sixth, and seventh ribs, near the left side of the sternum. The motion of the venticles gives a dull sound; the auricles a clearer sound, similar to the noise of a valve.

The action of the heart propelling the Blood through the arteries, and against the elastic walls of the arteries, communicates to the finger the feeling known as the pulse. The variations of the pulse may be noticed in the changing periods of life, and in different sexes. It is altered by watchfulness, sleep, exercise, depressing and exciting passions; meals, the discharge of the seminal fluid, the loss of Blood, and many dis-

eased conditions of the system. Notwithstanding the uncertainty of diagnosing disease by the action of the pulse, the physician is governed to a degree by this peculiar function of the heart. He depends upon the pulse in the use of his remedies, although it often proves fallacious. The exciting state of disease may be present; nervous excitement may increase it, or transient depression may lower it for a short time; affections of the heart, by sympathetic or diseased organic action, may be present; and in some persons an unusual action of the pulse attends them through many years of life. Although the action of the heart, as well as the appearance of the tongue, become general guides to the physician, they do often disappoint us.

The Blood, when thrown from the heart, is said to complete its round and return back in two minutes; but this celerity of movement varies in different individuals, depending upon the vitality and health of the person. The average pulsations or contractions of the heart of a healthy adult, without any nervous or other excitement or depression, is said to be sixty-eight to seventy-five beats per minute. All deviations from this acknowledged standard, is to be viewed as a diseased condition of the system. It is a remarkable fact, that by nervous excitement or disease, the stomach at once becomes the centre of the trouble, and thus imparts a derangement of the heart's action. Therefore, to judge correctly, the physician must take a careful survey of all attending circumstances, else he is led astray, and forms erroneous conclusions. This precaution is more necessary with females, because of their nervous susceptibility, and of their peculiar organization in some particulars.

The Blood (sanguis) is chiefly formed from the *chyle* prepared through the digestive functions. It acquires important properties and changes as it passes through the lungs. It is the supplying resource, maintaining the vigor and strength of the body, and the source of all the secretions. Blood is distinguished as arterial or *red* Blood; being thrown from the heart to every part of the body, when it becomes changed, and returning back through the veins, it is called dark or *black* Blood; thus passing into the heart; then by the pulmonary artery into the lungs, when by the oxygen of the air in the

lungs, it again becomes changed, receiving its *red* color, when it enters the heart, and is again distributed through the arteries.

By analysis of the most able chemists and physiologists, the Blood has been divided into four component parts, viz.: Fibrin, albumen, corpuscles, and salts; thus, in solution, it circulates in the body. Fibrin and albumen form the liquid, and the salts and corpuscles are suspended in this liquid, or liquor sanguinis.

When Blood has been drawn from the arm and allowed to stand, it coagulates, forming the *clot* and *serum*. The clot (crassamentum) comprises the fibrin and corpuscles; the serum is the albumen and salts. Of the solids and liquids of the Blood, it has been established that it consists in one hundred parts, about seventy-nine of water, and twenty-one parts are solids. The *serum*, or water, holds albumen and the salts in solution; the *clot* contains the fibrin, a little serum, salts and coloring matter.

The elementary constituents of Blood, as exhibited by several chemists, are found to be—*Water*, *albumen*, *fibrin*, *coloring matter*, *oily matter*, *crystallizable fatty matter*, *extractive matter*, *soluble in alcohol* and *water*, *albumen* combined with *soda*, *chlorides* of *potassium* and *sodium*; *alkaline*, *sulphate*, *phosphates*, and *sub-carbonates*; *phosphate* of *magnesia*, *lime* and *iron*; *per-oxide* of *iron*, and *sub-carbonate* of *lime* and *magnesia*. Some authors on physiology have more clearly defined the above elements, and have added oxygen.

From the above analysis, it will be seen that the Blood which has been elaborated from a supply of food, water, and air, contains the elements to form and keep up a supply for all that is necessary to the formation, growth, and support of every part of the human form.

OBJECTIONS TO CERTAIN MINERAL AGENTS.

The question may well be propounded—Are mineral agents beneficial in the cure of disease? The solution of this ques-

tion involves some uncertainty, at least by internal use. The external use of some of this class of agents may be acknowledged to be of utility, because of the chemical changes they effect upon local parts, especially when some of the dangerous ones are applied in such manner that their deleterious effects are not taken up by the absorbent vessels.

It may be of little importance to show that Dioscorides, Hippocrates, Avazenna, Galen, and other ancient physicians, seldom employed these agents, because it does not conclusively prove either their beneficial or injurious results.

The full force and use of these agents were inaugurated by Paracelsus, the first who taught chemistry in the schools of Europe, and who is acknowledged to be the founder of the chemical or mineral practice, and from which has descended and multiplied the present Old School profession, with innumerable remedies and improvements besides the class of mineral agents. This revolution in medicine was commenced by Paracelsus in the early part of the sixteenth century, and before its close, had gained possession of the medical schools of Europe which had been controlled by the followers of Galen for several previous centuries. By the aid of chemistry, these agents were increased into various forms, and which, together with the powerfully destructive adjuncts of bleeding, blistering, and cupping, the profession held direful sway and dreadful carnage over our deluded and helpless race for over two centuries.

Visible signs of another revolution in medicine appeared in the first quarter of this, the nineteenth century, with aim and intent upon lifting off this terrible incubus from afflicted humanity. It should not be considered inappropriate here to refer merely to the names of these pioneers of medicine. At the head of these stands the name of Dr. Samuel Thomson, of New Hampshire. He it was who "set the ball in motion." Dr. W. Beach, of New York, soon after appeared, and with more scientific investigations than the former. In a little time others appeared, with greater or less popularity—Dr. Elisha Smith, of New York; Dr. Farley, of New Jersey; Dr. Newton, of Massachusetts; Dr. Morrow, of Ohio; Dr. Howard, do; Dr. Semms, of Delaware; Drs. Howell, P. F. Sweet, and Thomas

Cooke, of Philadelphia, and many others. These have all gone to their graves, with the exception of Dr. Beach, whose lamp burns feebly. Of the living, there are many who have devoted many years of hard labor to purify and elevate the medical profession. But we have digressed a little from the subject in hand.

Why object to certain mineral agents? To answer this, we refer to the several elements of the blood, as exhibited by Carpenter, Dungleson, and other eminent physiologists. Thus it will be observed that certain kinds of material, including some of the mineral, are necessary for healthy blood, which is of a natural law—a wise provision of nature to establish the growth and maturity of the body. Nature thus having established her law, has called together all of the elements that are necessary to establish the wonderful exhibition of human economy. Therefore all those mineral agents or their elements not found as a component part of the human body, cannot and do not assimilate with the fluids and solids of the system. They may be taken up by the absorbent vessels, carried into blood circulation, deposited in the solids of the body, as has been proved. And although there are probably many instances where no bad effects have been observed in such cases, yet this is not sufficient evidence that no deleterious effects have resulted to the human system. It has been admitted by all late writers that arsenic, mercury, silver, gold, zinc, lead, copper, and a few other mineral agents, will produce serious and fatal results. The student is referred to such articles in their appropriate places.

It is not disputed that these objectionable agents do sometimes remove the disease for which they are administered; yet it cannot by harmonious action with the functions of the system, and must only be effected by a chemical change of the solids and fluids, substituting their own action for that of the previous diseased condition.

Mercury (or its preparations) has been for 200 years the great "catholican" of the Alopathic school; and although late authors see that their idol is on the wane, and with it their peculiar practice is falling into disrepute, still they hug to the delusion, fearing that with its fall goes their power to an uncertain degree; and they still press its importance, yet have sufficient

generosity to note its bad effects. They admit that its action is such as to produce an inflammatory crust on the blood; that its color deepens, and its coagulability becomes less; that the proportions of clot and serum become changed, and "that the whole organic formation of the patient is less consistent and cohesive," and that the "electrical condition of the blood changes from the negative or healthy state to that of the positive." The nervous system often becomes seriously affected by palsy, shaking and trembling; the heart and lungs become seriously affected; the urinary organs, the osseous structure, and muscular system diseased. It has been the great remedy for venereal diseases, chiefly by substituting its own action. And in many cases, mercurial diseases have been charged upon its victims as being the action of venereal virus.

There are numerous mercurial preparations, and the calomel and blue mass are in most frequent use. By chemical changes which they produce on the fluids and solids, acting as excitants, they stimulate the liver to active secretions, and especially the salivary glands, producing salivation, which have, in thousands of cases, caused long and lingering diseases. Several instances have come under my notice, and one within the past year was of peculiar interest. It was a lady who, twelve years previous, was taken with a fever, when calomel was prescribed in small doses. She soon became salivated enormously. The bones of the nose were attacked, and nearly all exfoliated. She partially recovered. Her existence was wretched and disgusting to herself; continually harassed with mercurial, rheumatic, and neuralgic pains. These attacks were upon the periosteum of the bones, and toward the close of her life, upon the bones of the head, upon various parts of which suppuration and abcesses, followed with heavy discharges, reducing vitality, and closing in death. Like many thousands of others, this was a sad commentatory upon the superstition and ignorance of the medical profession of the Alopathic school.

Corrosive sublimate, arsenic, and some other mineral agents, destroy life by direct action on the mucus coat of the stomach; and these, with others, are taken into the circulation, destroying life by their impressions upon the solids and nervous sys-

tem. We believe the true position to be—*that no remedy should be employed internally whose elements are not found in the human body. All others cannot possibly act in accordance with the human economy.*

The great error of the profession has been by establishing certain dogmas and creeds, to which its members have blindly adhered, without independence and energy sufficient to think and act for themselves; taking foolish theories to be matters of fact, and fearing the obloquy that the schools, societies, and their colleagues may heap upon them—neither all of the virtue or intelligence of which rests with our own profession. Within the ranks of the Alopathic school, have been, and still are, many lovers of truth, benevolence, and charity. The celebrated Professor Chapman allowed his mind to soar above his own teachings and that of his colleagues, when, in the fulness of his heart, he remarked: "It is more than probable that, on some Alpine height, or along the margin of some mighty stream which pervades our wide-spread continent, there blooms many a plant, wasting its virtues on the 'desert air,' which, were they known, may be peculiarly adapted to the gigantic form of disease, and capable of reducing the lengthened catalogue of the *opprobria medicorum.*"

To investigate the efficient virtues of the vegetable kingdom, and to present them as substitutes for the fatal remedies of the past and present, has been the peculiar and arduous office of the reformed Eclectic practice of America. Many hundreds of the Old School are laying aside the prejudices of their education, and adhering more closely to the teaching of the New School of "rational medical" doctrines.

BLOOD-LETTING—BLEEDING.

It may be considered quite superfluous to offer any remarks on this subject, since its practice has been so materially abandoned, chiefly through the energies of our own profession, by enlightening the minds of the people, who have made the most impressive effects upon the Alopathic faculty.

The art of bleeding was occasionally employed in the middle ages of the world; but when, and by whom introduced, there is an uncertainty. At no time had the profession become wild and fanatical in the use of the lancet, until after the discovery of the blood circulation by Harvey, in the latter part of the seventeenth century. For a number of years, this diligent investigator was persecuted with most bitter denunciations by that class of physicians who advocated the chemical or mineral practice introduced by Paracelsus. The opposition to Harvey did not last many years, for the more the investigations to disprove it, the clearer became the facts of the discoverer; and although the balance of his life was a scene of distress, because of the abuse and derision of his former friends, his name will forever be proudly known in medical history, whilst his persecutors are in oblivion.

But blood-letting has been employed as an agent in the cure of disease. Although it has been introduced into very few works on Materia Medica, its unbounded praises are to be found in the text-books on physiology, practice and surgery of the Old School. To the credit of some of these late authors, they having seen so much of the fatal effects of this practice, they have felt constrained to place safe-guards to some extent on its use. They advise much caution in its use upon old people, because re-action may not follow, when the patient falls into a sturterous breathing, syncope, and death. Some consider the practice improper, except between the ages of eighteen and forty-five. They also have regard to the temperament of the patient; advising caution in the sanguine, and free use with the phlegmatic and melancholic. But it is difficult to ascertain before the act who can or cannot withstand the operation; for some of full habit will faint on the first opening of the vein, whilst some weakly persons will admit of the free loss of blood.

With females, besides the amount of vitality and the strength, the functions of lactation and menstruation must be considered, as well as the climate and mode of life. As before stated, these cautions have more specially been noted by late (English) authors. The practice of blood-letting has been more persistent in this country than any other, up to the year 1850. As an item

for the physician and student of the Eclectic School, and for others of enlightened views, we here give space to notice a few of the diseases in which bleeding is advised by the best Old School authority, viz.:

For its effects in active hemorrhage, in dropsy, epidemic diseases, hypertrophy, inflammatory and mixed fevers, puerperal mania, pleurisy, phlegmasia; the cure of epilepsy, cynanche trachyallis, croup, dysentery, erysipelas, intermittent fevers, mania, opthalmia, phthisis, pneumonia or inflammation of the lungs, spasms, hysteria, puerperal fevers, concussion, and other affections of the brain, typhus fever (Dr. Rush), Asiatic cholera. Indeed, these are but few in the long catalogue of diseases, for which bleeding has not been resorted to.

At this time (1865) there are but few persons of the age of forty, who cannot testify to the terrible infliction of bleeding. How well they can remember that when the Old School physician arrived, his first call was quite sure to be for the "bowl, towel, and bandage," or "send for the bleeder," to take "one, two or three pints of blood." Thousands of physicians have followed this practice as they would the habit of eating or going to bed. It was taught in text-books of colleges, and followed by the profession. This infatuation was not only peculiar to those of less note, but Professor Rush, of Philadelphia, whose fame was unsurpassed in this country, advised and practiced bloodletting for typhus fever, which was terribly destructive about 1798. All physicians bled for this disease as soon as Dr. Rush advised its use; and no instance is known in which death did not immediately follow. And how else could it have been? for the patient was already in a sinking state, and the loss of blood soon induced syncope and death. But this practice, so immediately fatal, was soon abandoned.

Bleeding was the great *sedative;* it reduced the bulk of the blood; and if taken full and free from a large orifice, reduced the pulse, followed with prostration. It also produces a change in the composition of this fluid, by changing the relative proportions of its constituent parts; for as it is drawn off, solids are rapidly replaced by the secretions, which are rapidly supplying this loss, making the blood in the body more thin and watery, so that after repeated bleedings the blood shows less

of the *clot* or solids, and more water, or *serum*; the body becomes weaker, and less able to stand the shock of the disease, when the muscular and nervous functions become diminished in action; fainting, syncope, and death may very soon follow. Then the plain facts appear, that when the solids and fluids have become changed by any form of disease threatening the life of the body, and when, added to this, the blood, so all important to animal life, is either rapidly or slowly drawn off, and to supply the vacuum in the heart and blood-vessels, the secreting organs immediately supply that which they only can, watery parts to fill up this vacuum, the blood is soon found in unhealthy proportions, as it is shown that by each successive bleeding the blood becomes thinner and lighter in color; the solids being less, and the watery particles greater. A horrible view was that the disease was alone in the blood, and through the opened vein both the disease and blood must be drawn off. All but the most ignorant physician can now see that to remove disease in this way, it can only be done with the lance, by drawing the whole of the blood, or that it can only be removed in proportion as the amount of blood is taken; whilst they did not seem to comprehend by this ordeal that the body becomes weaker and vitality endangered.

It may be admitted that in some instances bleeding will give relief. In some individuals the blood may have accumulated so as to engorge the blood-vessels and heart, threatening life by apoplexy. In pleurisy it has given temporary relief. Again the sudden loss of blood acts as a revulsive agent, that arouses the heart to restore its diminished action. But the enlightened physician never feels the necessity of the use of the lancet in this particular.

At this day, and because of the change of practice in this particular—the Eclectic profession having effected the revolution—it does not seem important to enter into any extended review of the cruelties perpetrated through a long series of years upon our race. Nor can it be supposed that the many thousand physicians who have with the lancet destroyed millions of lives, separating husbands and wives, fathers and mothers, children and kindred, forever, have done all this by

intention. No! it has been done in their ignorance and false education. Nevertheless, the results to the victims of blind fanaticism have been the same as if by intention. It has broken the heart-strings, made desolate hearth-stones, and whitened the graveyards of our whole land. What a happy deliverance now for those who are laid low by disease. For part of the seventeenth, all of the eighteenth, and part of this, the nineteenth century, the prostrated forms of millions of our race have plead for mercy and relief at the hands of the profession of medicine, when they received the sting of the lancet which drained away the blood, the pabulum, the life of their suffering bodies.

The well-read Eclectic student is already instructed how to avoid the lancet as a sedative agent. He knows that active emetics, followed with lobelia, veratrum, ipecac, and gelsemin, with general or local baths of warm water, and vapor-baths, will modify artificial excitement, which with suitable adjuncts, will meet all urgent and alarming emergencies; that in sudden prostration, syncope, or threatened dissolution, his powerful stimulants will serve his purposes. He also knows that active cathartics will soon reduce any too large bulk of arterial circulation of the blood that may threaten the brain, lungs, or pleura. He also knows that if the blood be diseased, he can by bleeding only take it away in proportion to the amount of blood extracted, and to remove all of the disease he must take all of the blood; hence it is that in millions of cases the Old School doctors have bled their patients until they have passed the portals of life.

Although the practice of blood-letting has been well nigh abandoned in Philadelphia, New York, and the Eastern and Western States, in fact all over the country, we are occasionally importuned to take blood. This arises from the fact that many persons of middle and later years have been accustomed to it on every attack of vertigo, acute pains of the chest, inflammatory fevers, fulness of veins, especially with females near the term of gestation. That in the above, and even in other cases, we are willing to admit that bleeding may give temporary relief; but the beautiful arrangement of the secreting organs hasten to supply the vacuum, as before stated. The patient,

so anxious to obtain relief, has faith in the practice, and hence in one week, one month, or one year, appeals to the physician for the use of the lancet.

We admit that bleeding may give temporary relief—that it cures disease, we deny. If the blood be diseased, the disease can only be removed by taking away the whole of the blood, and thus millions of our race have been sacrificed to the blind superstition of the medical profession. To take blood is a cruel thing, whether by war or the lancet, except perhaps in local congestion, with the cup, or the leech, to relieve local parts.

CUPPING.

The taking of blood from a local part, and by means of cupping, is generally acknowledged to be of utility by our profession. It is a practice of ancient date. A horn was perhaps the first cupping instrument, and suction by the mouth of the operator the mode of exhausting the air.

The manner of drawing blood in this way has been to apply the scarifier to the desired part; then to hold the suitable tin cup in the right hand, with the left hand a small piece of paper that has been saturated with alcohol, ignite and place it in the cup, quickly and firmly placing it over the scarified part. If all of the air be exhausted, the cup remains firm, and the blood flows into it. But a late and valuable improvement is found in the cupping *glass*, being so arranged as to have a small brass suction-pump attached to it. This is a most easy, convenient and expeditious way of performing the operation.

The advantages derived by this procees are of two kinds. First, to act as a counter-irritant to deep-seated local inflammation. Second, to relieve local congestion, and remove effused blood from the contused part. Marked advantages have followed this operation in diseases of the spinal column, and in deep-seated and local inflammation of other parts of the body and head. It is seldom, if ever, necessary to take only a little blood; in fact, *dry* cupping, without the scarifier, is all that is needed in many cases; or, after its use, apply the cup

just long enough to start the blood through the incisions made by this instrument. To continue the irritation for a time, irritating plasters or other agents may be applied.

CALORIC—HEAT.

Caloric is known to us by the sensations and effects which it produces—*heat*, and is therefore an excitant. It pervades everywhere, and passes from one body only to enter another. It has been classed into *free* or *sensible Caloric*, a state of its existence that can be known to our senses, or to the thermometer, and *combined* or *insensible Caloric*, when it is not evident to our senses. This last division of Caloric is not of material importance here; but the effects and importance of *free* Caloric will be briefly noticed.

The *sun* is the chief source of Caloric. *Chemical* action also produces it, as well as some *mixtures*, owing to the specific gravity of the bodies mixed, as when strong sulphuric acid is mixed with water.

Some *mechanical* operations, as *percussion*, evolves Caloric—the action of flint on steel, &c. *Friction* also produces Caloric, so as to cause wood to ignite, and iron to be heated. *Electricity* is another source of Caloric. A spark of eclectricity may be so applied so as to heat metals, and set fire to combustible substances.

Vitality, or the mysterious *vital* principle of animal heat, exhibits Caloric, a faculty or power which enables man and other animals to withstand the extremes of cold. This vital process is greatly aided by the nervous system, the blood and chemical changes going on in the body. In England, the lowest average heat of the human body is eighty-eight, and the greatest heat in the state of disease, 110 degrees.

Some bodies receive Caloric, according to the temperature of heat surrounding them, and emit it as the air becomes cool, so as to produce an equilibrium; whilst in other bodies, Caloric is admitted in different degrees, giving a different sensation to the touch. Thus, in a warm temperature, a piece of pine wood will feel comparatively warm, a piece of flannel cool, a piece of leather colder, and a piece of iron coldest.

It is said that when Caloric enters into a body, that it does not augment its weight, although it may accumulate to an extent that increases the bulk, depending upon the conducting powers of the body. Solid bodies are the best conductors, gasses the worst. Iron is a good conductor, glass a poor one. Most all kinds of clothing, especially wool, silks, and furs, are bad conductors; hence it is that when man is well enveloped, the Caloric of the body passes off but slowly, allowing him to withstand the great extremes of cold; and again, animal bodies are bad conductors of heat.

On the *living* body, the effect of free *Caloric* or *heat*, is to stimulate the nervous system, augmenting irritability and exciting motion. This was illustrated by Harvey, experimenting with the egg, showing that in ordinary temperature, the "*vital speck*" has a higher degree of heat than other part of it, and that as Caloric is gradually increased and continued, motion and life is the result. It is on this account that both plants and animals arrive sooner at maturity in the hot climates, where women become mothers at the age of ten and twelve years, whilst in extreme cold climates, not until they are past twenty years, In hot climates, the excitement caused by Caloric is soon followed with debility, and the inhabitants become more languid than do those of the temperate climates.

Caloric or *heat* is essential to vitality and life of the human body; in health, having its proper amount and equilibrium. In febrile diseases, there is (real or apparently) too much. In some other diseased conditions, there is too little; and in proportion as death of the body approaches, Caloric or heat is diminished. The inanimate body is cold in a warm temperature—it is a bad conductor now.

It is this vitalizing power of Caloric or heat, so essential to life, that has induced different emiment men to philosophize upon the principle of life in the human body. In the absence of Caloric or heat, there can be no *excitability*.

THEORY OF DR. BROWN.

That life is a forced state. If the *exciting* powers are withdrawn, death ensues as certainly as if the excitability was gone. By too great excitement, weakness is produced, because

excitability becomes defective. This is *indirect debility.* When the exciting powers are withheld, weakness is also induced; and this is *direct debility.* Dr. Brown gave special and detailed examples to show that life is a *forced* state, depending upon excitability derived from Caloric or heat; that the stimulating powers support life, and at the same time consume it; hence when the body and mind are steadily on the stretch for a long time, excitability becomes exhausted, and unless the body have sleep and rest, so as to give the living principle time to accumulate excitability, it becomes exhausted, and death ensues.

THEORY OF DR. RUSH.

Dr. Rush agreed with Brown, that life is a forced state; but that life, as applied to the human body, included *motion*, *heat*, *sensation*, and *thought.* To the support of life, he adds *sensibility* to Brown's *excitability.* He does not agree with Brown that *debility* is disease, but only that it is a *pre-disposing cause* of disease.

THEORY OF DR. S. THOMPSON.

The body is composed of four elements—*earth*, *air*, *fire*, and *water.* That earth and water constitute the solids—air and fire the fluids of the body; that the *healthy state* consists in the proper balance and distribution of these four elements, and disease by their disarrangement. All disease is caused by obstruction; the cure is to remove it by diffusing heat over the system; that *heat* is life, and *cold* is death.

It was no doubt the view of Brown, that his *excitability* was *heat*, and when this power is withheld, or had been in excess, so as to destroy the body, death followed, and its negative, cold, appeared; that *life*, or excitability, is a forced state, Dr. Rush's view being that motion, *heat*, sensation, and thought compose, when united, perfect life. It cannot well be disputed that the earth, *fire*, air, and water of Dr. Thompson stands equally fair, at least, with the others.

Drs. Brown and Rush were educated, distinguished, and popular men. Their teachings were well received, being of high authority. They stimulated the profession to renewed investigations in physiology and laws of health. Like them-

selves, their theories, for all practical purpose, have passed away, leaving their labors, as well as their errors, on the pages of medical history.

Dr. S. Thompson was a man of limited education, yet of keen perception and boldness of action. His course was peculiar to himself. His observation of the Alopathic practive convinced him that it was more *destructive* than *curative*, and, like all great minds, bent his mental and physical energies to the one object—the cure of disease, and, to a great extent, succeeded. Thomson, of New Hampshire, stands above all others in the medical revolution of America. We write this only to assert the facts in history. His system of medicine was crude; but in the absence of any one better that could break the heavy incubus of the Old School, it succeeded.

When the theories of life, set forth by these three men, are carefully examined, a marked similarity will be noticed. To do them justice, many pages should be written in explanation of their course of reasoning. Many before them have sought to explain the theory of life; in fact, we believe this desire to be universal; but this has only been like the continual waves of the ocean dashing against the unyielding and everlasting rocks. Men may theorize as they have done, whilst so far as can be known, the desired object is yet a deep-hidden secret. *Life is a mystery.* The efforts of men are fruitless, for they never can find it. Seek it whom you will, but your labors are in vain.

As a *therapeutical* agent, Caloric is of great consideration, a fact which the Eclectic physician keeps in view. The healthy secretions of the system depend upon its just amount, as well as the brain, spinal column, and nervous system. Its excess may be seen in febrile diseases, and its deficiency may be noted in great prostration and threatened dissolution, when large serous discharges flow from the bowels, or in the "cold sweat" upon the body. In cold climates, the secretions are likely to become defective, inducing disease. In hot climates, Caloric often pre-disposes the body to fevers, by increasing irritability, producing debility, causing a vitiated state of the secretions, which re-acts on the system, producing febrile action. It is noticed, in changes from a cold to a warm tem-

perature, that sudden excess of Caloric or heat terminates on the surface in the form of *prickly heat.*

Under various circumstances, the body is found without a sufficient amount of Caloric. The conducting mediums to supply this deficiency are several, viz.: warm *air*, *water*, *vapor*, and *solid* substances.

The solid conductors are simply illustrated in hot iron or brick being applied to any part of the body to restore or increase the heat of the part.

Heated dry air surrounding the body sometimes imparts Caloric so rapidly as to become an excitant, producing headache and accelerating the pulse, when the body is suddenly placed in temperature over ninety-five degrees. In this high temperature, it generally occurs that the excess of heat terminates upon the cutaneous capilliaries, followed with perspiration and therapeutical effects. To restore suspended animation soon after drowning, hot air becomes important in restoring heat and vitality, aiding the respiratory functions and the heart to resume their office.

The hot and warm vapor-bath may be used for a double purpose—to restore the natural heat of the body, and to relax the cutaneous surface. The vapor-bath becomes a valuable therapeutical agent in many diseased conditions, as muscular contractions, some congestive fevers, cutaneous diseases, chronic rheumatism, and is employed as a means of imparting Caloric or heat to the body. It moderately excites the heart's action, relaxes the cutaneous surface, excites the capillary vessels, equalizes the circulation, has a sedative effect upon the nervous system, and is one of the best ablutions. It was enjoined by the laws of Moses and Mahomed, and in Asia formed one of the religious rites, and in all parts of the civilized world has been employed either as a preventive or curative agent in disease.

The good effects of the warm-bath are not fully appreciated by our people. In most of our large cities there are many public baths, yet they are not properly patronized. A *clean skin* is one of the most important requisites for health.

ELECTRICITY.

The subject of Electricity has received the attention of many scientific investigators, upon which many pages have been written, and is of much importance in science and medicine. It is admitted to be a therapeutical agent to some extent; hence it is that we give it a condensed reference, to call the attention of the student to further investigations.

It is believed that Electricity, like caloric and heat, is diffused everywhere, and that all bodies possess more or less of it. When bodies contain their natural share of it, then it is said to remain dormant, producing no sensible effect. The human and other bodies may receive more than their due share, when they are said to be electrified. It has been supposed by some that Electricity is a modification of the material agent which produces the phenomena of heat and light, whilst others regard it differently.

The phenomena of Electricity is remarkable, and may be produced by different agents. If a piece of amber, or a glass tube, or a stick of sealing-wax be rubbed with fur, silk or flannel, a feather will be attracted by it, but if placed in contact, will fly from it to discharge its more redundant amount of Electricity on any conductor nearest to it. This experiment with amber was noticed by Thales six hundred years before the Christian era.

All bodies in reference to electrical relations, are regarded as *conductors* or *non-conductors*. The conductor is any body or substance that is easily traversed by the electric fluid, as all metals, plumbago, charcoal, water, plants, the animal body, animal fluids, fused chlorides, iodides, and salts. Some of the bad or poor conductors are glass, sealing-wax, sulphur, baked wood, resin, oil, and air. These are generally considered *non-conductors*. Of the metals, the best conductors are silver and copper; the poorest is lead. Some writers affirm that there are no perfect conductors.

When bodies are *isolated*, is when they are placed upon stools having glass feet, so that when charged with electricity it cannot pass off from them, glass being a non-conductor; and in this

way the body is isolated; and so isolation occurs when the body is placed upon sealing-wax, beeswax, rosin, sulphur or silk. Electricity is excited in bodies by friction. When two non-conducting bodies are rubbed together, the electrical matter cannot be diffused or carried off; but if another substance, which is a conductor, comes in contact with them, the electric fluid becomes diffused and carried off. On these principles the electrical machine is conducted.

There has been queries as to the cause or phenomena of Electricity. Without enumerating the various opinions, we may say that "Electricity is matter regulated by certain laws." It is believed to be generated by heat, cold, friction, and in some animals. Of the last, the electric eel is noticed as having an apparatus by which it possesses the power to impart the "shock" through the medium of water, in which they swim, sufficient to affect other fishes and animals that come near them.

With this view of the origin of Electricity, we let the subject pass to the investigating student, to consult works specially devoted to the subject, with the advice that he be not led astray with flattering encomiums of its great therapeutical powers in the treatment of disease. There are several machines or modes of applying Electricity to the body. Again, the amount or quantity to be applied is a subject that requires investigation and practical experience.

The utility of Electricity in its application to the human body for the cure of disease, admits of much doubt, and depends also upon circumstances, the amount, and manner of its application. Its chief action is upon the nervous system. Some individuals can bear its effects with impunity, and apparently become benefitted by it; others cannot tolerate it in the slightest degree. The general opinion of the profession is, that it is unreliable in the treatment of disease. This is also my own conclusion from repeated trials of its efficiency. I do not thus speak from any desire to prejudice the student. The fundamental ground of the Eclectic practice is, to employ such agents as are best adapted to remove disease, with the least injury to the system.

CONCENTRATED REMEDIES.

This class of remedial preparations has followed in the labors of medical reformation, and of legitimate consequence. These elements are not isolated, but are a combination of the active principles of various vegetable plants. They combine the resins, resinoids, alkaloids, neutral and other principles. In these preparations, the intention is to obtain all of the medicinal properties in a condensed form, and to throw off all parts of the plant not really medicinal, or necessary in the treatment of disease.

These forms of preparations received special attention from the Eclectic profession about 1853. Soon after this time, B. Keith, of New York, William S. Merrell, and Hill, of Cincinnati, O., instituted large laboratories for these preparations. About this time, Dr. P. F. Sweet, of Philadelphia, one of the most laborious of pioneers in medical reformation, gave much attention to these preparations. His remedies are yet to be found at his late residence, Second street, near Diamond, Philadelphia.

We believe there are other individuals who have imparted means and labor in these preparations, whom we are not able to identify. We desire to give credit to all, as far as possible. Of prior claims in this matter, we cannot definitely speak.

Of the utility and dependence of these concentrated remedies there is at this time much interest felt in our profession. They are concentrated, and easily encompassed in the pocket-case of the physician. The inquiry and the great desideratum is, will they meet all emergencies? We answer, no. They do not and cannot meet all cases of disease: nor do we understand that the manufacturers claim this much.

The physician should bear in mind that, in a majority of cases, the extracts, powders, infusions, and decoctions, with all of the vast appliances externally, including air, diet, exercise, &c., are still of the greatest and material importance.

The concentrated remedies are peculiar to the Eclectic profession. They are being adopted by the Alopathic and Homeopathic professions. These two professions are really follow-

ing in the advance of the Eclectic profession; yet they disguise this matter as much as possible.

The Eclectic practice is really a revolution in medicine. Its members must carefully guard themselves. In the selection of remedies, they must, in their use, be judged by their *actual* therapeutical action. They must be governed by *real*, not *imaginary* effects. They must never be blinded by the millionth or even the hundreth part of a grain of *any agent.*

As we have said, the *concentrated* agents are of great value. Some of them fail. Often, in emergencies, the powder, infusion, decoction, and extract are of great and superior importance. Whilst we recommend these remedies, we feel it our duty to say to the profession, that they do not, cannot meet emergencies, simply because medicines prepared in other forms are superior, in a majority of cases.

The concentrated remedies are prepared by only a few pharmaceutists. The profession have no positive knowledge of the *modus operandi.* We must take these preparations at the word of him who prepares them. The Alopathic school publish all of their concentrated remedies, as quinine, benzoic acid, morphia, &c. Those who prepare our concentrated remedies refuse to give their particular mode of preparation. We are satisfied that this refusal is from pecuniary interests, fearing that advantage may be taken by others. We believe that each manufacturer has his own peculiar mode of these preparations. The heavy expense of these laboratories may justify their secrecy in this matter. But, like all other secrets, when understood, they are plain and simple.

So far as we are advised, the chief laboratories are B. Keith & Co., New York; Wm. S. Merrell, Cincinnati; also H. Hill, Cincinnati, Ohio, and the remedies of Dr. P. F. Sweet, Philadelphia. The remedies of the two first are chiefly used in Philadelphia, not disparaging to H. Hill, Cincinnati, or any others preparing these remedies.

As a further elucidation of *concentrated remedies*, and by special favor, we are permitted to extract a portion of one of the lectures of Dr. Joseph Fitler, Professor of Chemistry in the Eclectic Medical College of Philadelphia, which we fully endorse, and more correct and instructive than any thing which we could write on the subject.

VEGETABLE CHEMISTRY.

[EXTRACTS FROM LECTURE BY PROFESSOR FITLER.]

We will to-day notice briefly a very important class of compounds which the chemist has extracted from various vegetable substances; and in so doing, he has furnished the physician with the active principles of many plants, divested of the inert, and, in some instances, the injurious substances with which they are mixed or combined in the plant. I allude to the "*vegetable alkaloids.*"

These are very different substances from potash or soda, which I have already said were alkaline metalloids, obtained from vegetables, "as they are actually vegetable active principles;" and they consist chiefly of the very same elements as the acids to which your attention was called at the last lecture. It appears that the true vegetable alkaloids most frequently contain nitrogen, in addition to the three elements found in all vegetables.

PARTIAL LIST OF ACTIVE PRINCIPLES AND CONCENTRATED REMEDIES.

MORPHIA, from Opium.
NARCOTINE, " "
CODEINE, " "
PARAMORPHINE, "
CINCHONINE, Peruvian Bark.
QUININE, " "
QUINIDINE, " "
CHINOIDINE, " "
ARICINE, Cusco Bark.
STRYCHNINE, Nux Vomica.
BRUCINE, " "
VERATRIN, Alb. Hellebore.
VERATRIA, Seeds of Veratrum Sabadilla.
HARMALINE, Seed of *Peganum Harmala.*
CAFFEINE, Coffee.
THEOBROMINE, Cacao-nuts.
CORNIN, Dogwood.
BERBERINE, *Barberry*, Berberis Vulgaris.
ELATERIN, Elaterium.
ANTIARIN, Upas Antiar.
PICROTOXIN, Fish Berries.
SANTONIN, Worm-seed.
ASPARIGIN, Marsh Mallow.
ABSINTHIN, Wormwood.
ALOESIN, Aloes.
BAROSMIN, Buchu.
AMPHELOPSIN, Ivy.
ALNUIN, Tag Alder.
APOCYNIN, Bitter-root.
ASCLEPIN, Pleurisy Root.
BAPTISIN, Wild Indigo.
CAULOPHYLLIN, Blue Cohosh.
CERASEIN, Choke-cherry.
CHIMAPHILLIN, Pipsissewa.
CHELONIN, Balmony.

PIPERINE, Pepper.
CONIA, Hemlock.
NICOTINE, Tobacco.
SPARTEINE, *Broom*, (Spartium Scoparium).
HYOSCYAMINE, Hyoscyamus Niger.
ATROPINE, Belladonna.
SOLANINE, Dulcamaria.
ACONITINE, Aconite.
DELPHININE, Delphinium Staphisagria, *Stavesacre Seeds.*
EMETINE, Ipecacuanha.
CURARINE, Arrow Poison of C. America.
COLLINSONIN, Hardhack.
GENTIANIN, Gentian.
DAPHNIN, Mezereon.
HESPERIDIN, Oranges and Lemons.
CORYDALIN, Turkey-pea.
BETIN, Sugar-beet.
CYPRIPEDIN, Ladies' Slipper.
DIGITALIN, Fox Glove.
DIOSCOREIN, Colic Root.
EUPHORBIUM, Blooming Spurge.
EUPATORIN PURP., Gravel-root.
EUONYMIN, Wahoo.
FRAZEREIN, Columbo.
GELSEMIN, Yellow Jasmin.
GERANIN, Crane's Bill.
HYDRASTIN, Golden Seal.
HAMAMELIN, Witch Hazel.
HELONIN, Unicorn-root.
IRISIN, Iris Versicolor.
LEPTANDRIN, Black-root.
PODOPHYLLIN, May-apple.
MACROTIN, Black Cohosh.
STILLINGIN, Queen's Delight.
SENECIN, Senecio Gracilis.

Two or three examples of the alkaloids will suffice to give you an idea of their nature and use.

For the sake of illustration, I will select morphia, which is found to be the narcotic active principle of opium. There are various other substances in that drug, one of which is *narcotine* and it is from the presence of this article that proceeds the extremely unpleasant effects produced upon some persons by the use of opium. When the *morphia* is procured in a separate state, the soothing effects of opium are produced, without that feverish excitement which so often results from laudanum and opium, as commonly used.

Cinchonia and *quinia*, or *quinine*, are alkaline active principles, and both contained in *Peruvian bark.* They are also bitter principles, and although evidently different from each other are analagous in their medicinal properties. They both form salts with nearly all the *acids.* That which is most employed is the *sulphate* of *quinine.* In this substance the active principle of the bark is so concentrated, that five to ten grains of it, when pure, have proved as effectual in curing some cases of intermittent fever as one or two ounces of the powdered bark.

The modus operandi for obtaining the active principles of plants are tedious and various. In the first place, it is necessary for the physician to be thoroughly acquainted with, and have an intimate knowledge of the first principles, the essentials of the science of chemistry, as the process for obtaining them are all based on chemical laws.

There is also required practical manipulation, as they are found in combination with tannin, gum, extractive matter, resin, and various other substances, and to isolate them from these, it is necessary to add some agent that will separate the combination. Therefore, understanding the laws of repulsion and affinity, also by applying skillful and careful manipulation, they can be obtained.

The concentrated remedies which contain these active principles, are used in the liquid and solid form. The liquids are generally saturated alcoholic solutions. The solids are mostly precipitated from the alcoholic solutions by taking advantage of the superior affinity of water for alcohol. By adding some water to the alcoholic solution, the water combines with the alcohol, and the resin is precipitated, which may be collected by allowing it to settle at the bottom of the vessel, decanting the liquid, or filtering the solution from the sediment, drying it; then it is powdered, and ready for use.

Some of them are simply powdered extracts. They sometimes contain improper additions of magnesia, liquorice root, &c., which can be easily detected by analysis.

I shall now call your attention to the second class of the vegetable proximate principles. This class consists of the oily, resinous, and alcoholic substances, in which the hydrogen, when compared with the oxygen, *is in excess.*

Oils are divided into *fixed* and *volatile.* *Fixed oils* are so called because they require a very high degree of heat to convert them into vapor; whilst the *volatile oils* evaporate at the common temperature of the atmosphere. A drop of fixed oil will produce a permanent spot of grease upon paper, whilst a drop of volatile oil will rapidly evaporate, especially if the paper be held before the fire.

Nuts sometimes contain a large quantity of oil—from the

seeds of plants it is always obtained. *Olive oil* is extracted from the pulp which surrounds the stone, but the *fixed oils* are usually contained in the seeds only. They are generally obtained by bruising the seeds, and then putting them under a press in strong bags made of hemp or horse-hair. *Linseed oil* is thus pressed from the seed of flax. Walnuts, almonds, and poppy, cotton, sunflower, rape and many other seeds, supply considerable portions of oil.

There is a very striking difference between these *fixed oils.* The *linseed* and nut oils, which are used in painting, dry and become hard, which is never the case with olive oil. They are called drying oils, and they appear to possess this property in consequence of their affinity for oxygen, of which they absorb a large quantity, and thus become converted into hard substances, resembling the resins.

The natural result from the absorption of a large quantity of oxygen from oxygen gas, is heat. To produce combustion, the absorption must be rapid as well as great. It is from this fact that combustion has frequently taken place.

If hemp, cotton, or similar materials be moistened with drying oil, and laid in a heap, it will, in the course of a few hours, heat and take fire. Many destructive conflagrations have resulted from spontaneous combustion of this kind.

When a single article is oiled, and exposed to the cooling influence of the atmosphere, the heat will be carried off as fast as it is generated; but where there is *a mass* of the material, the *heat* is retained and accumulated.

The volatile or essential oils are of a different class; they form the basis of all the vegetable perfumes. Essential oil is contained, more or less, in every part of an odoriferous plant, excepting the seeds. Many flowers contain it in considerable quantities, from whence it is frequently obtained. In a few instances, as from the rind of lemons and oranges, essential oil may be obtained by simple pressure. This, however, can very seldom be done.

It is very plentiful in the leaves of mint and thyme, also geranium, and all the sweet-smelling herbs, which have a much more powerful odor than flowers. The perfume of sandal fans

is an instance of its existence in wood fans; in short, all vegetable odors or perfumes are produced by the evaporation of particles of these volatile oils.

The usual mode of obtaining these essential oils is by distillation. The aromatic plant is put into a still along with water, without which the vegetable would be burnt. The essential oil and water pass over, and are condensed in a condenser. The oil, being insoluble in the water, floats upon its surface or sinks to the bottom, according to its specific gravity.

There is a great difference between what are called essences and volatile oils. Volatile oils are soluble in alcohol, and the essences are solutions of this kind. Thus essence of peppermint consists of the essential oil of peppermint and alcohol. Essences are formed by using whisky or alcohol, instead of water, in the distillation of aromatic plants.

The essential oils evaporate but slowly at common temperature, and, like the drying oils, when exposed to the atmosphere, they absorb oxygen, thicken, and at length acquire a consistence resembling the *resins*.

One of the most useful of the essential oils is the oil or spirits of turpentine, which is procured by distilling the turpentine which oozes from the pine tree. Common rosin is the substance which remains in the *still* after the volatile oil is driven over.

There is something singular about the powerful smell of camphor. This article, although closely allied to the volatile oils in many respects, seems in others to stand alone. It is obtained from a tree in Japan called the *laurus camphora*. Like the essential oils, it is diffused throughout the plant, and is separated from the trunk, root, and branches by sublimation. Camphor is found in small quantities in various other plants. It is soluble in the essential and fixed oils, and in alcohol, but is *insoluble* in water. By its aid, *copal*, one of the *resins*, may be rendered soluble in alcohol, and converted into a varnish.

The different varnishes are made from the resins. The resins are the inspissated juices of plants, which, although they resemble the *gum resins* in appearance, differ from them essentially in their properties. The different kind of gums are partly soluble in water, whilst in this fluid the resins are com-

pletely insoluble, their proper solvents being the fixed and volatile oils, alcohol and ether. The resins are also dissolved by means of the fixed alkalies; they undergo fusion by heat, are extremely combustible, affording a brilliant light, and, like the oils, produce in their combustion carbonic acid and water. The principal resins are common *rosin*, *copal*, *lac*, *sandarac*, *mastich*, and *elemi*. These are all used in varnishes. They are not all soluble in the same fluids, hence we have spirit varnishes. Essential and fixed oil varnishes have their appropriate solvents, and become the basis of oil or of spirit varnishes, according to the difference in their natures. *Amber* is a peculiar resinous substance of vegetable origin undoubtedly; but it is sometimes dug out of the earth, and at others collected in certain places on the sea-shore. Its precise origin is unknown, but it is certainly a vegetable product, as it frequently includes insects and small pieces of plants within its substance.

There is a mixture of essential oil, of resin gum, and other matter, obtained, in a concrete state, from different plants, and called gum resins; aloes, gamboge, assafœtida, and several other compounds belong to this class.

Caoutchouc, or gum elastic, is a very singular gum. When first procured from the plants, it is a white, milky, glutinous substance, (fluid.) It acquires consistence and blackens by drying. There are two or three different trees in the East Indies and South America, from which it is obtained by making incisions in their stems, The juice is collected as it trickles from these incisions in a mass. Moulds of clay in different forms are sometimes dipped into it; a layer of this juice adheres to the clay, and dries on it; and by repeating this operation several times, layers are successively added, until the bottle or shoe is of sufficient thickness. When perfectly dried, it is then beaten to break down the clay, which is easily skaken out. The natives use this gum very extensively in the manufacture of their boots, shoes, bottles, etc. This gum makes a shoe that is not only pleasant, but serviceable, and, on account of its insolubility, perfectly water-proof.

Beeswax is another singular compound. It partakes of the character of a concrete (fixed) oil, and appears to be both of

vegetable and of mineral origin. It is contained in the pollen of flowers, and forms a coating to the plum, and is found in the leaves and roots of many plants. It is obtained in quantities under the name of *myrtle wax*, from the berries of the *myrica cerifera*. There appears, however, to be some difference in the composition of that procured directly from plants and that furnished by the bee.

I have classed in the list of vegetable principles of the second class *bituminous substances*. They may, perhaps, with equal propriety, be classed as belonging to the mineral or the vegetable kingdom, for although the *bitumens* are found in the earth, they are undoubtedly of vegetable origin. They may be conveniently arranged under the heads of *bitumen* and *pit coal*.

The name *bitumen* includes *naptha*, *petroleum*, and *mineral* tar. They are very viscid fluids, bearing a strong resemblance to each other. They are found in many coal districts, and by exposure to the air, become solid, and appear much like common pitch. The bitumens are distinguished by their inflammability.

Common pitch and tar are not mineral substances. They are brought from the pine districts, where turpentine is prepared. Turpentine exudes from the growing pine tree, but *tar* is extracted from the wood by means of heat, and consists of the turpentine partially decomposed and mixed with other vegetable products. When the more fluid parts are evaporated by boiling, the tar is converted into pitch. The difference between them and mineral tar and mineral pitch is not greater than might be expected in substances having the same origin, but obtained by different processes. *Asphaltum* is a much purer bitumen than common pitch. It is found on the banks of the Dead Sea, and in the Islands of Barbadoes and Trinidad, forming large beds in the earth. Dissolved in spirits of turpentine, it forms a dark-colored varnish, much used for some purposes. Articles very similar to most of these bitumens may be extracted from pit coal. It may be no easy thing to believe that the vast beds of pit coal existing in various parts of the world, and buried far beneath the surface

of the ground, have all originated from vegetable materials. Wood and coal bear but little resemblance to each other, except in the fact that they are both combustible. When we make a comparison of this kind, the fact of a similarity of composition is a point of much greater weight than that of mere combustility. But we have still stronger evidence in the fact that specimens are sometimes found in coal-mines, one part of which exhibits the organic structure of the wood, in the form of charcoal, whilst another part is completely converted into pit coal. The slate which usually covers the beds of pit coal, abounds also in petrified vegetable remains. This, however, is a point which is not our business to consider.

There is a great difference in the nature of pit coal. The anthracite of Pennsylvania, and the coal from Virginia or England, burn as differently as do charcoal and yellow pine wood.

The difference between the two is precisely that which exists between the articles just named—charcoal and yellow pine. One of them contains a bituminous or resinous substance, the other does not. The best anthracite is nearly pure carbon; and if we take the bituminous coal and treat it as they do pine wood when they convert it into charcoal, the bitumen will be volatilized by the heat; mineral tar and pitch may be collected during the process, and a species of charcoal will then remain, which is called *coke*. Except in its being very porous, this substance is very similar to anthracite; and it is prepared and used in great quantities in the English iron manufactories as a substitute for charcoal.

We will now take up those vegetable principles which constitute the third class—that in which the oxygen and hydrogen are to each other in the proportion, by weight, of eight to one, or in other words, in the exact proportions for forming water.

The first of this class of substances which will claim your attention is sugar. This article is contained in a great number of vegetables; indeed, there are few vegetables which do not contain sugar. But it is so much more abundant in the sugar cane (*arundo saccharifera*) than in any other plant, that except under peculiar circumstances, the whole supply, both for Europe and this country, is obtained from it. Louisiana is

a great sugar State. Considerable quantities are also made in the West Indies.

The juice of the cane is pressed out by passing it between rollers, large iron rollers, after which the watery part is evaporated by boiling, and the solid part collected in the form of brown or moist sugar. The juice, when pressed out of the cane, contains a portion of vegetable acid, and of mucilaginous matter, which requires to be removed. This is, in a great part, effected during the boiling, by the addition of lime water, the lime neutralizing the acid, and causing much of the foreign matter to rise, whence it is taken off by skimming.

The juice, when sufficiently concentrated, is drawn off in wooden coolers, in which the sugar crystallizes. It is then of a very dark color, owing to the presence of that brown, syrupy fluid, *molasses*. To get rid of this, it is put into barrels, the bottoms of which are perforated with numerous small holes, through which the molasses gradually drains off. The common brown sugar is thus prepared for the market. Of course a considerable portion of the sugar is still contained in the molasses, as its taste fully indicates; but it is so intimately mixed with other vegetable matters as to prevent crystallization. This fluid, however, is not lost, as much of it is used with articles of food, and large quantities are employed in the distillation of rum.

Loaf sugar is prepared by re-dissolving the brown sugar, and refining it in such a way as to remove the whole of the molasses and other foreign matter. It is then, as you know, a solid white substance, of a crystalline texture, and of a pleasant, simply sweet taste. By its ultimate analysis, an atom of sugar appears to consist of one atom of carbon, one of oxygen, and one of hydrogen. Sugar is used extensively in families and in the preparation of medical syrups, &c.

Honey, which the industrious bee collects from various flowers; manna, which is a concrete juice obtained from several species of ash; the sugar of grapes, and some other saccharine materials, although they contain principles very analagous to sugar, do not appear to derive their sweet taste from the same indentical ingredient. The sweet matter of manna has

been procured in a separate state, and has received the name of *mannite.*

Most of these vegetable juices, as they ooze, or are expressed from the plant, contain considerable portions of the principle called gum or mucilage.

Gum is a substance with which you are no doubt well acquainted, particularly with the kind called gum Arabic; gum is also very common on the bark of plum and peach trees.

Gum which, when in solution, is called mucilage, is contained in most plants, but the most useful is that which is obtained from a species of the acacia tree, growing in Arabia, whence it derives its name of gum Arabic. It is procured in such quantities as to be exported to most parts of the world. It contains much nutriment, and forms a considerable part of the food of the natives of those countries which produce it. Although there are several species of gum, it is probable that they all contain the same principle, and that they derive their peculiar properties from the different vegetable products with which this principle is combined in the respective plants by which it is furnished. In its external appearance, gum somewhat resembles the resins, but it differs from them in being soluble in water, whilst they are insoluble. A resin will be precipitated from its solution in alcohol, if water be added to it; and a solution of gum in water will, in like manner, be decomposed by the addition of alcohol. The cause of the precipitation is the same in both cases, namely, the affinity of water and of alcohol for each other being such as to deprive the gum or the resin of its solvent. If you will pour a little water into some spirit varnish, you will see the resin separate and fall to the bottom, in consequence of the water depriving it of the alcohol which had held it in solution.

Starch or *fecula* is very abundant in the vegetable kingdom. That which is generally used is obtained from wheat; but the common and sweet potato yield it in large quantities. The *Indian arrowroot* is only a very pure *starch*. *Tapioca* and *sago*, also, are chemically the same with *fecula*, but somewhat modified and altered by the heat employed in their preparation. Starch is insoluble in cold water, although hot water will dis-

solve it completely. Starch appears to be somewhat crystalline in its form, but when you examine its texture, it does not at all resemble that of crystals. This appearance is a consequence of its contraction in the process of drying in the manufactories. You have often, in dry weather, observed hard, clayey paths cracked or divided in a similar way.

In its composition, starch is very nearly allied to sugar, and may be wholy converted into saccharine matter by boiling it in water containing a small portion of sulphuric acid. Frost produces a similar effect upon the *fecula* contained in the potato and in other vegetables, several of which, you know, acquire a peculiar sweetness by being frozen. When seeds begin to germinate, their starch is converted into sugar, which being soluble, becomes the food of the embryo plant.

In the process of malting barley, the grain is first moistened, and allowed to sprout, and then heated sufficiently to arrest its further growth. It is thus rendered saccharine, and fitted for the use of the brewer or distiller. Although starch is obtained from wheat, the difference between it and flour is very great. Different kinds of grain contain a principle called *gluten.* This principle is more abundant in wheat than in either of the other farinaceous plants. The soluble materials and the fecula may be washed out of flour; and when this is done, the gluten may be obtained in a separate state. This substance is very tenacious and elastic, of a gray color and fibrous texture. Like animal matter, it contains nitrogen, and if left in a moist state, will soon putrify. The tenacity of paste made from wheat flour, and also the nutritious quality of wheat bread, result principally from the gluten in their composition.

Two proximate principles have been discovered in gluten, one of which has been named *gliadine*, the other *zymome.* You perceive a common loaf of bread is quite a complex affair. It consists of fecula, gluten, with its gliadine and zymome, some water and yeast, a portion of muriate of soda, with a little pearlash or saleratus, besides all the contaminations of all these ingredients.

They are mixed together, and the compound is called simple bread; quite a list of materials—almost enough to supply a column for a dictionary.

CACTUS GRANDIFLORUS.

BY JOHN BUCHANAN, M. D., PROFESSOR OF SURGERY IN THE ECLECTIC MEDICAL COLLEGE OF PENNSYLVANIA.

The Cactus Grandiflorus is indigenous to Mexico and the West Indies. It has been cultivated in Spain, Italy, and in some of the Islands of the Mediterranean. The stems of the Cactus are cylindrical, provided with five or six stalks, and furnished with small thorns, arranged in a radiated form. It blooms in June and July, the flowers appearing one by one; white, of considerable size, and of an extremely sweet odor of benzoic acid and vanilla. It is brilliantly beautiful, deliciously odoriferous, and exquisitely inimical to light, the flowers opening in the evening, lustrously blooming in the twilight, withering as the night progresses, and closing and dying before the dawn of day, never to bloom again. The fruit is shaped like an egg, crowned with scaly tubercles, of an orange or red color, filled with small seeds of an acidulated taste.

Medicinal Properties.—This is one of the most valuable plants in the Materia Medica, and its discovery marks one of the greatest events in ancient or modern times. It is an antiphlogistic of wonderful power. It does not create debility like aconite, veratrum, gelsemin, digitalin, &c.; it would rather seem to preserve the vital forces in disease—it supports, it aids re-action as it were. Its great therapeutic value consists in acting as a neuro-sedative to the heart in suppressing any irritations or excitations of the circulation.

Mode of Preparation.—The only preparation in use so far is a tincture prepared as follows, from the fresh plant: The flowers, the youngest and most tender stems are cut up into small pieces, and macerated in alcohol for one month—one part of the plant to ten parts of alcohol. During maceration, it is well to shake it up twice a week. The tincture, when filtered, is fit for use.

Mode of Action.—It acts with promptitude, given in the following manner: Forty to sixty drops in half a tumbler of

water—a teaspoonful every two hours. It will reduce a pulse of one hundred, to eighty, in a remarkably short space of time; besides, it rapidly relieves the painful sufferings. In all diseases of the heart, it is a specific remedy. It is a sovereign agent, curing promptly, efficiently, and alone. In nervous diseases of the heart, its effects are magical. From my careful use of this agent, I think that it acts as an anesthetic upon the *par vagum*, and in this way retards the heart's action; or suppose we grant the *par vagum* as the vasomotor nerve of the coronary arteries, and that its stimulation causes contraction of those vessels, and thus, by preventing the passage of blood into the cardiac tissue, diminishes the frequency of, and eventually suspends the heart's beat. It has also a direct influence upon the sympathetic nerve.

From my own experience, I would only confirm the opinions of that eminent Italian, Rubine, *that it is a specific* for diseases of the heart. In all diseases—in hypertrophy as well as atrophy—its effects are unsurpassed; even in diseases of insufficiency, failing muscular power of the heart, it is valuable. In palpitation from anemia or chlorosis, typhus or diphtheria, from a white cell condition of the blood, its use should be preceded by pyro-phosphate of iron, good diet, fresh air, &c., improving the impoverished blood, and thereby renovating the degenerated tissues, then following with the *Cactus*. So in pericarditis, from rheumatism. Extended observation has clearly demonstrated that, in the treatment of rheumatism, there is no remedy which has such a powerful influence over the disease as the salts of potash. It is a well recognized fact that the poison that produces rheumatic arthritis is identical with that which produces rheumatic pericarditis. First, then, give sufficient alkali to render the urine normal; then put the patient on Cactus. It is notorious that diseases of the heart are becoming daily more common. The mortality from this source is great; and now we have in the Cactus Grandiflorus an agent calculated to meet the most pressing emergencies, and certainly an agent, as far as my limited experience goes, of inestimable value to suffering humanity. Let us, as true Eclectics, try this agent further, and set its untold therapeutic properties thoroughly before the scientific world.

SULPHITE AND BI-SULPHITE OF SODA, &c., &c.

To Professor Henry Hollembaek, M. D.:

Esteemed Sir: —These past six months, the Sulphite and Bi-sulphite of Soda, &c., have been fairly tested at the Surgical Clinic of the Eclectic Medical College of Pennsylvania, with wonderful success; and as the action of these agents, in certain forms of disease, is attracting the attention of the scientific portion of the profession, I give you the statistics of cases of particular diseases treated with those remedies:

I do not believe that they are applicable in all cases, or that they will positively neutralize the action of catalytic poison. In certain cases, their value is of great magnitude, and a vast improvement on our present limited means of medication in hydrophobia, glanders, erysipelas, puerperal fever, and the like.

Erysipelas.—Nine cases of erysipelas were treated by the internal and local treatment of the Sulphite of Soda—rapid cure, the affection subsiding in a few days.

Cancer.—Forty-eight cases of cancerous ulceration were treated with drachm doses, thrice daily, of the Sulphite of Soda internally; with a local dressing of the permanganate of potash. It was of essential service—all the cases recovered rapidly. It induced a healthy appearance of the ulcerated surfaces—cicatrization was speedy. In these cases success was unprecedented.

Ulcers.—In nearly a *hundred* cases of every variety of ulcers, I prescribed Sulphites or Bi-sulphites in various proportions, from half a scruple to one or more drachms, with the permanganate of potash locally, in various degrees of strength, to meet any particular indications, with unbounded success, a speedy and permanent cure. Even in eroding ulcers, foul and phagedenic, which are seen in constitutions broken down by syphilis or mercury, where the dyscrasis is so great as to almost baffle the skill of the profession to restore a healthy action in the system, these remedies were successful—were efficacious in bringing about healthy action and effecting a cure.

Scrofula.—In a large number of cases of scrofula, these

remedies were used with a success never dreamed of in the annals of medicine. It would seem positive to my mind that it is in strumous disease that the Sulphites are most beneficial. In scrofulous habits, or where there might be a syphilitic taint, superadded to struma; in scrofulous affection of the joints, more especially the hips; in caries and necrosis, these remedies were used with great advantage, being always beneficial,

Lupus.—I have only tried them on two cases of lupus, with poor success.

Ozeana.—In several cases of ozeana depending on scrofulous ulceration, or inflammation of the schneiderian membrane and disease of the bones, the Sulphite of Soda internally in drachm doses, and injections of a solution of permanganate of potash, injected up the nostrils, was attended with the most happy results, curing cases that resisted all other treatment, and which had been of ten and fifteen years' standing.

Chorea.—In cases of chorea that appeared at the clinic, various methods of cure were adopted, the dyscrasia, and any abnormal state of the constitution being attended to. The valerianate of ammonia, the cimicifuga racemosa, bromide of ammonium, cannabis indica, galvanism, counter-irritation to the spine, met with good success. Thorough hygenic measures, friction to the skin, the bitter tonics, and various anti-spasmodics were used; and when all failed, we have given the Sulphite of Soda with success.

In *anemia*, Vallet's mass in five-grain doses, thrice daily, in alternation with the Sulphite of Soda, has an almost magical effect.

From my own observation and experience with these agents, I regard them of utility in all diseases of the blood, more particularly where we have a predominence of white cell blood, or have it vitiated by any special poison. The extended trial of these agents is much to be desired by all friends of progress in medicine.

I am, with great respect, very sincerely yours,

JOHN BUCHANAN.

APIOL.

Professor Hollembaek :—Apiol, the concentrated principle of the parsley, has been prescribed by me, both in my private and clinical practice, in *amenorrhea*, with very poor success. I used the French capsules, exhibited in fifteen-grain doses, three times daily, for a week before the expected period. I do not regard the Apiol as nearly such a good agent as the betin; indeed, it is not by far so valuable as some preparations of iron. Parsley I regard as a good diuretic; and I do think the Allopaths that extol Apiol as an emmenagogue, have mistaken the idea.

JOSEPH SITES, M. D.,
Professor of Obstetrics.

CACTUS GRANDIFLORUS.

BY PROFESSOR EDWARD DOWN, M. D.

Commonly called large flowered Cactus, Vanilla Cactus, sweet-scented Cactus. This is a beautiful plant, of large size, and possessing a sweet odor. The flower appears inimical to light, for it opens in the evening at twilight, withering as night advances, and closes and dies before the dawn of day. This plant is certainly a valuable treasure to man. But few have yet questioned and compelled her to reveal her mysteries. The stems of the Cactus are cylindrical, provided with five or six slightly prominent ribs (costole), and furnished with small spires or thorns, disposed in radiated forms. The flowers appear one by one; they are white, of considerable size, and of an extremely sweet odor of benzoic acid and vanilla .The fruit is shaped like an egg, covered with scaley tubercles, fleshy, of an orange color, filled with very small seeds of an acidulated taste.

History.—In Italy it blooms in the month of July. Although originally from Jamaica and the coast of Mexico, it still thrives well in the open air of the mild climate of this country. The Cactus family being very numerous, great attention must be paid in order to avoid mistaking one for another, when it is the intention to prepare the true remedy, which can be ob-

tained. Every individual of the family possesses an innate virtue proper to itself, and the generical action not existing in vegetable substances, it is impossible to replace with impunity one plant for another. Hence the real Cactus Grandiflorus, of which I have noted expressly the characteristics, is the only one to select.

Preparation.—The fresh vegetable substance should be procured, if possible. The flowers and most tender stems are officinal. They should be gathered in the month of July, and cut in minute pieces; put them to macerate in rectified spirits of wine, one part of the plant to ten of the spirits. It should remain one month in maceration, frequently agitated. The bottle should be well closed. The tincture, when decanted, is fit for use.

Medicinal Properties.—It is strongly antiphlogistic, having this effect by its strong sedative action on the arterial circulation, almost acting specifically on the heart and its blood-vessels, dissipating their congestions, without weakening the nervous system, like aconite; hence it is preferable to the latter in all cases of inflammation, particularly in phlegmatic and encephalic temperaments. If given in over-doses, it acts very powerfully on the heart and circulating system, causing the shedding of tears and feelings of terror and suffocation, fainting, cold perspiration on the face, and loss of pulse. It is indicated in cases where the patient complains of feelings of constriction and hoarseness, especially if this constriction is referred to the cardiac region, and the patient describing the feeling as if a cord was tightly bound around the thorax, with disinclination to move the scapulæ; also sometimes accompanied with disinclination to move the left arm, and causing the patient to respire cautiously. It is also indicated if the pain is of a lancinating character, and causing great difficulty in respiration, with a sense of suffocation and impending dissolution; in short, it is indicated in every phase or group of symptoms arising from irritation or congestion of the heart, its coats or vessels. The dose of the tincture is from four to ten drops diluted in pure water. If it is a nervous affection of the heart, smaller doses will act better.

CASE IN PRACTICE.

Called to see T. R.—April 1st—a boy twelve years of age. He had a croupy cough, with labored respiration, aggravated in the recumbent position; auscultation gave evidence of fluid in the pericardium; percussion dull over a space larger than normal; pulse one hundred and ten, and violent, sufficient to be seen for quite a distance; œdema of the lower extremities, with a cold and benumbed sensation; kidneys acted very sluggishly, secreted very small amount, and that dark and semi-fluid; appetite weak, with frequent vomiting. Treat.

℞.—Cacti Grand. tinct., ℥i.
Aqua distill., ℥ii.
S.—Teaspoonful every two hours.

April 3rd.—Found the patient much improved. Pulse eighty, and nearly natural; great improvement in the appetite, and nearly free from that languid expression of countenance which was so very conspicuous on the previous visit; œdema of the feet slightly diminished. Continued treatment, with the addition of a mild purgative.

April 7th.—Improvement still continues. Continue treatment.

May 1st.—Heart difficulty entirely removed.

ATMOSPHERIC AIR AND COMBUSTION.

[EXTRACT FROM LECTURE BY PROFESSOR FITLER.]

The air which we breathe, with the clouds and vapors floating in it, surrounds the earth on all sides, to an unknown height, forming a moveable envelope, which is called the *atmosphere*. The human species, and other land animals, being thus immersed in this fluid, may, with some propriety, be said to inhabit an ocean, as really as the fishes which live in the great deep. But the latter have the advantage in being able to mount up, remain, or descend at pleasure in *their* element, whereas, without some additional aid, we must content ourselves with the more humble allotment of remaining on the bottom of *our ocean*. The winged tribes doubtless have the power of ascending to great heights; still they can never reach the summit.

There is nothing more essential to the existence or health of man himself, or of the various inferior animals and vegetables which live on the globe, than the air or atmosphere; nor has any agent a greater share in the innumerable changes which are daily taking place in the inorganic materials composing our planet. Is it not wonderful, then, that the composition and properties of the atmosphere should have often excited inquiry? That *air* is a body or substance, possessing the essential properties of matter, appears plainly from the resistance which it offers to the occupation of its place by other bodies. Thus, if an apparently empty glass tumbler be first inverted and immersed in a vessel of water, that liquid will only enter a very little way into the tumbler, the rest being occupied by the air. This familiar experiment shows that air is a body, by its resisting the entry of the water. That it is a fluid, is evident from the ease with which bodies move in it—from its pressing equally in every direction, and passing with great facility through extremely minute openings. The ancients must have been aware of these properties, or, at least, of some of their practical applications, otherwise they could not have constructed their powerful *air-guns*, nor availed themselves of the principle of the diving-bell, for in those early ages, the adventurers who dived in search of pearls were

accustomed to hold large pots or kettles inverted on their heads. The air which these open vessels contained both excluded the water, and, for a short time, supported respiration, thus forming diving-bells in a portable shape. The ancients, likewise, in some of their mechanical contrivances, availed themselves of that property of air by which it expands with heat and contracts with cold. It was on this principle that, in more modern times, Sanctorio constructed his air thermometer.

Weight and pressure are properties of the air, as of all other bodies. It presses on the earth's surface, and on every other body with which it comes in contact. This was conjectured also by the ancients; but the effects which are now known to result from the weight and elasticity of the *air*, were for a long time ascribed to a power, or principle, called "*nature's horror of a vacuum.*" So late as the seventeenth century, it was generally believed that the ascent of water in pumps was owing to this principle, and that by means of suction, fluids might be raised to any height whatever; but Galileo, though inclining to this opinion, was surprised to find that water did not rise in the common pump unless the sucker or bucket reached within thirty-four feet of its surface in the well. From this discovery, he advanced the conjecture that not the power of suction, but the *pressure* of the atmosphere on the surface of the water in the well was the cause of the water's ascent. Torricelli, his pupil, profitting by this hint, soon after discovered that a column of water thirty-four feet high was a counterpois to one of air on an equal base, but reaching to the *top* of the atmosphere—and that for this reason water could not follow the sucker any further.

He also found that the same force which supported water to the height of thirty-four feet would sustain a column of any other fluid which weighed as much, on an equal *base*; and therefore mercury, being 13–6 times heavier than water, should only be suspended to the height of twenty-nine or thirty inches. He took a glass tube from three to four feet long, and closed it at one end. This he filled with mercury; then stopping the end with his finger, he inverted the tube, keeping the lower end under the mercury in a cup; and on removing his finger, the result was in accordance with his expectations.

The mercury, obeying the laws of hydrostatics, descended in the tube until the vertical column was about thirty inches above the level surface in the cup, leaving the remaining space in the tube at the top empty, or nearly a vacuum, discovering in this manner, that it was only the weight or pressure of the atmosphere on the mercury in the cup which balanced the column in the tube. This is usually called the Torricellian experiment, and is the foundation of the barometer.

I trust that the preceding remarks are well qualified to convey a clear conception of atmospheric pressure. I will now explain the principle of this pressure a little further. If we take a tube of glass, crooked at one end so as to form a syphon, with legs of unequal length, and both ends open, the crook being lowered into water, the fluid will of course rise within the tube, to the same height as without; but if before the crook is sunk in the fluid, the lower portion is occupied with mercury, the water will then enter the crook only so far as the pressure it exerts upon the mercury in the short leg is competent to raise the mercury in the other. This pressure, or the *effort* of the water to enter the tube, is obviously measured by the height to which it forces the mercury in the long leg of the crook or syphon, above the mercurial surface in the short leg. The height will be greater or less, of course, in proportion to the depth to which the lower surface of the mercury may be sunk. It will also be greater or less, according as the fluid in which it is immersed is heavier or lighter; hence, as water is about eight hundred and twenty times heavier than air, a column of eight hundred and twenty inches in height of air would displace the mercury as much as one inch of water only. Now, then, let us imagine ourselves above the atmosphere, with a long curved tube containing mercury; we let it down towards the earth, keeping the upper orifice as completely above the atmosphere as the orifice of the tube is above the water in the jar. The mercury in the short leg of the syphon, thus situated, would be evidently exposed to a pressure caused by the air, similar to that sustained from the water on the short leg of the syphon in this jar, and this pressure of the air would, as in the case of the water, be measured by the rise of the mercury in the tube or long leg of the syphon.

It is certainly impossible to perform this experiment with a syphon reaching above the atmosphere; but as the only motive for giving such a height to the syphon, is to render the mercury in the long leg inaccessible to atmospheric pressure. If this object can be otherwise obtained, the phenomenon may be exhibited in the case of the atmosphere, similar to that already shown to you with the water and syphon in the cylinder. In fact, to protect the mercury in the long leg from atmospheric pressure, we have only to seal close the orifice of that leg, and through the orifice of the other fill the syphon with mercury, before we place it in a vertical position. We shall then find that the pressure of the air on the mercury in the open leg of the syphon will support a column of this metal in the other leg of nearly thirty inches.

You perceive, therefore, what an immense pressure there must be on the earth's surface. If you take a tube with an internal area of one square inch, fill it with mercury, and invert it the same as this, the total weight of mercury contained in the tube, sustained by atmospheric pressure, will be fifteen pounds. This, of course, represents the weight of an equal column of air only reaching to the top of the atmosphere, whose place it has usurped; and as for every other superficial square inch on the earth's surface, a like column of air exists, the earth must sustain a pressure from the atmosphere equal to as many columns of mercury, thirty inches high, extending all over the surface of the earth. "It is well known that the equal weight of fluids are in bulk as much greater, or higher, as either may be lighter; and as much less, or lower, as heavier."

The height of the column of air, which by its pressure elevates the mercury, *must*, therefore, be as much *greater* than the weight of the air, supposing the air to be of uniform density.

Mercury is 11,152 times heavier than air, and, of course, the height of the atmosphere would be, if of uniform density, 11,152 thirty inches=27,880 feet (five and a quarter miles), supposing thirty inches the height of the mercurial column supported.

Hence, the atmosphere, if of the same density throughout as on the surface of the earth, would not extend much above the

elevation ascribed to the highest mountains. But as the pressure of the atmosphere causes its density, it may be demonstrated that the height increasing in *arithmetical* progression, the densities will decrease in *geometrical* progression. Thus, at an elevation of three miles, the air being by observation half as dense as upon the earth's surface; at six miles, it will be one-fourth; at nine miles, one-eighth; at twelve miles, one-sixteenth, and at thirty miles, it is *rarer* than it has ever been had by the finest air pump.

Less than forty miles, therefore, is the depth of our peculiar ocean, the atmosphere, which, with its apparent nothingness, possesses so many useful properties. Its expansion or dilatibility is daily exemplified to our senses in the production of wind, as this effect pre-supposes a previous expansion.

The rarefaction of the air with heat, by means of burning alcohol, is applied to the Mongolfier (fire) balloon, thereby lessening its specific gravity, and causing the balloon to ascend in a medium more dense, until an equilibrium is attained.

If there was no atmosphere surrounding the earth, only that part of the sky would appear light in which the sun is placed; and if a person should turn his back to the sun, he would directly perceive it as dark as night; for, in that case, there would be no substance to reflect the rays of the sun to his eyes. It is no doubt owing to the refraction that the sun enlightens the earth some time before it rises, and some time after it sets.

Were it not for atmospheric air, we should be unable to converse with each other; we should know nothing of sound or of smell, or of the pleasures which arise from the variegated prospects which surround us. Man is the only being who gives to it all the modulations of which it is susceptible. With his voice alone he imitates the hissing, the cries, and the melody of all animals, while he enjoys the gift of speech, denied to every other. To the air he also communicates sensibility. He makes it sigh in the organ pipe, lament in the flute, threaten in the trumpet, and *animate* to the tone of his passions, even the solid brass, the box-tree, and the reed. Sometimes he makes it his slave; he can force it to grind his grain by the windmill, and to move, for his advantage, an endless variety of machines; he can float through it with immense velocity,

and he can oblige it to waft him over the stormy billows of the ocean, if necessary. Atmospheric air, you perceive, is a body of which but few persons have an idea of the importance of its agency, either mechanically or chemically, but particularly in its supporting life, and its necessity in combustion. For, indeed, the atmosphere is like a *vast laboratory*, in which nature operates immense analysis by solutions, precipitations, and combinations. It is a grand receiver, in which all the attenuated and volatilized productions of terrestrial bodies are received, mingled, agitated, combined, separated; and notwithstanding this mixture, "of which it seems impossible for us to ascertain the nature," atmospheric air is sensibly the same with regard to its intimate qualities, wherever and whenever we examine it.

The chemical properties of atmospheric air, and of the two simple gases of which it is composed, is a subject well worthy the attention of every scientific man. The essential ingredients of the atmosphere are oxygen gas and nitrogen gas, or *azote*. You see I use the terms *air* and *gas*. Strictly speaking, they are synonymous terms; but, in common language, when we speak of air, we mean *the atmosphere*, no other species of air having been formerly known. When the *airs* were found to be numerous, the term *gas* was adopted as a *generic one*. Any airy fluid, therefore, which remains permanently elastic under atmospheric pressure at every natural temperature, is called a *gas*. Oxygen gas, nitrogen gas, and some others, are sometimes called *simple gases*, because they contain but one *base*, there being some gases which have two or more *bases*.

In chemistry, by a *base* we mean the principal ponderable material which enters into the composition of a body, and upon which its characteristic properties depend. The term *gas*, of course, indicates the presence of caloric as necessarily as do the words *steam* and *vapor*. Oxygen gas, therefore, is a combination of oxygen with caloric; and nitrogen gas, of nitrogen and caloric. Oxygen is the base in one case, and nitrogen in the other.

The difference between a vapor and a gas is altogether owing to the temperature at which they are converted into liquids or into *solids*. Many of them have actually been ren-

dered liquid by the united influence of cold and of great mechanical pressure. It appears perfectly fair, therefore, to consider the gases as being the vapor of liquids, which are so volatile that their boiling point, under atmospheric pressure, is lower than any natural temperature. You must, therefore, *never* expect to see these bases in their simple state; for when disengaged from any solid in which they are combined, they instantaneously become gases, because there is no natural reduction of temperature at which they do not find caloric enough to convert them into that form.

The proportion of the two gases contained in the atmosphere is generally given thus: One hundred parts, by measure, of the air, are said to contain twenty-one measures of oxygen gas, and seventy-nine of nitrogen gas. Some eminent chemists, however, think that twenty of the one to eighty of the other may safely be set down as the true proportions. When separated from each other, their qualities are found to be totally different. The nitrogen will not support combustion or animal life, whilst in the oxygen, every combustible burns with greatly increased splendor and rapidity. Animals also will live longer in a confined portion of it than in the same bulk of atmospheric air. Some would suppose, if the air contained more than one-fifth of oxygen gas, our gas-lights would give more light, our fires more heat, and that we should probably breathe more freely, and live more merrily than we do now. As nitrogen neither supports life nor combustion, we do not know, and probably never will know one half of its uses; but He who formed the atmosphere has, in infinite wisdom, adapted it to the perfect fulfilment of his beneficial designs. In pure oxygen, our gas-lights would not last long. The gas-burner and pipes would soon disappear; the stoves would burn up as if made of wood; and good-bye to segars, for when you would light one, it would blaze like a Roman candle, and burn your nose in less than ten seconds. It would, indeed, be as rational to desire our rivers and springs to flow with brandy, as to wish for an atmosphere of pure oxygen, the stimulating effects of which would have a merry effect, but would rapidly destroy life.

That the nitrogen contained in the atmosphere is as neces-

sary to living animals as the oxygen, will appear plain to you, when I inform you that it has been ascertained that their well-being not only depends upon its presence, but upon its being present in the *exact* proportion in which we find it.

There are many ways of separating the two gases which compose the atmosphere, and of thus obtaining the nitrogen gas; but we know of no process by which to separate the nitrogen, and leave the oxygen in a gaseous form. A burning body placed in a confined portion of the atmospheric air will cause its decomposition.

I place this lighted candle under a bell-glass, the bottom of which stands in water; it immediately burns dimly, and is now extinguished. The larger portion of the oxygen has disappeared, and a second candle placed in the air which remains would go out instantaneously. A portion of water, you see, rises into the glass. This is in consequence of the absorption of the oxygen, leaving a void space, and the pressure of the atmosphere forcing the water up to occupy it. The whole of the oxygen is not separated by this experiment, although there is too little left to support combustion; and besides this, there is another gas produced in the burning, which occupies a part of the space formerly filled by the oxygen. There are, however, some combustibles which will unite to the whole of the oxygen, and convert it into the solid form. The nitrogen will in this case be left in a state of purity.

It may seem strange that the atmosphere should be decomposed by combustion. However surprising that may seem, it is not, however, more wonderful than that the candle should be so, also. The tallow which disappears from the candle must combine with something, and, in the present instance, that *something* is oxygen. We all know that air is necessary to combustion, and yet how few have an idea of the great importance of its agency, as you perceive it is evidently as necessary to the process as the fuel itself.

We are indebted to that eminent French chemist Lavoisier, and his associates, for much of what is called the *modern theory* of chemistry, and also for the idea of *momenclature*, or system of names, which is now usually employed by chemists.

Lavoisier's theory of combustion was also generally adopted,

and deemed satisfactory. It taught that combustion consisted in the rapid combination of oxygen with a combustible body, and the consequent disengagement of heat and light. However perfect this beautiful theory may seem, "the question of light and heat"—from whence do they come?—which, in many instances, may be satisfactorily answered. There are others in which the theory fails in accounting for the production of heat; and therefore, notwithstanding its simplicity and its beauty, it is, like most other theories, *imperfect*.

It is believed that light is a constituent both of gaseous and combustible bodies, and that in their combination, it is thus given out. Caloric also is a constituent of gaseous bodies, and consequently of oxygen gas, and it is supposed to supply the heat which is disengaged in combustion. Oxygen frequently combines with the combustible, and passes into the solid or liquid state, and of course gives out the caloric which converted it into a gas. At other times, it combines with the combustible and forms with it a compound gas, the capacity of which for caloric is less than that of oxygen; and, of course, latent heat will then be rendered sensible, and that, in a degree, proportioned to this difference of capacity. These remarks, you perceive, supposes that the heat comes from the air, and *not* from the fuel alone in combustion. You will recollect, in a former lecture, I told you that, in the slacking of lime, the heat disengaged is derived from the water even; and when we are convinced that the oxygen gas of the atmosphere is as necessary, and as actively engaged in the process of combustion as the fuel itself, we must be compelled to attribute to it a full share in producing the effect, although it is itself invisible. The combination takes place only at the surface of the burning body, where the air has free access to it.

The principal objection to the Lavoisierian theory of combustion is, that at the time it was proposed, oxygen gas was the only known supporter of combustion; but there are other agents which are now admitted into the class. These are *chlorine*, *iodine*, and perhaps *bromine*. Although combustion does in general consist in the rapid combination of oxygen gas with a combustible body, this is not universally the case. There are also many chemical combinations which are accom-

panied by the disengagement of light and heat, where neither of these supporters, as they have been called, are present.

In many instances of combustion, we are not positively acquainted with the source of the heat, as in the firing of gunpowder and other explosive mixtures. In these, solids are converted into gases, and this, according to Lavoisier's theory, should produce cold, as an increased capacity for caloric is the necessary result for such a change. It is now, therefore, the practice among chemists to state, in general terms, that "combustion is the result of *energetic chemical action.*"

In what I have said when speaking of combustion, you are to understand me as intending the burning of bodies in atmospheric air, oxygen gas, or some gas containing oxygen; and the products of combustion, as consisting of a combination of oxygen with the combustible body. The exceptions may receive some attention in the future.

Some may suppose that the products of combustion mean the smoke or ashes, or other substances which are left after a body has been burned; but this would be not only a very meagre, but a very incorrect deffinition. In the greater number of instances, the products of combustion exist in the gaseous form, and are from this cause invisible. They are then called *volatile products.* When they remain in the solid state, they are called *fixed products.* The whole of the tallow in a candle, or the oil in the lamps, and a large proportion of our coal or wood, form, with the oxygen, *volatile products*, which if collected and weighed, will be found to contain all the matter that has apparently vanished, not an atom being lost.

Smoke is not properly a product of combustion, as it consists principally of a part of the fuel which escapes combustion, and which, by its condensation, forms the soot, which is seen in chimneys.

When the products of combustion are altogether of the kind called *fixed*, it is easy to show that in burning they have acquired weight, instead of suffering a diminution. This may seem somewhat extraordinary. Light and heat, which escape, weigh nothing; and the body may not sensibly *lose* weight, you may say; but, strange as it may seem, I again repeat that the products of combustion, "altogether of the kind called

fixed," actually increase in weight. I have already said that the air possesses weight; and if the oxygen of the atmosphere unites with the combustible, the two together must weigh more than the one. The oxygen, which is the base of oxygen gas, combines with the combustible, assumes the solid form, and loses its existence as a gas. You must carefully distinguish between a gas and its base, or your ideas upon this subject, like many others, will be frequently confused.

Combustibles are bodies which may be burned; *products of combustion* are bodies which have been burned. There are many which do not appear to belong to either of these classes, such as *rocks, earths, and metals*, which are either combustible or products of combustion. Rocks and earths are generally compounds of a combustible body with oxygen. The metals are all combustible, notwithstanding some of them require a most intense heat to cause them to burn. There are some bodies, also, that take fire at a much lower temperature than others. Some of these combustibles have so strong an attraction for oxygen that they will rapidly combine with it without first applying heat to them—such as phosphorus, potassium, and others. These bodies, however, are all prepared by art, as they are always found in nature combined with oxygen, from which it is necessary to separate them by chemical means. The very nature of such bodies forbids their existing in an uncombined state anywhere near the surface of the earth, where oxygen has access to them.

I will now occupy a few moments of your time with the manner the gases are collected, and kept from mixing with the common air. The mode of effecting this is very simple and very perfect. Before the time of Dr. Priestly, chemists knew but little of the gases. From his numerous discoveries, this philosopher has been emphatically styled the father of pneumatic chemistry, as the greater number of the gases were made known by his researches. To him, also, we are indebted for the invention of the pneumatic trough, similar to this which I intend to use. It has a shelf within it, at about two inches below its upper edge. Water is poured into it, so as to cover the shelf completely. Through this shelf a hole is made for the passage of gas. This is a receiver, sometimes called a bell-

glass. This bell-glass, or a tumbler, or other vessel, is filled with water, and placed with its mouth over the hole in the shelf. If now the beak of a retort, or a tube from any vessel from which gas is to proceed, be made to pass under the shelf, the bubbles of air will ascend through the water, and gradually displace that in the glass vessel; and as the water had excluded the atmospheric air from it, the gas which passes up will be collected, uncontaminated by admixture with any other.

By means of blowing through this tube, you see the bubbles are rising, and also how simple and convenient is the apparatus altogether. As some practical experience is necessary to manage it with address, it will be best for you to practice at first with atmospheric air. In pouring from one inverted vessel into another, you first fill the receiver with water, and then place it inverted over the hole in the shelf; then press the vessel containing the gas sufficiently deep in the water to pass its edge under the shelf, so that, when tilted on one side, the gas which escapes from it shall be conducted into or through the hole in the shelf to the upper receiver. In this way, gases can be poured from one vessel into another with great facility. It is an unusual kind of pouring—upwards instead of downwards—which (of course) is on account of the levity of the gas.

The experiments illustrative of the properties of oxygen gas, and of the nature of combustion in general, merits and should claim your undivided attention. I will exhibit them at the next lecture.

WEIGHTS AND MEASURES.

APOTHECARIES' WEIGHTS.

POUND.	OUNCES.	DRACHMS.	SCRUPLES.	GRAINS.
lb. 1	12	96	288	5760
	℥	8	24	480
		ʒ	3	60
			℈	20

The above form of weights is employed in apothecary shops, for prescriptions and making preparations.

AVOIRDUPOIS WEIGHTS.

POUND.	OUNCES.	DRACHMS.	GRAINS.
lb. 1	16	256	7000
	oz.	16	437
		dr.	27

This form is employed for the retailing business of the druggist.

WINE OR LIQUID MEASURE.

GALLON.	PINTS.	FLUID-OUNCES.	FLUID-DRACHMS.	[MININIM OR DROPS.
Cong. 1	8	128	1024	61440
	O 1	16	128	7680
		fl℥	8	480
			fl℥	60

The above constitutes the ordinary retailing apothecary and other business measures.

A TABLE

OF SIGNS AND OBSERVATIONS THAT MAY BE USED IN THE PRESCRIPTIONS OF THE PHYSICIAN.

℞, *Recipe*—take.

A a, *Ana*—of each.

lb., *Libra*—a pound.

℥, *Uncia*—an ounce.

ʒ, *Drachma*—a drachm.

℈, *Scrupulus*—a scruple.

O, *Octarius*—a pint.

fl℥, *Fluiduncia*—a fluid-ounce.

flʒ, *Fluidrachma*—a fluid-drachm.

M, *Minimum*—the sixtieth part of a drachm; one drop of ordinary fluids.

Ad. Lib., *Ad libitum*—take at discretion.

Altern. Horis, *Alternis horis*—take every other hour.

Aq. Distil., *Aqua destillati*—distilled water.

Aq. Ferv., *Aqua fervens*—hot water.

Aq. Fluvial., *Aqua fluvialis*—river water.

Aq. Font., *Aqua fontana*—spring water.

Aq. Pluv., *Aqua pluvialis*—rain water.

Bull., *Bulliat, bulliant*—let it or them boil.

Cap., *Capiat, capiendum*—let the patient take it—it must be taken.

Chart., *Chartula, chartulæ*—a small paper, or papers.
Cochleat., *Cochleatin*—by spoonfulls.
Coch. Mag., *Cochleare magnum*—a tablespoonful.
Coch. Med., *Cochleare medium*—a desert-spoonful.
Coch. Parv., *Cochleare parvum*—a teaspoonful.
Col., *Cola*—strain.
Collyr., *Collyrium*—an eye-water.
Comp., *Compositus*—compound.
Cong., *Congius*—a gallon.
Decoct., *Decoctum*—a decoction.
De D. in D., *Diebus de die in diem*—from day to day.
Dieb. Alter., *Diebus alternis*—every other day.
Dil., *Dilue*—dilute.
Dim., *Dimidius*—one half.
Div., *Divide*—divide.
D., *Doses*—a dose.
Enema., *Enema enemata*—a clyster, or clysters.
Exhib., *Exhibeatur*—let it be administered.
F. H., *Fiat haustus*—let a draught be made.
Fil., *Filtra*—filter
Ft., *Fiat*—let there be made.
Garg., *Gargarysmus*—a gargle.
Gr., *Granum, grana*—a grain, grains.
Gtt.. *Gutta, guttæ*—a drop, or drops.
Guttat., *Guttatim*—by drops.
Haust., *Haustus*—a draught.
Ind., *Indies*—daily.
Infus., *Infusum*—an infusion.
Inj., *Injiciatur*—let it be injected.
M., *Mises*—mix.
Mist., *Mistura*—mixture.
No., *Numero*—in number.
Omn. Hor., *Omni hora*—every hour.
Omn. Bid., *Omni biduo*—every two days.

Omn Bih., *Omni bihoris*—every two hours.

Omn. Man., *Omni mane*—every morning.

Omn. Nocte, *Omni nocte*—every night.

Ph., Pharmacopœa.

P. R. N., *Pro re nata*—as the symptoms may call for.

Pulv., *Pulvis*—a powder.

Q. S., *Quantum sufficiat*—enough.

Redig. in Pulv., *Redigatur in pulverum*—reduced to powder.

S., *Signa*—write.

Sign., *Signatura*—a label.

Ss., *Semis*—a half.

Trit., *Triturata*—triturate.

FORMS OF PRESCRIPTIONS.

MIXTURES.

For (the name of the patient.)

℞.—Abies balsamea, (fir),

Gum Guiacum, a a,	℥i.
Oleum sassafras,	fl℥i.
Spiritus rectificatus (alcohol),	Oi.

S.—Twenty-five drops in a teaspoonful of sugar, four times daily for several days.

Useful for difficult menstruation, and should be given for several days before the expected menstrual flow.

For

℞.—Bal. copaiva, fl℥i.

Spiritus nitre dulcis,	℥i.
Spiritus lavandula comp.,	℥ss.
Tinctura cubebæ,	℥ss.
Acacia syrupi,	ii.

S.—Thirty drops three times daily.

Uses.—For gonorrhea and gleet.

TINCTURES.

For

℞.—

Tinct. Lobelia infla.,	fl℥i.
" Sang. canad.,	fl℥ii.
" Ictodes fetida,	iv.
" Asarum canad.,	iv.
" Asclepius tuber,	iv.
" Syrupi simplex,	fl℥ii.

M. S.—A tablespoonful every two hours.

A useful preparation to induce secretions and excretions in asthma, whooping-cough, croup, and inflammation of the lungs. The dose may be increased or diminished, as desired.

POWDERS.

For

℞.—Pulveris Cubebæ,
" Bi-tart. potassa, a a, ℥i.

M.—Fiat in chart. divid., No. xvi.

S.—One every two hours, daily, in a tablespoonful of sweetened water.

Uses.—Gonorrhea and gleet.

For

℞.—Pulv. Capsicum,
" Ipecacuanha, a a, Grs. x.
" Opii, v.

M.—Fiat in chart. divid., No. xii.

S.—One powder morning and evening, in a tablespoonful of sweetened water.

Uses.—To allay coughing from irritation of the fauces, throat, and bronchial vessels.

For

℞.—Pulvis Lobelia inflata folia, ℥i.
" Ipecacuanha, ss.
" Sang. canad., ss.

M.

S.—In half a pint of boiling water. When warm, give the infusion in three divided doses, every ten minutes.

Uses.—An efficient and valuable emetic, diaphoretic, and nervine. Employed for spasms, convulsions, Asiatic cholera, mania potu, dysentery, affections of the liver, sick headache, croup, hysteria, nervous and febrile diseases.

For

℞.—Hamamalin, Grs. xx.
Podophyllin, v.
Leptandrin, v.
Dioscorein, xii.
Gelsemin, vi.
Sac alba, xl.

M.—Triturate well in a mortar. Divid. in chart., No. xii.
S.—Take one every three hours, in a tablespoonful of water.
Uses.—For chronic diarrhea and dysentery.

For

℞.—Pulv. Podo. pelt. radix, Grs. xii.
" Ipecac, ii.
Gelsemin, i.
Pulv. Sac alba, ix.

M.—Divid. in chart., No. xii.
S.—Take every half hour.
Uses.—A mild purgative, with diaphoretic action for debilitated patients.

PILLS.

For

℞.—Ext. Podo. peltatum, ℥i.
" Taraxacum, ℥i.
Pulvis Sang. canadensis radix, i.
Sapo Castile, i.
Oleum Tiglii, ss.
" Abies canad, fl℥ss.
Gum Arabica, ℥i.

M.—Divide into three-grain pills.
Dose.—Two to four, at discretion.
Uses.—An efficient purgative for obstruction of the bowels; for hepatic diseases, intermittent, bilious, and continued fevers in early stage.

For

℞.—Gum Assafœtida, ℥i.
Carb. ammonia, ss.
Pulv. Opii, Grs. x.
Bal. canadensis. xx.

M.—Divide into three-grain pills.

Dose.—Two, morning and night.

Uses.—Hysteria and nervous derangements.

For

℞.—Pulvis Cubebæ, ℥i.
" Potassa nitras, ss.
Bal. Copaiva, i.

M.—Div. in pilulæ fifty.

S.—One morning, noon, and night.

Uses.—Gonorrhea and gleet.

For

℞.—Pulvis Ipecacuanha,
" Capsicum,
" Opii, a a, Grs. x.
Mucil. G. Arab, Q. S.

Mix. Divide into sixty pills.

S.—One morning, noon, and night.

Uses.—An anodyne and diaphoretic for nephritis, acute pains of the head, colic, hysteria, and nervous spasms.

For

℞.—Chinoidine, (see art. Cinchona), ℥ii.
Ext. Colocynth comp., ℥ii.
Oleum Piper nigrum, fl℥ii.

In the mortar, reduce the first article to a powder, then add the two last, and form into mass for pills of three grains each.

Uses.—Chills and fever. It is best to precede these pills with an active emetico-cathartic.

S.—Three pills daily. Commence four hours before the expected chill, giving one every hour. Continue this daily, until the paroxysm is broken.

NOTE.—If, in a few days, the symptoms of chills appear, renew the pills for two or three days. This form of treat-

ment almost always supersedes the necessity of the use of quinine, and is specially recommended to the profession.

Chinoidine is prepared by Powers & Weightman, Philadelphia, Penna., and by other manufacturers of quinine. The extract of cinchona will be found equal to the chinoidine.

SYRUPS.

For

℞.—Tinct. Lobelia infl.,		fl℥ii.
"	Opii,	ss.
"	Sanguinaria can.,	i.
Acidum Acetic,		Gtts. x.
Syrupus simplex,		fl℥ii.

M.

S.—A teaspoonful every hour.

Uses.—For croup, cough, and irritation of the throat and fauces.

The acetated tincture of San. canadensis may be used as a substitute. See Blood-root.

OINTMENTS.

For

℞.—Pulv. Creta preparata,		℥ii.
"	Catechu,	i.
"	Opii,	Grs. xv.
Oleum Olivæ,		fl℥ss.

Mix.—Incorporate well in the mortar.

Uses.—Painful sores and ulcers.

For

℞.—Oleum Olivæ,		fl℥vii.
Cera alba,		ii.
Sevum,		iii.
Pulvis Opii,		℥i.
Alconet, (merely for color),		iv.

Digest the Alconet in the oil for six days, and strain. By gentle heat, melt the wax and suet together; then add the oil

and Opium, and with a spitula mix well until the ointment is cool

Uses.—Sore eyes, lips, and chapped hands, and other abraided surfaces.

For

℞.—Pulv. Podo. pelt. radix,		℥i.
Ext. Trifolium pratense,		i.
Balsama canadense,		iss.
Sulph. zinc,		Grs. xv.

Apply gentle heat to the balsam, into which thoroughly incorporate the other articles. Apply on a piece of linen, twice daily. Should it cause inflammation and fever, omit it for a day or two, applying cooling applications. To cleanse the part, apply a solution of table-salt; then apply the ointment, until the diseased part be removed. The zinc may be reduced in amount, or entirely omitted.

Uses.—For sores, ulcers, and cancers.

For

℞.—Pulvis Quercus infectoria,		℥ii.
" Opii,		Grs. x.
Adeps,		℥i.

M.—In the mortar thoroughly.

Uses.—For piles, painful sores, and ulcers.

PLASTERS.

For

℞.—Clean pure tar,		lb. i.
Burgundy pitch,		℥viii.
Resin,		iv.
Beeswax,		iv.

Mix by gentle heat, and add—

Pulvis Pod. pelt. radix,		℥i.
" Phytolacca decan.,		i.
" Sang. Canadensis,		i.

Mix.—Incorporate all by gentle heat in tin or earthen vessel.

Uses.—A valuable strengthening and counter-irritating plas-

ter, for the chest and back; for affections of the lungs, liver, kidneys and stomach. Sometimes a mustard cataplasm is first applied to irritate the skin. This is similar to the form of Dr. Beach, long known to the profession as an effectual remedy.

LOTIONS—WASHES.

For

℞.—Hydrastis Canad. radix, coarse powder, ℥viii.
Aqua font., Oi.

Boil twenty minutes and strain through muslin.

Decoction Hyd. Canad., fl℥iv.
Tinct. Camph., ss.
Sulph. Morphia, Gr. i.
Pulv. Soda Boras. ℥i.

M.—Dissolve the morphia and borax in the decoction, and add the tincture.

Uses.—A wash for inflammatory sore eyes; and for inflammation, swelling and itching of the external organs of generation.

For

℞.—Chloride sodium, ℥iv.
Aqua font., Oi.

M.—A cleansing and detergent wash for cancers and indolent sores and ulcers.

℞.—Soda carbonate (or saleratus), ℥i.
Aqua font., Oi.

M.—For a part or all of the body in typhus, bilious, and all febrile diseases. The dry towel to be used immediately after bathing.

LINIMENTS.

For

℞.—Oleum Sassafras, fl℥i.
" Origanum, i.
Tinct. Camphor, ii.

	Tinct. Capsicum,	i.
	Sapo (Castile),	℥ii.
	Alcohol (spiritus vini),	Oi.
	Aqua ammonia,	fl℥ii.

M.

Uses.—For rheumatism and kindred diseases of lumbago, neuralgia and gout. The alkaline wash should be employed every twenty-four or forty-eight hours.

For

℞.—Oleum cajeput,		fl℥i.
	Aqua ammonia.	ii.
	Oleum tiglii,	ss.
	Sapo (Castile),	℥i.

M.

Uses.—To produce immediate irritation of the skin on any particular part desired, as a counter-irritant.

INJECTIONS.

For

℞.—Pulv. radix podo. pelt (or jalap),		℥i.
	Aqua font. (boiling),	Oss.
Of this	Infusum podo. pelt.,	fl℥viii.
	Oleum ricini,	ss.

Mix well with the syringe, and use for constipation.

For

℞.—Tinct. Opii,		fl℥i.
	" Assafætida,	ii.
	Oleum ricini (or sweet oil),	ii.
	Aqua font. (warm),	Oi.

M.

Uses.—For painful affections of the kidneys, uterus and bowels.

For

℞.—Infusum quercus infec,		fl℥i.
	Chloride sodium,	℥i.
	Oleum ricini,	fl℥i.

Uses.—Mix well with the syringe, and use for bloody discharges of dysentery or piles. Its effects should be noticed, that the discharge be not suddenly checked, so as to cause fever and unfavorable symptoms.

For

℞.—Aqua font., Oi.
Sapo Castile, Q. S.

M.

Uses.—A common injection for constipation of the bowels. It should be warm when used.

INFUSIONS.

For

℞.—Cypripedium pubescens, bruised, ℥i.
Cataria folia, brusied, i.
Scutellaria laterifolia, ss.
Aqua font. (boiling), Oi.

M.

Let stand in a covered earthen vessel until cold. *Dose*—One-half to a wine-glassful every two hours.

Uses.—Nervous and sick headache, hysteria, colic, flatulence, and general debility.

For

℞.—Salvia officinalis folia, ℥iv.
Pulv. Soda boras, ss.
Mel, ℥i
Aqua font. (boiling), Oi.

S.—Add the boiling water to the sage; let stand half an hour; pour off, and add the borax and honey; apply gentle heat until thoroughly mixed.

Uses.—Ulcerated sore mouth, sore throat, and quinsey.

For

℞.—Hydrastis canad. radix (coarse pow.), ℥i.
Pulv. Zingebar, radix, i.
Aqua font. (boiling), Oss.
Saccharum officinarum (white sugar), ℥ii.

S.—Allow the water to remain on the powder for one or two hours; pour off the infusion, and add the sugar. *Dose*—A tablespoonful three times daily.

Uses.—For indigestion, constipation, erysipelatous, and other forms of general debility.

COSMETICS.

℞.—Spiritus vini (alcohol), fℨviii.
Oleum Castorum, i.
" Roses, or neroli, ℨi.

M. and apply gentle heat for a few minutes.

Uses.—It keeps the scalp soft, and gives a glossy appearance to the hair.

℞.—Pulv. Lobelia inflata, folia, ℨii.
Geranium macul. radix (coarse pow.), i.
Humulus lupulus, ii.
Spiritus vini (alcohol), ii.

M.—Digest ten days, and filter.

Uses.—Moisten the scalp twice daily, to prevent the hair from falling out and turning white.

℞.—Lac sulphur, ℨii.
Pulv. Acetate plumbi, i.
Aqua rosea, Oss.

M.—Apply to the scalp once or twice daily. It is employed both to prevent the loss of hair and to renew its growth.

DENTIFRICE.

℞.—Creta preparata, ℨii.
Pulv. Myrrha, i.
" Cinchona, i.
Essence of lemon, fℨi.

M.—Thoroughly in the mortar.

Uses.—Apply with a soft brush, or a piece of linen or muslin, morning and evening, to cleanse the teeth and gums.

PERFUMERY.

℞.—Oleum Lemonis,	fℨviii.
" Lavendula,	iv.
" Bergami,	iv.
" Rosemarinus,	viii.
" Cinnamomi,	Gtts. xxxii.
" Caryophyllum,	xxxii.
" Neroli,	xl.
Tinct. Moschi,	xl.
Spiritus vini (pure deodorized alcohol),	Oiv.

M.—One of the best of the expensive colognes.

GLOSSARY.

Abortion, an imperfect development of any organ.
Absorption, drawing from the soil, the food and moisture, the growth the plant absolutely requires.
Acaulescent, the absence of the caulis or aerial stem.
Accretion, the growing of one thing to another.
Achenium, a small, dry, hard, one-celled pericarp, inseparable from the seed which it encloses.
Achlamydeous, plants with no floral envelopes, are naked or achlamydeous.
Acicular, small, needle-shaped.
Acine, a separate grain or carpel of a collective fruit.
Acotyledonous, plants having no cotyledons.
Acrogens, plants having a regular stem growing at the extension of the point only, and without increasing in diameter.
Aculeate, armed with prickles.
Acuminate, a leaf ending with a long tapering point.
Acute, ending with an acute angle.
Adherent, not distinct from the ovary.
Adnate, growing to or upon.
Aggregate, assembled closely together.
Aglumaceous, plants of the endogenous structure, with flowers regularly constructed.
Alæ, wings.
Albumen, the white substance between the integuments and the embryo of plants.
Alveolate, with partitions like a honey-comb.
Ament, a spike, whole flowers, each covered with a scaly bract, instead of a calyx and corolla, and fall off together, all remaining still connected with the rachis.
Amplexicaul, embracing the stem.

Anastomosing, the uniting of vessels, inosculating.
Anatropous, when the hilum of the seed does not correspond with the chalaza of the ovule. The ovule is anatropous.
Ancipital, two-edged.
Androgynous, with both stamens and pistils.
Angiosperms, a subdivision of the vegetable kingdom.
Anthelmintic, expelling or killing worms.
Antiseptic, efficacious against putrefaction.
Apetalæ, apetalous, without petals.
Appressed, pressed closely upon something else.
Apterous, without wings or (margins.)
Aquatics, growing in or belonging to the water.
Arachnoid, covered with interwoven hairs, so as to resemble a spider's web.
Arboreous, tree-like.
Arborescent, belonging to a tree.
Areolæ, having the surface divided into little spaces or areas.
Aril, an expansion, proceeding from the summit of the funiculus or seed-stalk, either partially or wholly investing the seed.
Aristate, bearded, as in the glumes of barley.
Armed, when the veins project far beyond the tissue in sharp spires or prickles.
Aroma, the spicy quality of a thing; the odorous part of plants.
Articulation, a joint, the place where one thing is joined to another.
Artificial classes, the different conditions of the stamens.
Artificial orders, the different conditions of the styles or stigmas.
Ascending, arising obliquely.
Attenuate, rendered slender or thin.
Auriculate, having ear-shaped lobes at the base.
Awn, a short slender process or stiff beard, from the top or back of glumes or chaff.
Axil, the angle between the petiole and branch on the upper side.
Axillary, growing out of the axils.

Baccate, berry-like, covered with pulp.
Banner, the upper petal in a papilionaceous flower.
Bark, the external covering of the stem.
Beak, a hard, short point, like the beak of a bird.
Bearded, with long awns or hairs.
Berry, a pulpy pericarp enclosing seeds with capsules.
Bicuspidate, with two points.
Bidentate, with two teeth.
Biennial, of two years' duration.
Bifid, two-cleft.
Bifoliate, with two leaves.
Bilabiate, two-lipped.
Bifurcate, two-forked.
Binate, growing two together.
Bipinnate, twice pinnate.
Bivalved, two-valved.

Botany, the science which treats of the vegetable kingdom.
Brachiate, with opposite spreading branches or arms.
Bracts, leaf-like appendages, intermediate between leaves and the floral organs.
Branch, a division of the main stem or root.
Bristles, rigid hairs.
Bud, the winter residence of leaves and flowers.
Bulbiferous, producing bulbs above ground.
Bulbets, small lateral bulbs shooting from larger ones.

Caducous, any part of a plant which falls off earlier, compared with other parts of the same plant, than is usual for similar parts in most plants.
Calyx, the external envelope, the cup of the flower, consisting of leaves with their edges distinct or united.
Campanulate, bill-shaped, having the tube wide and swelling abruptly at the base.
Capillary, very slender, hair-like.
Capitate, growing in a head.
Capsule, that kind of pericarp which opens by valves and becomes dry when ripe; not including siliques nor legumes.
Carpels, the small parts out of which compound fruit is formed.
Cathartic, purgative.
Catkin, or ament, an assemblage of small flower-bearing scales, which serve as lateral calyces.
Caudate, with a tail-like appendage.
Caudex, the main body of the root.
Caulescent, denoting the presence of the caulis or aerial stem.
Cauline, leaves growing from the stem.
Caulis, the main herbage-bearing stem of plants that are annual in their duration and destitute of woody tissue.
Cellular, composed of cells.
Cellular Tissue, composed of separate cells, or vesicles adhering together.
Cernuous, nodding.
Chaffy, with chaff-like processes.
Chemical basis of vegetable tissue, oxygen, hydrogen, and carbon, with an occasional addition of nitrogen.
Chromulæ, green-coloring matter or particles.
Ciliæ, hairs like those of the eyelash.
Ciliate, edged with parallel hairs or bristles resembling eyelashes.
Circinate, rolled downwards from the apex.
Claw, the lower narrow part of a petal, by which it is fixed in the calyx or receptacle.
Climbers, plants which support themselves on other objects or plants by means of tendrils.
Cochleate, resembling the shell of a snail.
Cohering, connected.
Collum, that part of the root which connects it to the ascending axis
Colored, not green.
Column, the consolidated stamens and pistils of Orchidaceæ.

Commissure, the inner face of the carpels of Umbelliferæ.
Compound leaves, consisting of several leaflets.
Comose, a kind of inflorescence, having a tuft of sessile bracts on the top of it.
Compressed, flattened in a vertical direction.
Concave, hollow.
Concentric, points or lines at equal distance from a common centre.
Concrete, hardened or formed into one mass.
Confluent, running into one another.
Connate, joined together at the base.
Conoid, like a cone.
Convex, rising spherically.
Cordate, heart-form.
Corolla, the interior envelope of the flower.
Corona, a crown, the expanded cup-like disk of the Narcissus, &c.
Corymb, the same as the raceme, having the lower pedicles so lengthened as to elevate all the flowers to nearly or quite the same level.
Corymbose, arranged like a corymb.
Cotyledon, the bulky porous and farinaceous part of seeds.
Cotyledonous plants, producing seeds composed of determinate parts.
Creeper, consisting of slender branches, exceedingly tenacious of life, extending horizontally, and sending out roots and branches.
Crenate, notched on the rim or edge.
Crisped, margin much expanded and curled by a superabundance of tissue.
Cruciform, consisting of four petals spreading at right angles to each other.
Cryptogamiæ, flowerless plants.
Culm, the stem of grain and grass when dry, usually called straw.
Cuneate, wedge-shaped.
Cuspidate, like the point of a spear. A leaf is cuspidate when suddenly contracted to a point.
Cuticle, the epidermis or scarfskin.
Cyme, flowers umbel-like in their general external appearance.
Cymose, arranged like a cyme.

Decandrous, with ten stamens.
Declinate, turned towards one side.
Decompound, more than once compounded, as bipinnate, &c.
Decumbent, lying down or leaning on the ground.
Decurrent, when the base lobes of the leaf grow to the stem below the point of insertion, so that the leaf seems to run downwards.
Decussate, crossing each other at right angles.
Deflexed, bent downwards.
Defoliation, the separation of the leaf from the stem.
Dehiscence, the longitudinal fissure which usually opens each cell o the anther.
Deltoid, shaped like the Greek letter Δ.
Dentate, toothed.
Depressed, pressed inward, or flattened from above.

Dichotomous, branching by two equal divisions, forked.
Didymous, two united.
Didynamous, having two long stamens and two short ones in one and the same flower.
Diffuse, wide-spread, scattered.
Digestion, the changes effected by the leaves in rendering the crude sap fit for the purposes of nutrition.
Digitate, finger-shaped.
Digynous, with two pistils.
Diœcious, bearing staminate flowers on one individual, and pistillate on another.
Disk, the whole surface of a leaf, or of the top of a compound flower, as opposed to its edge or periphery; also, the centre of the head in the Compositæ.
Distinct, separate, opposed to connate and confluent.
Divaricate, spreading in a straggling manner.
Decandrous, having twelve stamens.
Dorsal, the outer edges of the carpel formed by the midrib, (on the back.)
Drupe, (stone-fruit.) that kind of pericarp which consists of a thick, fleshy, succulent or cartilaginous coat, enclosing a nut or stone.
Ducts, membranous tubes, with conical or rounded extremities, their sides being marked with transverse bars, rings, or coils, incapable of being unrolled without breaking.

Elementary organs, cellular tissue, vascular tissue and fibre.
Elongated, exceeding the common length.
Emarginate, having a small notch at the end.
Embryo, an organized body, the rudiments of the young plant, situated within the integuments
Endocarp, putamen or shell, the inner coat of the seeds.
Endogenous structure, accretions of the stem being made within the portions already formed.
Endogens, plants growing by internal accretions.
Endosmose, flowing inwards.
Ensiform, sword-shaped. two-edged.
Entire. the margin of the leaf even-edged, continued without interruption.
Epicarp, the outer integument or skin of the seeds.
Epidermis, the skin, a form of cellular tissue externally enveloping the plant.
Erose, gnawed, unequally sinuated, as if the sinuses had been eaten by insects.
Esculent, eatable.
Exhalation, the process by which the superabundant water of the sap is given off to the atmosphere.
Exogenous structure, additions to the diameter of the stem, made externally to the part already formed.
Exogens, plants whose stems increase by external accretions.
Exosmose, falling outwards.

Exotic, foreign, not native.
Exserted, projecting or extending out of the flower or sheath.
Extrorse, outwardly, turned outwards or from its axis.

Facula, the nutritious part of wheat and other fruits.
Falcate, sickle-shaped, linear and curved.
Fascicle, a bundle, flowers umbel-like in the general external appearance.
Fasciculated, branchlets bundled unnaturally.
Fastigiate, having a flat or level top.
Feather-veined, that in which the venation consists of a midrib, giving off at intervals lateral veins with branching veinlets.
Febrifuge, efficacious against fever.
Fecundation, the act of making fruitful.
Ferruginous, iron-colored, rusty.
Fibrils, the finer branches of the root sent off from the caudex.
Filament, the stem supporting the anther at or near its top, and is analogous to the stem of a leaf, or to the claw of a petal.
Filiform, shaped like a thread.
Fimbriate, fringed.
Fistular, or *fistulous*, tubular.
Floral envelopes, or *perianth*, one or more circles or whorls of leaves, surrounding the stamens.
Flosculous, consisting of many tubular monopetalous flowers or florets.
Flower, origin of, instead of a leafy branch, the ordinary progeny of a bud, a flower is the result.
Flower, consists of, the perianth, the stamens, the pistils, and the receptacle.
Flower, physiological structure of, the floral envelopes agree with, or are similar to the leaves, of which they are only modifications.
Flower-bud, the elements of a leaf-bud transformed into the organs of a flower.
Follicle, a pericarp with one valve, which opens lengthwise on one side only.
Foot-stalks, the stalks of either flowers or leaves.
Foramen, the passage left through the two sacks or integuments of the ovule.
Fork-veined, veins divided and subdivided by forked divisions, which do not again unite.
Fringed, having a border like a fringe.
Frond, the leaves of the ferns, palms, &c.
Fruit, the ovum brought to perfection.
Fruit consists of, the pericarp and the seed.
Fugacious, falling off early, before the end of summer.
Fungous, of the substance of the fungi.
Furcate, forked.
Fusiform, spindle-shaped, a thick, fleshy caudex, tapering downwards.

Galea, the arched upper lip of a labiate flower.

Genus, a number of plants which agree with one another in the structure of the flower and fruit.
Germ, the old name of the ovary.
Germination, the first stages of vital action in the seed.
Gibbous, swelled out, protuberant.
Glabrous, smooth, without hairs or bristles.
Glands, minute bodies of cellular tissue, situated in various parts of plant.
Glandular fibre, or *tissue*, little glandular points arranged along the walls of the woody tubes.
Glaucous, sea-green, pale bluish green, with a powder or bloom.
Globose, round or spherical.
Glume, the bracts situated at the base of a spikelet of flowers.
Granular, formed of, or covered with grains.
Grooved, furrowed or channelled.
Groups, orders are associated on natural principles into groups, alliances, &c.
Gymnosperous, with seeds naked or growing without pericarps.

Hairs, minute expansions of the epidermis.
Hastate, halbert-shaped, hollowed out at the base and sides.
Head, similar to an umbel, but the flowers are sessile, or nearly so, upon the summit of the peduncle.
Helmet, or *Galea*, upper lip of a labiate corol.
Herb, a plant without a woody stem.
Hexandrous, having six stamens.
Hilum, the scar or mark left on the coats of the seed by its separation from the stalk.
Hoary, white, with very short, dense hairs.
Hooded, curved or hollowed at the end into the form of a hood.
Hybrid, partaking of the nature of two species.

Imbricate, placed over one another like shingles upon a roof.
Incised, the margin divided by deep incisions,
Incumbent, lying against or across. In the Cruciferæ it denotes that the radicle is applied to the back of one of the cotyledons.
Indusium, the membrane that encloses the theca of ferns.
Inferior, below, a calyx or cord is inferior when it comes out below the germ.
Inflated, tumid and hollow, blown up like a bladder.
Inflexed, bending inward.
Inflorescence, the arrangement of the flowers upon a stem or branch.
Inflorescence centripetal, the blossoming of the flowers commencing with those of the circumference and proceeding towards the centre.
Inflorescence centrifugal, the blossoming of the flowers commencing with the central flower and proceeding towards those of the circumference.
Infundibuliform, funnel-form, tubular at the base, but gradually enlarging towards theborder.
Innate, attached to the filament by the base of the connectile.
Inserted into, growing out of.

Integument, covering of the seed immediately exterior to all its other parts.
Intercellular passage, the spaces between the cells of the tissue.
Internode, the space between joints or knots.
Introrse, inwardly, turned inwards.
Involucel, a partial involucre.
Involucre, a leaf-like calyx, coming out some distance below the flower, and never embracing it closely.
Involute, having the edges rolled inwards.
Irregular, unequal in size or figure.

Keel, the lower petal of a papilionaceous corol.
Kidney-shaped, reniform.
Knot, a swelling joint.

Labellum, lip, the nectary of the Linnean school.
Labiate, having lips, the calyx or corol divided at the top into two general parts.
Laciniate, gashed, the nerves and veins all separate.
Lamina, the expanded upper part of the petal supported by the claw.
Lanceolate, lance-shaped, narrow and tapering at each end.
Lateral, relating to the side.
Leaf, consists of, a foot-stalk composing a frame-work of veins, a fleshy substance filling up the interstices, and a cuticle covering the whole.
Leaf, form of, depends upon the direction of the veins and the vigor of their action.
Leaf, color of, almost universally green.
Leaf, margin of, modified chiefly by the same causes which affect the form.
Leaf, surface of, depends upon the mode of veining.
Leaf, functions of, exhalation, absorption, respiration, and digestion.
Leaf-bud, the rudiments of young, tender branches, and consists of scales surrounding a minute axis.
Leaflets, divisions of a compound leaf.
Leaves, arrangement of, nearly, or quite circular, and modified in various ways.
Legume, a pod, consisting of two valves without dissepiments.
Liber, the innermost layer of the bark, or the last year's deposit.
Ligneous, woody.
Ligula, or *ligule*, the membrane at the top of the sheath of grasses, &c.
Limb, the broad spreading part of the petal of a monopetalous corol.
Linear, when the veins (or nerves) are straight.
Linnean Classes, the five different conditions of the stamens upon which the twenty-four artificial classes of Linnæus are founded.
Linnean Orders, the number of distinct styles (or stigmas) constitutes the basis of the artificial orders of Linnæus.
Loculicidal, when the natural opening takes place by the dorsal suture of each carpel directly into the cell.
Lunate, crescent-shaped.
Lyrate, lyre-shaped.

Marginal, on the margin.
Medulla, pith.
Medullary sheath, surrounds the pith.
Membraneous, or *membranaceous*, with the texture of membrane.
Midrib, the principal prolongation of the petiole running from the stem to the apex.
Mineral, an inorganic mass of matter that is without distinction of parts or organs.
Monœcious, stamens and pistils apart, in separate flowers on the same plant.
Monopetalous, the whole corol in one piece.
Monosepalous, when the sepals are united, or only one division of the calyx.
Mucronate, abruptly terminated.

Narcotic, producing sleep or torpor.
Natural System, the arrangement of plants which have the greatest general resemblance to each other, not only in aspect and structure, but also in properties.
Nectariferous, producing honey.
Nectary, an apparatus for the secretion of honey.
Nerves, midrib like fibres running from the base to the apex.
Net-veined, having veins crossing each other like net-work.
Nodding, in a drooping position.
Node, the point in the stem where the leaf, with its axillary bud, is produced.
Normal, regular, according to rule.
Normal structure of plants, complete and regular organs arranged in concentric order.
Nucleus, the central pulpy mass, the inner seed or kernel.
Nut, a hard, dry, indehiscent shell.

Oblong, narrow-oval.
Obovute, inversely egg-shaped.
Obtuse, blunt.
Octandrous, with eight stamens.
Octogynous, with eight styles.
Offset, a short lateral branch terminated by a cluster of leaves, and capable of taking root when separated from the parent plant.
Opposite, two against each other, at the same node.
Orders, the most important of all the natural associations.
Orders, names of, Latin adjectives, usually derived from the name of the most prominent genus in each.
Organic bases, membranes or fibres, of which all the tissues are constructed.
Oval, the length exceeding the breadth.
Ovary, the tumid and hollow part of the pistil.
Ovate, egg-shaped.
Ovules, little globular bodies produced in the cells of the ovary, destined to become seeds.

Paleacious, chaffy.
Palmate, hand-shaped, divided deeply and spreading, so as to resemble the hand with spread fingers.
Panduriform, fiddle-shaped, rounded at the ends, narrow in the middle.
Panicle, a compound inflorescence, formed by an irregular branching of the pedicles of the raceme.
Pappus, seed down, of thistles, &c.
Parasitic, growing upon or nourished by another.
Parenchyma, a succulent vegetable substance.
Pedate, when the palmate leaf has the two lateral lobes cut into two or more segments.
Pedicel, a partial peduncle of an aggregate.
Peduncle, flower stem, not radical.
Pellucid, transparent.
Peltate, shield like the nerves radiating in all directions, and all connected by intervening tissue.
Pendulous, drooping, hanging down.
Pepo, gourd, an indehiscent, fleshy fruit.
Perennial, enduring three years or more.
Perfoliate, when the base lobes of an amplexicaul leaf are united together, so that the stem appears to pass through the leaf.
Perianth, floral envelopes consisting of one or more circles or whorls of leaves surrounding the stamens.
Pericarp, the covering or envelope of the seeds.
Permanent, same as persistent.
Persistent, not falling off, but remaining green or growing until that which bears it is wholly matured.
Petal, the divisions of the corolla.
Petiole, the footstalk of a leaf, or part which connects the lamina with the stem.
Pilose, hairy, having distinct straightish hairs.
Pinnæ, wings, the segments of a pinnate leaf.
Pinnate, winged or feathered, where the petiole bears a row of leaflets on each side, generally equal in number and opposite.
Pinnatifid, feather-cleft, with deep sinuses between all the veins, separating each margin of the leaf into oblong parallel segments.
Pistil, the central organ of most flowers.
Pith, the spongy substance in the central part of the stem.
Plaited, the leaf folded like a fan.
Plant, an organized body endowed with vitality, but not with sensation.
Plumose, feather like down, when a hair has other hairs arranged on opposite sides of it.
Plumule, the rudiment of the ascending axis of the future plant.
Pod, legumes, siliques, &c.
Pollen, a small yellow dust contained in the cells of the anther.
Polyandrous, with many stamens.
Polygamous, having staminate or pistillate and perfect flowers on the same tree.
Polygynous, with many pistils.

Pome, apple, a fleshy, indehiscent pericarp, without valves, and containing a capsule.
Pores, apertures of perspiration in the cuticle.
Premorse, bitten off, terminating bluntly.
Prickles, expansions of the epidermis, consisting of hardened cellular tissue.
Prismatic, formed like a prism, with three or more angles.
Procumbent, trailing on the ground.
Proliferous, forming young plants about the roots.
Prostrate, trailing flat on the ground.
Pubescent, clothed with soft short hairs.
Pulp, the soft, juicy, cellular substance found in berries and other fruits.
Pulverulent, powdery.
Punctate, dotted with pellucid glands.
Putamen, nut-shell, the inner coat of the envelope of the seed.
Pyriform, pear-shaped.
Pyxis, a box, a capsule which opens by a circumsessile dehissence.

Quinate, five leaflets radiating from the same point of the petiole.

Raceme, having the flowers raised on pedicles, and being axillary to a bract, blossoming in succession from the base upwards.
Racemose, resembling a raceme.
Rachis, the axis of the inflorescence.
Radiate, when the outer flowers of an inflorescence are largest, or furnished with rays.
Radiate-veined, several nerves of nearly equal size, radiating from the base towards the circumference, each with its own system of veins and veinlets.
Radical, proceeding from the root without the intervention of a stalk.
Radicle, the descending part of the embryo.
Ramial, when the leaves grow from the branches.
Ramose, branching, ramifications of the root.
Receptacle, the summit of the flower stalk.
Recurved, bent or curved backwards.
Reflexed, curved backwards and downwards.
Reniform, kidney-shaped, broad, rounded at the apex and hollowed at the base.
Repand, having the margin slightly concave between the projecting veins.
Respiration, in plants is analogous to breathing in animals.
Reticulate, netted, having veins crossing each other like net work.
Retrorse, bent backwards.
Revolute, the margins rolled outwards or backwards.
Rhizoma, root-stalk, a kind of rooting stem under ground, nearly horizontal, and sends up new plants yearly.
Rhomboid, oval and angular in the middle.
Rib, costa, ridge caused by projecting veins, &c.
Root, the basis of the plant, and the principal source of its nourishment.
Root, forms of, much diversified in different plants.

Root. use of, fixing the plant in the earth and maintaining its posture.
Rosaceous, like the rose, a corol formed of roundish spreading petals without claws, or with extremely short ones.
Rotate, wheel-form, border, and scarcely a tube.
Rugose, the tissue between the reticulated veins, convex from its superabundance.
Runcinate, pinnatifid, with the divisions pointing backwards.
Runner, a shoot producing roots and leaves at the end only, and from that place giving rise to another plant.

Sagittate, arrow-shaped, with pointed descending lobes at base.
Sap, water holding in solution minute quantities of various kinds of solid and gaseous matter derived from the soil.
Scabrous, rough.
Scale, the bracts of the Compositæ.
Scape, the stem from the summit of the footstalk which bears the inflorescence of the plant, but not of its foliage.
Seed, the matured part of fructification, destined for the reproduction of the species.
Segments, parts or divisions.
Sepals, the divisions of a calyx or segments.
Septinate, when there are seven leaves from the same point in the petiole.
Septum, a partition.
Serrate, having sharp teeth pointing forward like the teeth of a saw.
Serrulate, very small serratures.
Sessile, setting down, when a leaf, flower, seed-down, pileus of a fungus, receptacle of a lichen, &c., are destitute of a petiole, peduncle, stipe, &c.
Sheath, the lower part of the leaf or leaf-stalk which surrounds the stem.
Shrub, a small vegetable with a woody stem.
Silicle, differs from the silique by being shorter and more nearly oval.
Silique, a pod, a long, narrow pericarp of two valves, divided into two cells by a false dissepiment formed by the extended placentæ.
Sinuate, having deep, rounded openings between the veins.
Sinus, the recesses formed by the lobes of leaves, &c.
Soporific, inducing sleep.
Spadix, a spike with a fleshy rachis enveloped in a large bract, called spathe.
Spathe, the sheath surrounding a spadox or a single flower.
Spathulate, obovate, with the lower end much narrowed and tapering.
Species, the lowest division of vegetables, embracing all originating from a common stock.
Specific names, Latin adjectives of the genus to which they belong.
Spike, an inflorescence consisting of several sessile flowers arranged along a common peduncle.
Spines, thorns, leafless, hardened, pointed, woody process, with which some plants are armed.
Spores, bodies analogous to the pollen grains of flowering plants.
Sporules, or spores.

Spur, a prolongation of the petal.
Stamens, thread-like organs, situated just within the perianth and around the pistils.
Stamens, consists of, the filament. the anther, and the pollen.
Stamens and pistils, use of, the fertilization of the seed.
Staminate, with stamens only barren.
Stellate, verticillate or whorled, when several leaves are arranged around the stem at the same node.
Stem, that part of the plant which originates with the plumule and arises above the surface, expanding itself to the influence of the air and light.
Stem, functions of, serves to convey the sap from the roots to the opposite extremities of the plant.
Sterile, barren, unfruitful.
Stigma, the upper portion or extremity of the style.
Stings, tubular and acute hairs fixed upon minute glands in the cuticle which secrete an acrid fluid.
Stipe, the stalk of a pod, of a fungus, &c.
Stipules, leaf-like expansions situated on each side of the petiole at its base.
Stipulate, leaves furnished with stipules.
Stolon, a branch proceeding from the stem and descending to the earth, taking root, sending up new shoots. finally becomes a new plant.
Striate, with striæ, slightly furrowed, &c.
Strigose, clothed with short, stiff, and appressed hairs.
Strobile, cone, an ament with woody scales.
Style, the prolonged columnar part of the ovary, or rather of each carpel, which bears the stigma at its top.
Subulate, awl-shaped.
Succulent, thick, juicy, and fleshy.
Sulcate, furrowed or grooved.
Superior, when the calyx or corol proceeds from the upper part of the germ.
Suture, a seam-like appearance at the meeting of two parts.
Syngenesious, when the anthers are united into a tube.
Systematic botany, the arrangement of plants into groups and families, according to their characters.

Tendril, that kind of appendage which is filiform, and reaches out to grasp bodies to climb by.
Terminal, borne at the summit.
Ternate, three-fold, in threes, where three leaflets proceed from the end of one petiole.
Testa, the first or outer membrane of the integument.
Tetragynous, with four pistils.
Tetrandrous, with fur stamens.
Thallus, that part of lichens which bears the fructification.
Thorn, a leafless, hardened, pointed, wooded process, with which some plants are armed.
Throat, the orifice of the tube of the corolla.

Tomentose, hairs entangled and matted.
Terose, uneven, or undulating on the surface.
Trailing, creeping or lying on the ground.
Tree, a large woody plant, with a bole.
Triandrous, with three stamens.
Tricuspidate, having three points.
Trifid, three-cleft.
Tripinnate, thrice-pinnate, when the leaflets of a bipinnate leaf become pinnate.
Truncate, blunt, as if cut square off.
Trunk, the central column or axis, which supports the branching tops of trees.
Tube, the hollow cylinder of a monopetalous corol.
Tuber, an annual thickened portion of a subterranean stem, provided with latent buds, from which new plants arise the succeeding year.
Tuberous, roots which are thick and fleshy, but not of any regularly globular form.
Tubular, having a tube, or being in the form of a tube.
Turbinate, shaped like a top.

Umbel, like the corymb, but the pedicels are of nearly equal length, and all arise from the same point in the common peduncle.
Umbilicate, depressed in the centre.
Unarmed, having no thorns or prickles.
Uncinate, hooked at the end.
Undulate, wavy.
Unguis, the claw, as of a petal.
Unilateral, one-sided.

Valvate, applied to each other by the margins only.
Valves, the several pieces of a pericarp, which separate naturally in ripening.
Varieties, changes produced among plants of the same species.
Vascular tissue, spiral vessels with their modifications.
Vegetable physiology, that part of botany which relates to the phenomena of the vital functions of plants.
Vegetable Kingdom, variety of, equally remarkable for its rich and boundless variety as for its wide diffusion.
Vegetation, its diffusion, caused by the quickening energy of the Creator.
Veins, the primary divisions sent off from the midrib or nerves.
Veinlets, branches of the veins.
Velvety, clothed with a dense soft pubescence.
Ventral, the inner edges of the carpel, formed by the united margins.
Verticillate, whorled, more than two in a circle at each node.
Vexillary, when the banner of a papilionaceous corol greatly exceeds the wings in size.
Villose, villous, clothed with long hairs.
Vine, stems which being too weak to stand erect, creep along the ground or otherwise, and do not throw out roots like the runner.

Viscid, clammy, sticky.

Whorled, when three or more leaves arise at each node, and are disposed in a circle, they are venticillate or whorled.
Winged, margined, flattened or expanded laterally into a border.
Wood, the most solid part of trunks and roots of trees and shrubs.
Woody tissue, or *fibre*, slender transparent membranous tubes, tapering to a point each way, and adhering together by their sides, the end of one tube extending beyond that of another so as to form continuous threads.

Zigzag, flexuous, bending alternately in opposite directions.
Zoophytes, animal plants.

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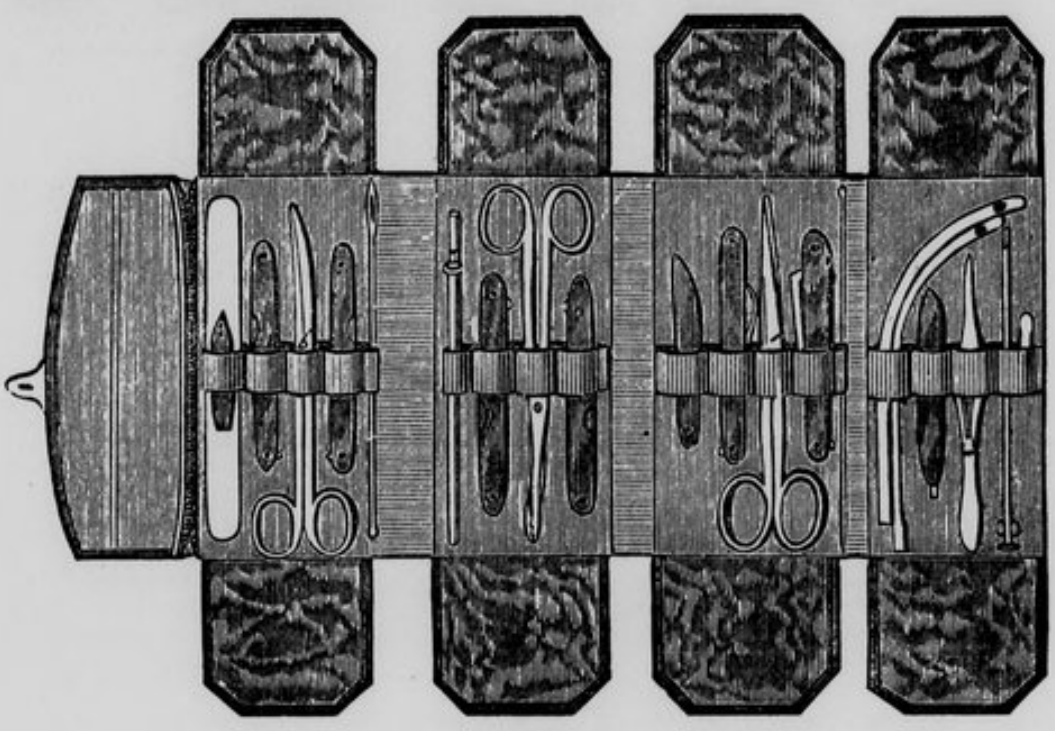

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