

The physiological and therapeutic uses of our new remedies / by John Buchanan.

Contributors

Buchanan, John, M.D.

Publication/Creation

Philadelphia : J. Buchanan, 1873.

Persistent URL

<https://wellcomecollection.org/works/a6vj72cr>

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

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



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

THE
PHYSIOLOGICAL AND THERAPEUTIC USES
OF
OUR NEW REMEDIES.

BY JOHN BUCHANAN, M. D.,

Professor of the Principles of Surgery and Institutes of Medicine in the American
University of Philadelphia.

SECOND EDITION, REVISED AND ENLARGED.

Philadelphia :

JOHN BUCHANAN.

1873.

34446

£7.50

(M)

102

13

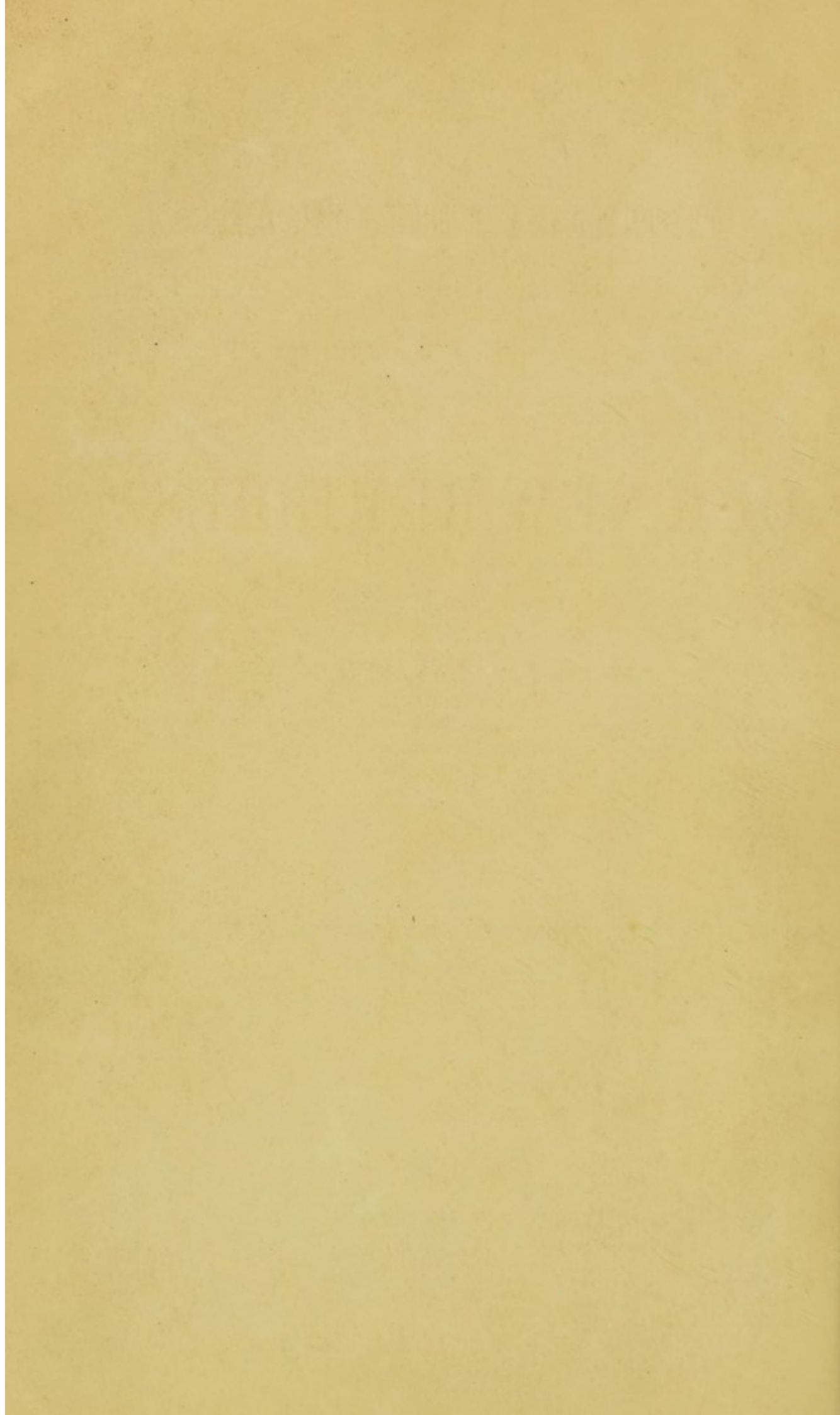


22102051499

Med
K13356

James Platt
Brunel Street.
Massley

gd.



THE
PHYSIOLOGICAL AND THERAPEUTIC USES
OF
OUR NEW REMEDIES.

BY JOHN BUCHANAN, M. D.,

Professor of the Principles of Surgery and Institutes of Medicine in the American
University of Philadelphia.

SECOND EDITION, REVISED AND ENLARGED.

Philadelphia :

JOHN BUCHANAN.

1873.

134446

8 581 383

TO

WILLIAM CLARK, M. D., LL. D.,

IN HONOR OF HIS

HIGH PHILANTHROPIC AND PROFESSIONAL STANDING,

AND

IN TOKEN OF GRATITUDE FOR

MANY KINDNESSES,

THIS LITTLE VOLUME IS RESPECTFULLY INSCRIBED

BY

THE AUTHOR.

337313

Printed by W. B. Selheimer,
501 Chestnut St., Philadelphia.

WELLCOME INSTITUTE LIBRARY	
Coll.	welMOmec
Call	
No.	QV

CONTENTS.

	PAGE		PAGE
INTRODUCTION.....	5	Balsamodendron Myrrha.....	41
Abies Canadensis.....	17	Baptisin.....	41
Acalipha Indica.....	17	Barberry.....	43
Achillea Millefolium.....	17	Barosmin.....	43
ACIDS—		Bearberry.....	43
Acetic.....	18	Bebeerine.....	43
Benzoic.....	18	Betin.....	44
Carbazotic.....	19	Bismuth.....	44
Carbolic.....	19	Blackberry Root.....	45
Chromic.....	20	Black Pepper.....	45
Citric.....	20	Blood.....	45
Fluoric.....	20	Brayera.....	46
Hydriodic.....	20	Bromides.....	46
Hydrochloric.....	20	Bromide of Morphia.....	47
Hydrocyanic.....	22	Bromide Potassa.....	47
Lactic.....	22	Bromide of Quinine.....	48
Nitric.....	22	Bromide of Strychnine.....	48
Nitro-hydrochloric.....	22	Broom.....	48
Oxalic.....	22	Bryonia Alba.....	48
Phosphoric, Dilute.....	23	Burdock Root and Seeds.....	49
Sulphuric.....	23	Cactus Grandiflorus.....	49
Aconite.....	23	Cadmium.....	50
Acorin.....	25	Caffein.....	50
Actæ Racemosa.....	25	Calabar Bean.....	51
Adiantum Pedatum.....	27	Calendula, or Marigold.....	53
Æsculin.....	27	Calx.....	53
Agaric.....	27	Camphor.....	54
Agrimony.....	27	Canella Bark.....	54
Aletrin.....	27	Cannabis Sativa and Cannabis Indica.....	54
Alisma Plantago.....	28	Cantharides.....	55
Allium Sativum and Copa.....	28	Capsicum.....	55
Allspice.....	28	Carbon.....	56
Aluin.....	28	Cardamon.....	57
Aloes.....	29	Caryophyllin.....	57
Alpinia Cardamomum.....	29	Catechu.....	57
Alumen.....	30	Caulophyllin.....	58
Amaranth.....	30	Ceanothine.....	58
Ambrosine.....	30	Celandine.....	58
Ammonia.....	30	Celastrus Scandens.....	59
Ammoniacine.....	31	Cerasein.....	59
Ampelopsin.....	31	Corium.....	60
Amygdalin.....	31	Chelonin.....	60
Anacycline.....	32	Chenopodina.....	61
Anemonin.....	32	Chimaphillin.....	61
Angelica Atropurpurea.....	33	Chionanthus Virginica.....	62
Aniseed.....	33	Chloral Hydrate.....	62
Antennaria.....	33	Cimicifugin.....	64
Anthemis.....	33	Cinchona.....	64
Apiol.....	33	Clematis Virginiana.....	64
Apocynin.....	34	Clover Heads.....	64
Araliacein.....	34	Cocculus Indicus.....	65
Aristolochin.....	34	Colchicum.....	65
Arnica Montana.....	35	Cold.....	65
Arnotto.....	37	Collinsonin.....	66
Artemisia Absinthium.....	37	Colocynthin.....	67
Asparagin.....	38	Columbin.....	68
Aspidium Filix Mas.....	38	Comfrey.....	68
Atropin.....	39	Copaiba.....	68
Avens Root.....	41	Coptis Trifolia.....	68

	PAGE		PAGE
Corollarrhiza Odontorrhiza, or Crawley		Narceine,.....	111
Root,.....	68	New Cure,.....	111
Cornus Florida,.....	69	Nicotine or Tobacco,.....	112
Corydalin,.....	69	Nitro-muriatic Acid.....	113
Cramp Bark,.....	70		
Crocus Sativus, or Saffron,.....	70	OILS—	
Cundurango,.....	71	Alcohol,.....	114
Cypripedin,.....	71	Lobelia,.....	116
		Populus Tremuloides, or American	
Datura,.....	72	Poplar,.....	116
Delphinia,.....	73	Pumpkin Seed,.....	116
Dewberry, Raspberry and Blackberry,...	74	Sandal-Wood,.....	117
Digitalin,.....	75	Staphysagria,.....	117
Dioscorein,.....	77	Stillingia,.....	117
Drosera Rotundifolia, or Sundew,.....	78	Xanthoxylum,.....	118
Dulcamara,.....	78	Opium,.....	118
		Oxygen,.....	120
Elaterin,.....	79		
Elder Flowers,.....	80	Pepsin,.....	120
Elecampane,.....	81	Phenol Sodique,.....	121
Epilobium,.....	81	Phloridzine,.....	121
Ergot,.....	81	Phosphorus,.....	121
Eryngium Aquaticum,.....	84	Physaline,.....	123
Erythroxyton Coca,.....	84	Phytolaccin,.....	124
Euonymin,.....	85	Platina,.....	124
Eupatorin Perfo.....	86	Podophillin,.....	126
Eupatorin Purpu.....	86	Populin,.....	128
Euphorbin,.....	87	Potash, Permanganate of,.....	128
		Potassa, Chlorate,.....	129
Frazerin,.....	88	Propylamin,.....	129
		Prunin,.....	129
Gelsemin,.....	88	Ptelein,.....	129
Geranin,.....	90		
Gold,.....	90	Quinine,.....	130
Gossypiin,.....	91		
		Rhein,.....	130
Hæmatoxyton,.....	91	Rhusin,.....	131
Hamamelin,.....	91	Rhus Radicans,.....	132
Helenin,.....	92	Rhus Toxicodendron,.....	132
Helleborus Niger,.....	92	Rumin,.....	133
Helonin,.....	93	Ruta Graviolens,.....	134
Hydrangea Vulgaris,.....	94		
Hydrastin,.....	95	Salicin,.....	134
Hydrides,.....	96	Sambucus Canadensis,.....	134
Hyoseyamin,.....	97	Sanguinarin,.....	135
Hypericum,.....	97	Santonine,.....	136
		Sarracenia Purpura,.....	136
Ignatia Amara,.....	98	Savine,.....	137
Iodine,.....	98	Scutellarin,.....	138
Ipecacuanha,.....	100	Senecin,.....	138
Irisin,.....	101	Sepia,.....	139
		Smilacin,.....	140
Jalapin,.....	102	Sodium,.....	141
Juglandin,.....	102	Stannum,.....	143
		Stillingin,.....	143
Kinovic Acid,.....	103	Strychnia,.....	144
		Symphytum Officinale, or Comfrey,.....	145
Lactucarium,.....	104		
Leptandrin,.....	104	Tannin,.....	145
Lithia,.....	105	Tansy.....	146
Lobelin,.....	105	Taraxacin,.....	146
Lupulin,.....	108	Theine,.....	146
Lycopin,.....	108	Trillin,.....	147
Menispermin,.....	109	Veratrin,.....	148
Mezereon,.....	109	Viburnin,.....	150
Millefolium,.....	110		
Myrcin,.....	110	Xanthoxylin,.....	150
		Xylol,.....	151

INTRODUCTION.

THE SCIENCE OF MEDICINE.

The science of medicine presents itself at the present time under three prominent, distinctive sects or divisions, namely: Allopathic, Homœopathic and Eclectic, each claiming broad, distinctive features.

Allopathy believes and teaches solely, exclusively and dogmatically, the law of contraries in the treatment of disease; the creating or setting up an excitement or irritation in some part greater, more intense, than the disease that is prostrating the vital forces; and also that fever and inflammation are diseases.

Homœopathy rests her faith in the law of similia; that like cures like; that if a certain class of remedies be administered in minute, impalpable doses, they will cure the symptoms which the same remedies will produce, if given in large doses to a healthy person.

Extended clinical experience has demonstrated that both the law of contraries and the law that like cures like are erroneous, untenable, and do not embrace the whole truth, nor a part of it; that honestly, disinterestedly considered, they are both empirical, nay, more, a deception and a fraud—the one being merely a destroyer of the vital forces of the patient, the other, a mere expectant, do-nothing treatment, a humbug and a farce.

The science of medicine is an inexact science, and no sane man can pretend to say that the law of the bombastic old school practitioner, or the whining, sneaking follower of Hahnemann can, or does, render it exact.

The Eclectic, or more properly speaking, the American system of medical practice, was inaugurated by Dr. W. Beach, the most brilliant meteor that ever crossed the horizon of medical science. That noble, independent mind, a radiation of Divinity, enunciated doctrines of pathology and therapeutics which have revolutionized medicine, removed its empiricism, and which are rapidly making it approach one of the exact sciences.

Beach laid down the cardinal principles of the Eclectic system of medical practice, a system which, notwithstanding all the persecution and intoleration of the old school, will reign supreme in America. The most distinctive and fundamental principle of this system is, *that* no medical treatment should be used that may impair or weaken the vital powers—*that* in the selection of remedies, those only should be preferred which are most positive and safe, which act in harmony or in accordance with physiological laws—that all diseases peculiar to our country and climate can be cured by remedies indigenous to our soil, by remedies that have a special action either in changing, modifying or toning.

Bleeding, the use of poisonous minerals, are discarded, their use being a gross violation of well-known physiological and pathological law. He also gave birth to that grand truth, that fever and inflammation are but conditions of imperfect reaction, not diseases, but salutary efforts of nature to eliminate, or overcome, or repair an effort, to be aided by judicious stimulation with brain and other stimulants, and also with proper hygienic and remedial means. This doctrine, this element of pathology, is the guiding star of all Eclectics. One step further; he was also the discoverer of the reflex function of the spinal cord and medulla oblongata. Read his article on spinal diagnosis, which was written long before the germ

that vitalized Brown Seguard had an existence, and on this theory the liberal profession of the world are raising a glorious superstructure. Take him all in all, we shall never see his like again; take his simple, natural, common sense theories, what are our views of Allopathy, but a destructive practice? what of Homœopathy, but a decided farce? Both have a deleterious effect, an effect which has filled the world with invalids, and brought millions to a premature grave; they have not retarded, but by their bigoted, intolerant ignorance of the primary elements, the first truths of medical science, they have aided the career of progress of the great American system of practice.

The Eclectic profession owe much of their success to the vile opposition of their opponents; it has begot a spirit of progress, an energy of character, an unfaltering determination, which means unconquerable.

Eclecticism in medicine does not mean a mere selection or combination of what is deemed best of the several systems of practice; it means more. Our different views of pathology naturally lead us to the selection of a class of remedies that aid nature in her efforts at recovery, as well as the peculiar adaptation of each drug to some special tissue or gland. Physiological reasoning or deduction has demonstrated these views to be correct.

Our therapeutics are in accordance with physiological and pathological laws, constructed on a scientific basis, which is not empirical; for blind, uninstructed, unsystematic empiricism is a bane to society and a disgrace to the progress of the age.

The name Eclectic has some advantages as well as disadvantages. Our preference is the American system of medical practice in contra-distinction to those twin importations, Allopathy and Homœopathy; nevertheless, the name Eclectic commends itself to every physician of liberal ideas; free investigation to all who deem it their duty to be free, untrammelled from all dogmas, and cheerfully receives or gathers knowledge from every available source. It is

an appropriate name for medical reform, which owes its very existence to an Eclectic freedom of thought, investigation; a departure from the dogmas of the schools—*an eclectic research into nature, into clinical experience; a research* that has introduced over a hundred new remedies into the materia medica of positive power; a *research* which has introduced new and correct ideas of pathology; a *research* which has so enlightened, that mercury, antimony, arsenic and other dangerous and poisonous agents are discarded from our Materia Medica, and in their place there is arranged efficient, safe substitutes; a research which has inaugurated a great, rational, comprehensive system of medical science upon the basis of the widest, most enlightened practical experience and sound common sense.

But our new discoveries in pathology, physiology, materia medica, are not alone our distinctive features. We claim an improvement in treatment which is diminishing mortality, and aiding in the prolonging the mean duration of human life. In the practice of surgery, the remarkable discovery of the immortal Sweet, in reducing luxations by manipulation and rotation, is enough for one age; but what can we say of the superior results of Eclectic medicine and treatment in major operations, obtaining union by first intention in nearly every case. *Need* I call your attention to our improved and most successful treatment of fevers—a success that has diminished the mortality from this source alone to a cypher? *Need* I call your attention to our success in those terrible epidemics where the august skill of the Allopath, and the profound egotism of the Homœopath, are perfectly powerless? *Need* I call your attention to our improved system of midwifery, which has done so much to mitigate the sorrows of the noble mothers of our race? *Need* I call your attention to the amount of progress that is being accomplished every year, every month—every hour is a world of progress—all gained by hard work, by determined perseverance?

The great object of a physician is to cure; to restore the disordered body to its natural state of comfort or health; to establish an equilibrium; and this is usually done by stimulating the vital forces, by aiding those forces to retain certain products from the tissues, or to replace them by new material. In the aiding of nature as a means of cure, *rest* is a therapeutic agent of intrinsic value; a partial suspension of the vital forces is often necessary to enable them to overcome a poison, as in snake bite, by thorough alcoholism; yellow fever, by gelseminum. In the aiding of nature as a means of cure, a correct appreciation of the brain and nervous system is the most important study of a medical practitioner. The centre of life, of vitality, of existence, is in the nervous centres, and in all diseased conditions there is an impairment of those parts.

If we were desirous of illustrating this assertion, we might enumerate a whole category of diseases as bearing on this point. A condition of imperfect reaction, known as fever, is most successfully combated by administering such stimulants as veratrum, aconite. A simple ulcer, a mere breach of continuity, will never heal till the pain is removed. Kill the sensation in the organic nerves, and how promptly will it granulate. What a miraculous, speedy, nay, instantaneous improvement takes place in peritonitis the moment the nervous system is stimulated to thorough narcotism. In phthisis, that fearful, terrible destroyer of our race, a disease which is annually sweeping off its millions, we have, as a commencement, an impaired nervous system; and whether this impaired, or weakened, or deteriorated nervous system, so common in our highly civilized condition, is due to excess, venereal or otherwise, or to other vices of civilization, we do not pretend to say; but we do most emphatically assert that this depreciated nervous system impairs nutrition, lowers the vegetative system, impairs the fountains of life, retards the formation of perfect blood corpuscles; hence the albuminous white cell condition of the blood, the second-

ary effect, and subsequently, the exudation or deposit of this albuminous blood in the glands, lungs, &c.

The primary cause of cancer is to be traced to a peculiar conformation of nerve structure, under which a peculiar blood disease is elaborated, but which condition is antidoted by chlorate of carbon.

Chlorosis was thought to be a disease of the blood; but of late years it has been clearly demonstrated that it depends upon some special depression of the nervous system, and is best rectified by nux, phosphorus, &c. Asthma, in some cases, is due to congestion of the cervical portion of the spinal cord, and is usually relieved by the administration of rosin weed and bromide potass.

Indeed, all the grand discoveries of modern medical science are, and will be made, in a more thorough investigation of the nervous system.

Anæmia, or bloodlessness, is more frequently due to a want of tone in the nervous system than any other cause. The red globules are by far the most important portion of that fluid, and a high state of mental vigor is conducive, above all things, to that end. If you analyze the blood of a healthy person, you will find that at least one hundred and twenty parts in one thousand will consist of blood globules; whereas, in anæmia there is seldom found any degenerated, devitalized substance, but an impaired nerve force, which causes a weakened vitality in the elaboration of the blood; and how speedily would a cure be effected, if phosphorus were more frequently depended on.

The exciting cause of fevers is a poison generated by decomposing organic matter and received into the body. Usually, the poison is widely diffused through the atmosphere, and people are affected by it in proportion to their powers of vital resistance, in proportion to the integrity of the nerve centres; for it is only on a predisposed or enfeebled body that a morbid poison operates. Once a poison has gained admission by the lungs, gastric mucous membrane or skin, its effects on the brain and spinal cord are a

depressant, and this very effect has a tendency to impair or destroy the vitality of the organic cell, and the destruction becomes general; the nerve centres become depressed; there is less vital, less organic condition. There is, in consequence, a diminished amount of red corpuscles in the blood. This result we have independent of the process of catalysis, one molecule imprinting its poison impress upon another; a process which resembles the act of fermentation—a process which we have beautifully exemplified in glanders, and which is instantaneously arrested by giving the patient large doses of sulphite of soda.

The chief characteristic effects of all poisons on the nervous system is to destroy it—to induce a partial death. We see this in the rigors, pains, diarrhœa, increased heat, which is diminished vitality; the sweating, the passage of solid matter by the kidneys, a destructive metamorphosis. Instead of depleting in this condition, we aid the natural effort to overcome, or eliminate, or neutralize, or arrest, and when we do this, destruction ceases, and the process of cure begins.

Although the poison of fevers chiefly affects the nervous system, still the blood and other tissues may be so saturated that there may be an almost instant destructive effect on organic life.

In all diseased conditions a cure is to be effected by the exhibition of remedies that promote vital power, and increase the quantity of nervous influence. A drug effects very little by its chemical or neutralizing influence; it is the amount of vital power the drug imparts that is the true healer. The action of a remedy by which a diseased part becomes sound is a vital act of the body itself, aided or propelled by the remedy, and the true secret in curing or healing is in the establishment of vitality—a vitality that tends to create or renew, or energize diseased tissue.

Life is a state of unending change, and this change is double—a construction of the body from foreign materials and a destruction of it into inorganic elements. The physician has to deal exclu-

sively with these two points of change, a construction or destruction. It is a well-attested fact that more than half the patients who die lose their lives from imperfect nutrition, and nearly all that recover, gain that end by a restoration of the process of nutrition. Remedies, then, that improve nutrition and arrest destruction, prevent death and cure disease.

Seeing we are so constituted, the progressive, intellectual physician accomplishes much by the use of constructive remedies—remedies from which the body is built up, as albumen, fibrine, fat, iron, lime, phosphorus, soda, sulphur, oxygen.

Besides these, the special action of our indigenous remedies is the grand field of present and future discovery, open to suggestion from positive physiology and enlightened pathology. The rational treatment of diseased conditions, by a direct or specific remedy, is the part of a medicine at the present day in which the greatest discoveries will be achieved. Let us briefly notice the special action of a few remedies.

To understand the action of remedies in disease it is necessary to understand the nature of disease. A derangement or depression of the vital forces is disease. That cause that disturbs, that produces the jarring, must be removed before a cure can be effected; then the proper remedy to antidote the disease should be given. If the disease is of recent origin and merely affects the organ, the direct action of the remedy is demanded. If the morbid condition has lasted long, a reflux irritation is set up in the origin of the nerve that supplies the organ, hence the action of the remedies should be reversed or attenuated from the large dose. Large doses of drugs spend their action upon the glandular system, when that system becomes aroused, and throws the remedy from the system by the various secretions. It has had no action on the brain save to increase the irritation by virtue of its reflex action, or irritate a sentient nerve; it must be extended to the brain and so increase the disturbance. In all cases the remedy must be selected in accord-

ance with its affinity for the part, the same as the direct or large dose is selected in glandular affections, and the dose so small that it does not disturb the structure of a part, but is readily absorbed, carried to the part to which it has an affinity, and neutralizes or antidotes the disease. There is a dividing line in the administration of drugs—large doses being best adapted for acute cases, small doses for chronic cases: the susceptibility for absorption is greater because the brain and mucous membrane is more implicated, and small, attenuated doses are best adapted to the case. Large doses in chronic disease disturbs, irritates, and fail to aid the vital effort. The necessity of understanding the full action of our drugs is apparent. We often see small doses effect good results after all other means have failed, while the reverse is the case when direct medication is given. In all humors alteratives cannot alone effect a cure, other remedies must be given to antidote the poison, and the remedy must be small and highly attenuated, for poisons are usually small in quantity, although permeating a large area. An antidote must be given, not only for the poison, but for the tissue affected. When we thoroughly understand that there will be no difficulty in curing the various forms of blood poisons, catarrhal irritation of the throat and nose, which is so prevalent, can be permanently cured by antidoting the humor or latent poison. Poke and chlorate of carbon will antidote the latent poison of cancer.

The principle of treatment is to administer remedies that neutralize a poison. The irritation is not the disease, it is the poison that produces it. The poison is the source, the offending cause that has disturbed the harmonious circulation of the part—the vital principle. There are a great diversity of poisons, each producing a peculiar train of symptoms and requiring a special remedy. For example, for a general psoric condition, perhaps the best remedy we have is sulphur well triturated and in small doses—it is antidotal—but it should not be repeated too often, for if the first dose

antidotes the poison, then nature is sufficient for the purpose; if the head and throat, *phytolacca* is the antidote; if syphilis, *platina* stands the true antidote; but in some forms *kalmia* is curative. Specific medication, scientifically represented—carried out in harmony with the great law—primary doses in acute diseases, secondary doses in chronic, wherever time has elapsed to beget cerebral irritation in the cord and brain.

Normal warmth is a great element in the treatment of a morbid condition. Disease lowers the power of producing heat in the diseased tissue, or causes heat to be produced in an irregular manner. Wounds heal more quickly when a natural heat is maintained. Artificial heat is a good means of maintaining life. If vitality is deficient, we can economize it by warm clothing. If there is a local deficiency of vitality, as in ulcerated bowels, none of our curative agents are so valuable as heat.

Electricity supplies the contractile muscular fibres with a stimulus to action, which is wanting in cases of deficient nerve force. Apply it to a paralytic limb, it prevents its becoming atrophied; sustains it in activity, until the breach of continuity or the injured nerve force recovers itself. Friction or shampooing act in the same way.

Oxygen, either inhaled or taken in the stomach, has a direct effect in increasing the quantity of red corpuscles in the blood; it excites the whole system with renewed life.

Bitter tonics are remedies that build up and construct. They brace and harden mucous membranes. Digestion is made more rapid and effectual. Nutriment is taken up more copiously and quicker.

Hydrocyanic acid has a beneficial effect in dyspepsia, not only supplying deficient elements in the gastric juice, but, from its general action upon the pneumogastric nerve, it alleviates the gastralgia, and, at the same time, deadens the over-sensibility of the gastric plexus.

In hemorrhages from mucous surfaces, the action of gallic acid, erigeron, is positive.

Dioscorein has a special affinity for the muscular coat of the intestines, relaxing spasm. Bromide potass. has a special action in removing congestion of the spinal cord and its membranes. Hence its value in hooping-cough, asthma, chorea, epilepsy, spermatorrhœa. Iodide potass. is the best antidote to lead, mercury, because it sets it free, and then eliminates it.

All remedies produce special effects upon particular parts of the body, in health as well as in disease; the only marked difference being, that in a diseased condition there is greater susceptibility or morbid augmented impressibility.

Besides the special action of remedies on particular tissues, we must recognize a fundamental law in all drugs; two effects, a primary and a secondary, and these secondary effects are very dissimilar to the primary effect. The knowledge of this truth is of great importance in the curative results of medicines, and enables us to more clearly appreciate and approximate precision in treatment. For instance, the primary effect of a large dose of opium is to cause congestion of the brain and spinal cord, to induce sleep, lessen nervous and muscular sensibility, diminish or suspend the secretions, with the exception of perspiration, which is augmented. The secondary effect of the medicine is the opposite: exhilaration, prolonged wakefulness, morbid irritation of the system, a return of the secretions. Ipecac., in fifteen-grain doses, will produce emesis, and in one-eighth of a grain dose, arrest vomiting; and so on with other remedies.

The law of primary and secondary action applies to all drugs that possess an affinity to the nervous system.

There is a healthy point in the functional actions of organs—an equilibrium of all the functions, which cannot be disturbed with impunity. Nature is ever striving to maintain this natural condition, and our remedies should be directed to this point.

Medicinal substances may be absorbed into the blood, or attracted by the peripheral extremities of the nerves, and, in whatever way they get into the system, they will act upon the part for which they have a special affinity, and be thrown off by the excretions.

If the same medicinal substances are given in disease, they are absorbed with far greater facility, and exercise the same special affinity for particular parts as in health, with this difference, that they make impressions upon the diseased tissues far more energetically and positively than when taken into a healthy condition, because the vitality of the diseased part is lessened or exhausted. This susceptibility to the influence of remedies is not confined to the particular tissue affected, but the whole system becomes highly impressible. It is a well-established law, that no one structure can be disordered without giving rise to secondary sympathetic symptoms in other parts of the economy. It does not matter whether the lungs, stomach, or skin, or any other part or structure be primarily affected, the whole system may be ultimately disordered through remote or contagious sympathy. The connection of every part of the body, through the media of the sympathetic and other nerves, is so close and direct, that no organ can be acted on by any poison or disease without involving the common whole.

Philadelphia, January, 1873.

OUR NEW REMEDIES.

ABIES CANADENSIS.—A pure aqueous extract of hemlock bark; possesses valuable astringent and stimulating properties. It may be used with remarkable success in chronic diarrhoea and dysentery, as follows:

R_y.—Fl. ext. hemlock bark, ℥ii;
Water, ℥viii.—*Mix.*

Dose.—One to two teaspoonfuls, as indicated.

It is of decided benefit in uterine and other passive hemorrhages; also, as an injection in leucorrhœa, catarrh, and all irritations of a mucous surface. It forms an efficacious injection in obstinate cases of gonorrhœa and gleet; also, in hemorrhoids. It has a direct specific action in all forms of ulcer, especially that of the os uteri. By saturating a sponge with the pure extract, and placing it in direct application to the most obstinate ulcer at or on the neck of the uterus, it will rapidly heal.

By adding a small amount of glycerine to a portion of the extract, it makes a valuable external agent as a styptic, and is of great utility in excoriations, prolapsus ani, fissures, and phagedenic ulcers.

ACALIPHA INDICA.—This plant grows luxuriantly in Hindostan; it is an acro-narcotic. Its primary action is upon the spinal cord as a direct sedative, diminishing excitement or congestion of that tissue. Its secondary action is a tonic to all mucous surfaces.

A saturated tincture is the best form for administration.

Dose.—From one to two drops every hour. Combined with some doses of tinct. bloodroot, it is very valuable in bronchial irritation and hæmoptysis.

ACHILLEA MILLEFOLIUM—(*Common Yarrow.*)—The parts used are the herb and flowers, made either into a saturated tincture or fluid extract.

The sphere of action of this remedy is quite extensive, being aromatic, tonic and astringent in large doses, whereas, in small doses, it is alterative and diuretic; hence it is useful in nervous dys-

pepsia, flatulence, constipation, and all forms of nervous debility. It possesses marked antiperiodic properties. Its special sphere of action is in hemorrhages from mucous surfaces, such as dysentery, hæmoptysis, hæmaturia, &c. An eligible form for frequent administration is the following:

Ry.—Fl. ext. yarrow, ℥i;
Water, ℥v.—*Mix.*

Dose.—Teaspoonful repeatedly.

ACIDS.

ACID, ACETIC.—In certain fevers, where there is an excess of alkaline ingredients in the blood, in diseases that operate by ferments, and where we have a superabundance of alkaline phosphates thrown off, this remedy is indicated, internally and locally. Locally, as sponging the body with vinegar and water. Otherwise, acetic acid is destructive to the human system; destructive in the stomach; on the process of digestion; impairing the primary molecules of the blood, and being a fruitful cause of consumption, scrofula, &c., and consequently contra-indicated in these diseases as being deteriorating to the red corpuscles of that fluid. The application of the pure acid to corns, chancres, &c., is often attended with the most happy results.

Dilute acetic acid and acetate of lead is an excellent formula in erysipelas, being a soothing sedative application.

ACID, BENZOIC—Is a more valuable remedy than most physicians suppose. In ordinary practice we all admire its soothing action in any irritation of the mucous membrane of the throat, being serviceable in coughs, catarrh, &c.

Its action on the skin, that immense fountain of excretion, is that of a bland sedative, kind and healing, and on this account it is incorporated into ointments and lotions for promoting the healthy action of that gland.

Its *physiological or chemical action* is of most utility to the physician. In the lithic acid diathesis, in ten-grain doses, morning and night, dissolved in weak borax water, it is a most positive remedy. In patients of a bilious temperament there is no remedy that can excel it in promptness of action. It promotes the excretion of nitrogenous matter; it neutralizes the excess of carbonaceous matters in the blood, the retention of which is the cause of the disease. In gout and rheumatism, with or without lithia, carbonate of soda or like remedies, it prevents the tophaceous or urate of soda concretions, and even the phosphatic urinary deposits are removed by it.

ACID, CARBAZOTIC.—A tonic and astringent, used in the convalescing stages of all acute diseases. It is nearly as good a tonic as quinine, and will often aid the vital power to throw off malaria when that drug fails. As the free acid may irritate the muscular and mucous coat of the stomach and bowels, and thus cause cramps, the carbazotates of ammonia and iron are excellent preparations. The dose is from half-grain to a grain, three times daily. The continued use of the acid causes a discoloration of the skin and conjunctiva, analogous to jaundice.

ACID, CARBOLIC.—This is a powerful antiseptic and azymotic; it prevents fermentation; preserves animal tissues from decomposition; becomes an escharotic when applied to the skin undiluted; as a caustic agent it is of very little value, as it produces too much irritation.

Its positive antiseptic properties—its faculty in coagulating albuminous surfaces—renders it a most valuable drug in surgical practice.

To hermetically seal up a compound fracture or wound:

℞.—Carbolic acid, ℥i;
Olive oil, ℥iv to ℥vi.—*Mix.*

Saturate lint and apply to the affected part, or take the same combination and add whiting sufficient to make a putty, and keep constantly applied. The same combination is useful in burns, scalds, stings of insects, &c.

In cutaneous affections, of long standing, the acid can be used as follows:

℞.—Simple cerate,
Glycerine, āā ℥i;
Sulphite soda, ℥iii;
Bicarbonate, ℥ii;
Carbolic acid, ℥i to ℥ii.—*Mix.*

Apply to the affected part; or

℞.—Carbolic acid, ℥i;
Acetic acid, ℥iv;
Water, Oss.—*Mix.*

As above.

Internally, the acid may be advantageously used in acid eructations from fermentation, the result of the yeast plant on the stomach.

As a spray in nasal catarrh, phthisis pulmonalis, bronchial inflammation, or an injection in gonorrhœa or leucorrhœa, it is invaluable:

℞.—Carbolic acid, grs. xx;
Glycerine, ℥ii;
Rose water, ℥iii.—*Mix.*

As a disinfectant for a sick chamber, the following is probably unexcelled:

R_y.—Carbolic acid, ℥ii;
 Alcohol, ℥ss;
 Water, ℥iii.—*Mix.*

Sprinkle around the apartment.

ACIDUM CHROMICUM.—Chronic acid is a powerful oxydizing agent yielding half its oxygen readily to oxydizable bodies, and being reduced to a sesqui-oxide.

Its therapeutic properties and uses are that of a potent caustic; less painful than other caustics. It is found to be advantageous in cancer, malignant tumors and ulcers. It is most applicable in the treatment of piles. Applied to the diseased surface nicely and evenly it is easily managed, for it does not spread beyond the prescribed limits, and as soon as its erosive operation is finished the acid passes into an inert powder.

The chloride of chromium, used in the form of a spray, is said to reduce growths to a state of powder.

ACID, CITRIC.—Useful as a refrigerant and antiscorbutic, rendering the blood more fluid by lessening its coagulability. It has been used in gout and rheumatism with very disastrous results—with very mistaken views of its chemical properties. In blood diseases, with the dark hue on the tongue, it is invaluable as a drink.

ACID, FLUORIC.—Possesses some very remarkable properties as a lotion in cancerous affections. Indeed, in malignant disease its action works a complete revolution. Incorporated with the aqueous extract of red clover, it possesses a decided affinity in bringing all cancerous growths to the surface.

It is the only known drug with which the absorption of a cataract can be procured. Pour a small quantity of the acid into a wide-mouthed rubber vial, guarding the nose and mouth well; it can be held to the eye for a few minutes, until the appearance of congestion takes place, then removed. It may be used daily, or every other day, taking care that no irritation is produced. A perseverance in this proceeding effectually stimulates the absorption of the effused lymph.

ACID, HYDRIODIC.—A powerful gland stimulant and absorbent, used whenever iodine is indicated.

Dose.—From five to thirty drops.

ACIDUM HYDROCHLORICUM.—This acid is a valuable therapeutic agent, both locally and internally.

As a topical application in cancrum oris, obstinate or phagedenic ulcerations and the like, it has probably no equal.

Internally, the acid should be diluted to a specific gravity of

about 1.045. The dose of this is from ten drops to half a teaspoonful, added to a large proportion of water, highly diluted. Its physiological effects are prompt, though positive in increasing the red corpuscles of the blood, stimulating the centres of life, arousing the fountain of vitality, preventing a metamorphosis or destruction of cell-life, so that it is a remedy specially indicated. Nature demands it in such diseases as typhus fever, diphtheria, malignant scarlet fever, wherever there is a blood poison operating on the human tissue.

It is a powerful alterative, an efficient diaphoretic and diuretic, and stimulates the granular structure of the liver.

A very favorite formula is the following:

R_y.—Hydrochloric acid, dilute,

Saturated solution of chlorate of potassa, āā ʒi.—*Mix.*

Dose.—Two drops in a little water every hour.

We regard this formula, in all diseases of the blood, as one of our most efficient. Try it. It seldom fails in cancer, and that terrible disease, diphtheria, where the blood discs are so depressingly affected. In that combination, we have chlorine and oxygen playing an important part.

Nitro-hydrochloric acid is prepared by combining one part of nitric acid with two parts of hydrochloric acid, a very valuable combination in dyspepsia; it increases the fibrine in the blood, which makes it an active agent in aneurism.

The *white liquid physic* is principally made up of this agent, as follows:

R_y.—Sulphate soda, lb. ss;

Water, Oiss;

Nitro-muriatic acid, ʒii;

Alum, pulv., ʒi.—*Mix.*

Dose.—A tablespoonful three times daily. It allays vomiting, hepatic disease, oxaluria, diarrhœa.

Perhaps the action of nitro-muriatic acid is best exhibited as a stimulant to the granular structure of the liver; hence, in cirrhosis, and all disorders of the organ, the action of the drug is unexcelled.

A remedy has been long and ardently desired, by all progressive physicians, calculated to meet the terrible indications and fatality of diphtheria. Some have imagined that we have had this in bromine, bichromate of potassa, chlorine, iron, quinine; but, the mortality of the disease clearly indicates the great necessity for some more positive or special agent, peculiarly adapted to overcome this blood poison. Chemistry tells us that chloric acid is a powerful oxydizing and general stimulating agent, and quinia a nerve tonic. Combine these remedies, and we have a medicine of great power—the chlorate of quinia. Each atom of the chlorate will provide five available atoms of oxygen from the

chloric acid, while, in the perchloric acid, each atom contains seven of oxygen. Its efficiency and utility have been tested in bad cases of diphtheria.

In cancer we would cordially endorse the free use of hydrochloric acid, either alone or combined. The principle upon which it acts is, that it increases the assimilation, and so indirectly increases the nervous energy as to effect more perfectly the vital changes in the chemical constitution of the molecules of the blood, which are necessary to prevent the occurrence of the disease.

ACID, HYDROCYANIC.—This acid, in the dilute form, is invaluable. It is a direct brain stimulant, useful when the nervous system is depressed, hence it aids nature in the cure of nervous dyspepsia, sympathetic vomiting, chorea, skin affections. Its effect on the laryngeal nerves, pneumogastric, vagus, is a direct sedative, hence, in all forms of cough (laryngeal) it may be used with good results. It is also one of the ingredients of gastric juice.

ACID, LACTIC.—Various compounds of this acid; one of great value—the acid itself not being used in medicine—is lactate of iron and of quinine. Its principal use seems to be to increase the faculty of digestion.

ACID, NITRIC.—This acid supplies the blood with nitrogen, which neutralizes the excess of fibrin that is present in the blood in some diseases.

As a lotion to ulcers, and a local application in skin affections, it is invaluable. We have no better caustic in all forms of venereal sores than this; its early application seems to strike at the origin of the disease.

ACID, NITRO-HYDROCHLORIC—Is prepared by combining one part of nitric acid with two parts of hydrochloric acid. A very valuable combination in dyspepsia. It increases the fibrine in the blood, which makes it an active agent in aneurism.

It allays vomiting, hepatic disease, oxaluria, diarrhœa.

Perhaps the action of nitro-muriatic acid is best exhibited as a stimulant to the granular structure of the liver; hence, in cirrhosis and all disorders of the organ, the action of the drug is unexcelled.

ACID, OXALIC—Has a remarkable affinity for latent cancerous infiltrations. In the inspissated extract of sheep sorrel this acid is in excess, and the remedy owes its therapeutic power to the acid. A plaster of this agent, applied to a cancerous infiltration, will remove it in ten days. A saturated solution, aqueous, is an excellent external agent in acne, scald-head, and other cutaneous diseases. This same solution, neutralized by caustic potassa, forms an excellent application to discuss indolent tumors.

ACIDUM PHOSPHORICUM DILUTUM.—The use of this remedy in all typhoid conditions of the system, where the vital or nervous forces are extremely depressed—where great physical and mental prostration exists—is specially indicated, its action being salutary, toning, vitalizing and positive.

Phosphorus is a constituent of the human body, having been found in all its parts, most abundant in the brain and its ramifications, and also in the bones. Its range of action is great, being indicated in all conditions of the system where the vital powers are depressed. The human system has a most remarkable power in assimilating this powerful tonic. Indeed, all forms of this remedy would seem to be congenial to the absorbents, as it has been clearly demonstrated that it is immediately taken up.

We may as well remark here, that an excellent way of administering phosphorus is in the form of pill. Take of phosphorus, six grains; suet, 600 grains; melt the fat in a stoppered bottle, capable of holding two or three times the quantity indicated, and when liquid put in the phosphorus, and agitate the mixture until it becomes solid. Roll into three-grain pills and cover with gelatine. Each pill contains one-thirty-third of a grain of phosphorus.

ACID, SULPHURIC.—Aromatic sulphuric acid tends to promote activity of the digestive organs, acts as a bracing astringent tonic to the mucous, serous and muscular coats; hence, it is useful in morbid acidity, debility and relaxation of the stomach and bowels. Its action on the skin as a stimulant is very decided, so much so, that when that gland pours out its secretion in hectic and exhausting diseases, this remedy will at once check it.

R.—Aromatic sulphur. acid, ℥i;
Sulph. quinine, grs. xx.—*Mix.*

Sig.—Fifteen to twenty drops in water every three hours.

An ointment of this acid is very useful in skin diseases. It makes an efficient and very cheap alterative, as follows:

R.—Epsom salts, 2 lbs.;
Glauber salts, 1 lb.;
Rochelle salts, $\frac{1}{2}$ lb.;
Nitrate potassa, ℥ss;
Sulphuric acid, ℥ii;
Water, boiling, 2 galls.—*Mix.*

Dose.—A tablespoonful three times daily.

ACONITE.—Leaves and roots are both of undoubted use. The former is esteemed of most utility. To the taste it is bitter, burning, acrid and benumbing, and the medical properties are a pure brain sedative, sudorific, deobstruent and narcotic. The active principle is the aconitin. It is usually made by treating an alcoholic extract with dilute sulphuric acid; precipitating by a solution

of ammonia; dissolving the precipitate in dilute sulphuric acid; treating with animal charcoal; again precipitating with a solution of ammonia; washing with water and drying. It requires nearly 150 parts of cold and 50 of boiling water to dissolve it, but is readily dissolved by alcohol and ether. It neutralizes the acids, and forms with them uncrystallizable salts. It is an unsafe and uncertain remedy for internal administration, but well adapted for external application, and also hypodermic use. Incorporated in simple cerate, in variable proportions, it is of great utility in neuralgia; in solution, for endermic medication.

The preparations of most positive therapeutic power are the concentrated aconitin and tincture.

The *dose* of the aconitin is one-twentieth grain in trituration, as indicated; of the tincture, five drops diluted in water.

The operation of this remedy in all febrile and inflammatory affections upon the heart and arteries is unmistakable, allaying inordinate action, toning and imparting nerve force, at the same time exercising the most powerful sedative effect.

Its physiological action is manifested principally in the ganglionic system, and exercises here its special influence upon the nerves of the capillary vessels. It acts on the motor nerves as a potent paralyzing agent; on the sensory nerves it excites their vital activity, but depresses their sensibility; on the central nerve fibres, or upon the mind or disposition, it produces a vivifying, elevating effect, increasing vital force.

It is indicated in all febrile and inflammatory affections as being an agent capable of aiding nature in her salutary efforts.

It is peculiarly useful in all febrile conditions existing in debilitated or cachectic systems; valuable in children, and being different from all other arterial sedatives, while it exercises sedation it exerts its tonicity.

It is well known that our arterial sedatives act usually in two ways: first, by acting on the vaso-motor nerves they act on the bloodvessels; and second, they act on the cerebro-spinal nerves, then directly upon the inflamed part.

Aconite does both. It is a specific remedy in inflammatory or febrile affections, where these conditions exhibit depressed vital power.

On the superficial sensory nerves aconite acts specially and tends to extinguish pain; combined with chloroform and tincture belladonna, in equal proportions, it is the best local anæsthetic we possess in neuralgic and other inflammatory conditions.

In all cases it has a powerful action on the brain and nerves generally, and, in poisonous doses, it causes an arrest of the vital functions of the brain, with a consequent loss of power in the heart.

Aconite may be given with the most decided results in all inflammatory affections. It is positively sedative, anodyne, soporific and narcotic.

Of all the different preparations of aconite the tincture of the leaves is most to be depended on.

An excellent mode of preparing the tincture of the leaves of aconite is as follows:

R_y.—Fl. ext. aconite leaves, ℥ii;
Dilute alcohol, ℥xiv.—*Mix.*

Dose.—Ten to thirty drops.

The preparations, as usually met with, are not to be relied upon. A very good test of the probable strength of the tincture may be formed by the taste, by the tingling sensation it produces upon the lips, and the degree and duration of the numbness which follows.

The improvement following the administration of aconite in febrile or inflammatory disease is always speedy; alleviation of pain, abatement of redness, tension and tenderness in a short time.

Aconite cures in a shorter period than any other remedy; with it there is no liability to extension of the disease, no depressing results, but when given in average doses, it is a pure and direct sedative to the nervous system. It is best given largely diluted with water.

A good mode of preparing the tincture of the root is as follows:

R_y.—Fl. ext. aconite root, ℥vi;
Alcohol, ℥x.—*Mix.*

Dose.—Five to ten drops.

An excellent liniment for neuralgia may be made as follows:

R_y.—Fl. ext. aconite root, ℥iv;
Glycerine, ℥ii.—*Mix.*

To be applied carefully, and never used over an abraded surface.

A good ointment may be made by rubbing up one drachm of the solid extract in the same amount of lard. The best plaster is made from the succus or expressed juice, mixed with an equal quantity of lead plaster. The solid extract can be used in the same way.

ACORIN.—This concentrated remedy has been quite extensively used. It is prepared from the root of the acorus calamus, or sweet flag. Its properties are those of a powerful diffusible stimulant; it tends to relieve capillary obstructions from colds; very valuable in colic flatulency. It is a sialogogue, acting freely on the salivary glands. As a carminative, its action is unexcelled.

ACTÆ RACEMOSA.—Cimicifuga racemosa, or black snake-root, or cohosh, grows abundantly throughout the United States and Canadas. The root, in the form of a simple decoction, is astringent.

gent, diaphoretic; useful as a gargle to the throat, and as a wash, it rapidly and effectually cures itch. Internally, the *cimicifuga* is an alterative of great power, an antispasmodic, stimulant, diaphoretic, diuretic, expectorant, resolvent, nervine, emmenagogue, parturient, tonic, and a potent, peculiar narcotic; and it possesses all these therapeutic properties on account of its positive action on the brain and spinal cord, relieving hyperæmia, congestion or irritation of these parts. It affects, by preference, the parts supplied by nerves from the spine, so that the throat, chest, abdomen, uterus, &c., are specially under its influence, acting magically in inflammatory conditions.

For example, it is well known that whooping-cough depends upon some specific poison, having an especial affinity to the cervical portion of the cord, causing irritation and congestion there. Hence the value of *cimicifuga*, belladonna, bromide of potassa and ammonia, and like remedies in the disease, which, if properly administered, abort it. Hence its value in asthma and croup; hence its salutary curative action in chorea, epilepsy, convulsions, neuralgia and chlorosis, abnormal conditions which depend upon spinal hyperæmia; hence its value in hysteria, amenorrhœa, dysmenorrhœa, when connected with inherent or reflex irritation of the cord.

Cimicifuga exerts, then, a controlling influence over all parts supplied with spinal nerves, more especially the uterine, acting on that organ more promptly and positively than any other drug. In all congested or inflammatory conditions of the uterus it is a remedy of great merit. Rheumatism unquestionably depends upon cerebral depression; this condition of nervous depression gives us the starting point for the generation of acidity.

The black cohosh has a decided effect upon the brain in raising the tone of vitality. Its action on the spinal nerves is different from ergot, although it has marked and decided contractile power, but never violent. Its effects are mild but efficient; the safety of the child is not endangered as by ergot. It proves abortive in all temperaments.

The physiological effects of the remedy are, its operating largely on the brain and nerve centres; it causes vertigo, dimness of vision, dull aching pain in the head, aching in the joints; it disorders the sensorium, increases secretion and absorption; it has a decided and well-marked influence over the capillary system of vessels, hence its value in small-pox and skin diseases, and in bronchial irritation; it increases the amount of solids in the urine, without increasing the quantity of water; it has the power of lessening arterial action and increasing general energy, so that in morbid heat and dryness of the skin from irritative fever, it abates irritation, produces relaxation and general moisture, so that its action is curative in malarial fever as well as in arthritis. It resembles quinine in some particulars.

ADIANUM PEDATUM.—This in the form of infusion is the most beneficial drink that can possibly be given a patient suffering from febrile and inflammatory affections. It has a very decided action in improving the vigor of the nervous system. It is an excellent vehicle for the administration of aconite and veratrum.

ÆSCULIN.—This concentrated remedy is prepared from the horse chestnut, and is a very valuable addition to our antiperiodics. It acts promptly in all malarial fevers.

℞.—Æsculin, ℥ii;
Gelsemin, grs. iii;
Podophillin, gr. i.—*Mix.*

Make ten charts; one every two hours prior to the chill. In the *interim*, give a teaspoonful of the following mixture:

℞.—Comp. tinct. cinchona, ℥iii;
Tinct. capsicum, ℥i;
Chloride sodium, ℥ss.—*Mix.*

The æsculin has a positive action in promoting a greater grade of vitality.

The oil of the horse chestnut is a good external application in hemorrhoids.

AGARIC.—The concentrated tincture of this drug, in six-drop doses, every four hours, is extremely valuable in aiding the vital forces in overcoming malarial fever. Efficacious as a decided nerve tonic, so much so that in consumption it will bring about a condition of recuperation so good, that night sweats and other exhausting symptoms will rapidly disappear.

Dose.—For nocturnal perspiration, twelve to twenty drops.

AGRIMONY.—This plant is a reliable tonic, good alterative, an invaluable astringent. Its action is chiefly upon the urinary organs. In all diseases of this part of the organism success attends its free exhibition, gonorrhœa, gleet, leucorrhœa, chronic mucous disease. It has no equal in the weak, relaxed condition incidental to Bright's disease; it checks the albuminous excretion better than queen of the meadow, myricin or buchu. The fluid extract or decoction are eligible forms for administration.

ALETRIN.—The true therapeutic action of unicorn root is an invaluable tonic to the uterus and its appendages; it imparts tone and normal energy to that organ. With great advantage it may be combined with asclepias, bethroot, senecin, macrotin, betin, as the indications may demand. It may also be employed as a general tonic in dyspepsia and colic.

ALISMA PLANTAGO.—A valuable alterative, diuretic, antiseptic, with a special stimulating action on the organs of generation; hence, it is very valuable in all conditions of sexual exhaustion. A very valuable mode of administration is as follows:

R̄.—Fl. ext. plantain leaves, ℥ii;
Aqua, ℥viii.—*Mix.*

Give freely.

ALLIUM SATIVUM AND COPA.—Both of these bulbs contain a peculiar volatile oil, which is stimulant, diuretic, expectorant and rubefacient; invaluable properties possessed by no other drug. In infantile pneumonia and catarrh they give prompt relief. A saturated tincture is extremely serviceable in dropsy. Indeed, there is no form in which they are administered but what they are valuable.

ALLSPICE.—A warm aromatic and stimulant, principally used to flavor unpleasant medicines. We have found it valuable in diarrhœa, as follows:

R̄.—Fl. ext. allspice, ℥i;
Water, Oi;
Carbonate magnesia, ℥iiss.—*Mix.*

Rub the fluid extract with the magnesia, then add the water. Teaspoonful every half hour.

As a local application, in irritation of the stomach, we find it valuable, as follows:

R̄.—Allspice, pulv.,
Cloves, pulv.,
Cinnamon, pulv.,
Capsicum, pulv., āā q. s.—*Mix.*

Add glycerine to make a paste, spread into a thin plaster and apply.

ALNUIN.—This remedy is prepared from the tag alder. It is an important agent; fills a place not occupied by any other drug. It is an important agent, being strictly a pure alterative; very useful in scrofula, cancer, syphilis, skin diseases, and whenever an alterative effect is wanted. Its alterative properties are solely dependent upon its specific action upon the nervous system—exercising that effect by sedation—by holding or stimulating an equilibrium in the system.

It controls hemorrhage by depressing the circulation through the nervous system. The beautiful soothing influence of the action of alnuin on the nerve centres, is the source of its genial alterative effect on the kidneys, liver, spleen and skin. It is not a diuretic, but a tonic to the kidneys; it is not a cholagogue, but acts by nervous stimulus; it acts efficiently in skin diseases,

through the same influence; consequently, it is not a cathartic, but in large doses it is an emetic.

Dose.—Two grains well triturated, keeping the system well under its influence, and repeating every two or three hours.

ALOEES.—The inspissated juice of the *aloe socotrina* is an active cathartic and emmenagogue. In its primary action it is a reflex abortifacient; its secondary action is a sedative.

Aloes, in large or medium doses, is a powerful stimulant to the lower bowel, causing rectal engorgement. The middle hemorrhoidal artery and the uterine and vaginal arteries arise from the anterior trunk of the internal iliac. This gives them a common blood supply, so that prolonged hyperæmia of the rectum necessarily involves the uterus. The extreme irritation resulting from its prolonged use excites reflex motor action in adjacent organs. Nerve connection is important, nay, necessary, to the production of reflex motor action. The hemorrhoidal plexus of nerves has a ganglionic connection with the uterine nerves. The motor stimulus from the rectum can be reflected off from the ganglia of the inferior hypogastric and transferred to the uterine plexus without the intervention of the reflex power from the spinal cord. The spinal cord being a reflex centre, all within the sphere of its influence become affected—ovaries, womb, all—and the drug stands as a powerful emmenagogue.

In small doses, frequently repeated, it is a stimulant to the entire system, as is indicated by the heat of skin and accelerated pulse. In still larger doses, aloetic purgation, with heat and tenderness along the course of the colon. If used for the purpose of uterine stimulation, it should be combined as follows:

℞.—Aloes soc.,
 Macrotin,
 Ext. sabina,
 Ergotine, āā.—*Mix.*

Make three grain pills. Used according to the indications.

ALPINIA CARDAMOMUM.—The seeds of this shrub are a grateful pungent aromatic, and are a very agreeable addition to such formulæ as the following:

℞.—Bal. copaiba, ʒi;
 Mucil. acacia, ʒiiss;
 Tinct. cubebs, ʒi;
 Spts. nit. dulc., ʒiii;
 Tinct. iodine,
 Tinct. opii, āā ʒi;
 C. tinct. cardamon., ʒi.—*Mix.*

Dose.—A teaspoonful three times daily. Useful in gonorrhœa.

ALUMEN.—Small doses, astringent; large doses, cathartic; an astringent chiefly to mucous membranes. In a relaxed condition of the faucial, tracheal and laryngeal mucous membrane, no remedy excels it, either in spray or ordinary solution. In chronic bronchitis of the aged it acts well. We have also derived great benefit from it in that relaxed condition of the ejaculatory ducts in bad cases of spermatorrhœa, where the semen oozes away without any excitement. Also, in an analogous condition in females; relaxation, the result of self-abuse.

In *colica pictonum* it may be given in doses of from thirty to sixty grains, every three hours; it mitigates and permanently overcomes the pathological condition, which is an irritation with consequent contraction of the muscular coat of the small intestine. In effusion of lymph upon the cornea, or other structures of the eye, in chronic ophthalmia, we have derived most salutary results from alum rubbed up in albumen, then carefully strained and applied liberally to the eye.

AMARANTH.—A decoction of the leaves of this plant is a powerful astringent—it acts best upon the mucous coats. Very valuable in menorrhagia.

AMBROSINE.—This is a beautiful alkaloid; as found in the shops, it is in brilliant prismatic crystals, perfectly tasteless, inodorous, and can be retained on the most sensitive stomach.

Its properties are valuable, being tonic, diuretic and alterative; it seems to act more upon the serous tissue, hence valuable in dropsy.

AMMONIA.—A valuable diffusible stimulant, and at the same time an arrester of metamorphoses of tissue, so much so, that when given by ignorant Allopaths in scarlet fever, it retains the urea in the kidneys, the carbon in the liver, and, as a result, the child becomes dropsical and dies.

We have found the following very good in nasal catarrh:

℞.—Alcohol,
Aqua ammonia,
Ether, āā.—*Mix.*

Inhale for a few minutes every three hours.

We have found the muriate of ammonia a valuable alterative—good in bronchial affections, as follows:

℞.—Muriate ammonia, ℥viii;
Chlorate potass., ℥xvi;
Alum, ℥ii;
Capsicum, ℥i;
Blood-root, ℥i;
Gum arabic, ℥vi;
Sugar, lbs. ii;
Aqua, 2 quarts.—*Mix.*

Dose.—A teaspoonful, as indicated.

As a local discutient, or solvent to lymph:

R_y.—Saturated solution muriate ammonia, Oi;
Nitrate potass., ℥iii;
Chloride sodium, ℥ii.—*Mix.*

Saturate a compress and apply to the affected part; or

R_y.—Stramonium ointment, ℥i;
Iodide potass.,
Muriate ammonia, āā ℥ii.—*Mix.*

Or use ointment of phytolacca instead.

AMMONIACINE.—This is the proximate medicinal principal of the gum ammoniac, divested of all extraneous or non-medicinal substances. Its action, when administered, very much resembles the cypripedin, but not so efficient. In two or three-grain doses, well triturated in sugar, and repeated every two or three hours, it is stimulant, anti-spasmodic and expectorant.

Its therapeutic action is limited to its tonic stimulating effect on the brain and spinal cord, with its peculiar soothing, bracing effect on all mucous surfaces. Hence, it is good in dry bronchial irritation, leucorrhœa, &c.

Locally, it is a valuable discutient to all indurated swellings and glandular enlargements.

AMPELOPSIN.—This is one of our most valuable alteratives; but, besides these properties, it is a mild diuretic and diaphoretic—stimulating, but toning to the emunctories generally.

Like all the preparations made from the ivy, it has an affinity to the nervous system, creating an increased stimulus at the nerve centres, so that under its use we have increased action in the trunks and periphery. This peculiar therapeutic power of the remedy renders it an alterative of wide range. When it is combined with irisin, phytolaccin and leptandrin, it acts well in the bilo-phlegmatic form of scrofula; combined with rumin, very efficient in skin, throat and bronchial affections; combined with belladonna or macrotin, or bromide of ammonium, almost specific in hooping-cough, asthma, rheumatism. It is invaluable in venereal diseases, and, indeed, under every condition where an alterative is demanded.

Dose.—One to three grains.

AMYGDALIN.—This is the isolated medicinal properties of the peach tree—of the leaves and kernels. The medicinal property this agent possesses is entirely due to the hydrocyanic acid it contains; so that its therapeutic action is identical with that acid, relieving spinal congestion. Hence, it is valuable in all diseases dependent on or excited by effusion, irritation, hyperæmia of the

cord, as tetanus, pertussis, asthma, hysteria, chorea, epilepsy, dyspepsia, kidney and skin diseases, urinary impediments. By its physiological action it is a potent sedative and depressant.

The *dose* of the amygdalin is one grain, well triturated and cautiously increased.

In smaller doses it relieves splenic congestion, and is, perhaps, a more perfect antidote to malarial poisoning, and its destructive effects on the blood corpuscles, than any other remedy.

It acts well, kindly and efficiently, whenever and wherever there is peripheral irritation depending on a hyperæmic nerve centre.

ANACYCLINE.—The proximate principle has been extracted in the form of an oleo resin or oil, chiefly from the root, less abundantly from the stem and leaves of the Spanish chamomile.

Its therapeutic action is analogous to belladonna on the portio dura, relieving congestion of that nerve almost instantaneously. In paralysis of the tongue, relaxation of the uvula, it acts promptly—one drop in trituration at the dose. The ethereal extract is an efficient form.

Some practitioners think well of this drug in intermittent fever—regard it as superior to quinine. Unquestionably, it has a renovating, vitalizing action upon the brain, promoting a degree of nerve life never realized by the use of any other drug. It may, therefore, be given in all forms of nervous exhaustion; chorea, epilepsy, paralysis, softening of brain, &c.

It is much superior to arnica in ecchymosis; rubbed up into an ointment and applied, it procures absorption of the blood, causes contraction of the bloodvessels.

ANEMONIN.—The concentrated principle of the pulsatilla, but not near so efficient as the tincture of pulsatilla. It is an acro-narcotic, and has a wide range of action. This active principle is very acrid and irritating, even in one-eighth of a grain doses. It has been extensively used by the Indians as a specific for snake bites, given in doses sufficient to produce marked exhilaration or intoxication. Its range of action would seem to be, to cause a suspension or an arrest of the flow of neurine, producing, as it were, a paralysis of the brain and its appendages, and in this way acts as an equalizer and restorer, so that it is administered when the patient becomes the recipient of some septic poison; its influence is such as to paralyze the nerve centres, consequently secretion is arrested. Its action on the brain and cord is very much like digitalis on the heart.

It is, consequently, a remedy of considerable value, more especially where there is any want of equilibrium in certain functions, as the uterine; gives prompt relief in chlorosis, whooping-cough, asthma; often cures amaurosis and other nervous affections

of the eye and ear, and its peculiar action renders it valuable in skin and other diseases. As an emmenagogue it is of positive value.

Dose.—From $\frac{1}{16}$ to $\frac{1}{8}$ of a grain; tincture, from five to twenty drops.

ANGELICA ATROPURPUREA.—Used as an aromatic, stimulant, diaphoretic, expectorant, diuretic, emmenagogue. Can be used in all affections of the urinary organs with good success.

ANISEED.—A decided aromatic and carminative. Its special action seems to be to relieve irritation of the muscular coat of the intestines.

Dose.—Ten to forty drops in a warm tea.

ANTENNARIA.—The fluid extract is very beneficial in all relaxed conditions of the kidneys, bladder, prostate. In relaxation of the mouths of the ejaculatory ducts its action is prompt.

ANTHEMIN.—A pure alkaloid has been obtained in all nervous diseases, nervous irritation, &c. The therapeutic action of the anthemini is that of a pure nerve sedative and nerve tonic. Hence, it is indicated in nervous dyspepsia, nervous cough, in phthisis and asthma—that form of dysmenorrhœa that attends spinal or nervous irritation. In all centric or eccentric nervous disturbances, anthemini is specific, if the patient is of a nervous temperament. Physicians cannot realize the intrinsic virtues of this remedy.

Dose.—One grain three times daily.

From extensive experience we value this highly.

A saturated tincture of chamomilla, in doses of from five to thirty drops, is indicated in all nervous affections, but especially where there is irritation of the stomach, liver and bowels, of a nervous character, such as in reflex irritation, teething, worms, &c. Its decided action upon the nervous system renders it invaluable in all neuralgic conditions, especially when attended with muscular contraction.

APIOL.—This is the concentrated principle of the parsley. It is one of the most valuable remedies we possess as an emmenagogue, being most reliable in amenorrhœa, resulting from an atonic condition of the uterus and its appendages. Its action seems to be to cause an increased nerve stimulant, then a true hyperæmia or congestion, then increased tone, vigor, and a normal condition of the organs contained in the pelvis. It acts like betin, but is more diuretic. Its use requires to be continued for some time. The

average dose is fifteen grains three times daily. In epilepsy, resulting from suppression, from pure atony of the uterine organs, it is really of intrinsic worth.

It has none of the drastic properties of cotton root, nor none of the peculiar nervous symptoms of macrotin. It acts purely and simply by creating and holding an increase of nervous fluid with its attendant sequel, a determination of blood to the part.

APOCYNIN.—This concentrated agent is taken from the root of dogbane. Its medical properties are powerfully emetic, cathartic and diuretic. It seems to have a special affinity to the liver, as a stimulant acting on that organ and stomach chiefly through the brain.

As an alterative in scrofula, syphilis, rheumatism, it has no superior. To the taste it is bitter and sickening.

ARALIACEIN.—This principle has been extracted from the different varieties of the elder, being abundant in the dwarf elder. Its properties are strictly alterative, being indicated as a feeble substitute for stillingia.

Its primary action seems to be chiefly upon the glandular structures, causing increased action of the salivary and other glands; its secondary action is to relieve spinal congestion, and control spasmodic action in that way; hence, it is a remedy of great value, in small doses, highly triturated, in cholera.

By the Eclectic profession in Philadelphia, this remedy, in the treatment of Asiatic cholera, in the epidemic of 1866, was highly esteemed; and the results of their grand success in its treatment are attributed to the virtues of this active, invaluable drug.

It relieves neuralgic pain pretty much in the same way as belladonna, so that it is esteemed by some members of the dental profession as valuable in giving immediate relief in odontalgia; also, like the atropia, it relieves the difficult breathing of asthma; excellent in inflammatory sore throat. We have found a decoction of elder blossoms to be specific in erysipelas; a poultice of them, locally, speedily relieves the burning, tingling pain. Elder blossoms stewed in lard make an active discutient ointment.

ARISTOLOCHIN.—This is the proximate principle of the Virginia snakeroot, and one of the most valuable remedies in the *Materia Medica*. It has been long known to our profession under the form of the comp. tinct. of serpentaria or sudorific drops, and been largely and extensively used with most excellent results.

Its therapeutic action is a powerful nerve tonic and stimulant; hence it is very valuable in all depressed or exhausted conditions of the nervous system, as in typhoid, puerperal, typhus and other

fevers, wherever we have a poison depressing the powers of life. Its powers are not inferior to quinine, acting like that agent as a diaphoretic, by its primary action on the nerves, hence its great value in small-pox, scarlet fever, &c.

Aristolochin may be given with advantage in all exhausted conditions, and, in ague, in the lymphatic temperament, more valuable than quinine. It acts in this disease on the catalytic principle, though not deserving the name antiperiodic.

It is easier to arrest malarial fever with the serpentaria, in that class of patients, than with any other remedy. Its use may be persevered with during the paroxysm, when great febrile reaction contra-indicates the use of other remedies.

An infusion of the serpentaria is a specific in sore throat, alternated with belladonna.

In all nervous affections, or in all morbid conditions depending upon an abnormal condition of the nervous system, there are few remedies that can be compared with this.

In addition to its wide range of action in nervous diseases, we have nearly twenty-five years used it with excellent results in suppressed and obstructed menstruation, from violent mental emotion or nervous disease. Indeed, after the use of the preliminary remedies in chlorosis, there is no remedy that can be more appropriately and successfully given than serpentaria.

Remedies have a curative influence upon certain tissues and organs; their action is both primary and secondary, according as the dose is large or small.

Now, the primary action of the serpentaria is a nerve stimulant of a peculiar character, different from quinine, nux vom., phosphorus, valerian, being powerfully tonic and stimulant; the secondary action is a nervine, tonic, mild diaphoretic, and is a remedy that covers a large sphere of useful medication in the treatment of diseases of women and children.

Dose—Of the tincture, from a half to a teaspoonful; of the concentrated principle, one grain.

ARNICA MONTANA—(*The Leopard's Bane*.)—This plant is a native of some of the mountainous districts of Europe, Siberia in Asia, and of this continent west of the Mississippi. The flowers, leaves and root are employed, though the flowers are preferred by some.

Properties.—The whole plant, when fresh, has a strong, disagreeable odor; it imparts an acrid, bitterish and durable taste. Water extracts its virtues but very sparingly; alcohol freely.

The flowers, on analysis, yield gallic acid, gum, albumen, yellow coloring matter, an odorous resin and a bitter principle, considered as identical with "cylisin." This substance is yellow, of a bitter and nauseous taste, deliquescent, readily soluble in water and

diluted alcohol; insoluble in ether. In five-grain doses it is a powerful emetic. The flowers also contain a proportion of a blue volatile oil.

An organic alkaloid has been separated from the flowers, named arnicina. It is solid, slightly bitter, but not acrid; of a castor-like odor, very slightly soluble in water, but freely so in alcohol and ether.

Medical Properties and Uses.—Leopard's bane is a stimulant, directed with peculiar energy to the brain and nervous system, as is manifested by the headache, spasmodic contraction of the limbs, and difficulty of respiration which results from its use. It also acts as an irritant to the stomach and bowels, often producing an emetic and cathartic effect; it is supposed by some to be diuretic, diaphoretic and emmenagogue in its actions. It is recommended in amaurosis, paralysis, and other nervous diseases. It is of paramount value in almost any disordered condition of the system, resulting from falls, blows, wounds and bruises. It is gratifying to know that, in this remedy, we have an agent of singular efficacy, applicable in all cases, from the most trifling to the most severe. I have so employed it during many years, and experience demonstrates it to be unapproached in power by any other remedy, or any combination of remedies whatever. It is generally supposed that we are indebted to the Homœopaths for the introduction of the arnica plant; but this is not so, as it is an old and popular remedy in cases of bruises, of wounds, to allay the smarting after operations, of fractures, dislocations, and similar accidents and injuries. In such cases it supercedes the use of fomentations, cooling lotions, and of leeching.

Internal Use.—Ailments arising from a shock, fall, contusion, strains by lifting, sprains, luxations, wounds, bleeding from the nose arising from an injury, paralysis of the right side, with involuntary evacuations, as in apoplexy; small boils and pimples, surrounded with an inflamed right border. In rheumatic affections, as in false pleurisy, or stitch in the side; effects of bodily fatigue from walking, rowing, &c.

External Use.—In the forms of lotion, one part of the tincture to about twenty of water. Excellent rubbed up in cerate, or made into a plaster for bunions, chilblains, corns, chapped hands or lips, black eyes, bruises, burns, sprains or strains, cuts or wounds, bites or stings of insects, &c., or in rheumatism.

Where the feet are swollen and painful from undue exercise, great relief is had by bathing them with about a quart of cold water, to which an ounce of the tincture has been added.

In its general use, care must be taken not to exceed taking more than the proper dose, for it occasionally irritates the skin, producing an erysipelas-like appearance. Those possessing a predisposition to that affection would require to be especially careful in its

use. It is invaluable in ecchymosis, consequent on a blow, or some external injury.

The physiological action of arnica is that of an anæsthetic to the brain and nervous system; it differs, essentially, from belladonna and aconite, although its action resembles those agents. It is undoubtedly a narcotic, stimulant, emmenagogue, diuretic, and possesses these properties by its peculiar anæsthetic effect. It is valuable in all injuries, internally and externally, exercising its effect upon the nerves of the part. It is in this way it relieves ecchymosis, contusions, mechanical injuries, effusions which often cause paralysis.

In nervous congestions of patients of a sanguine temperament it displays the most positive action. In paralysis, otitis, neuralgia, neuremia, &c., with extreme sensitiveness, tremor, it is specially indicated. As a tonic, in chronic rheumatism, dropsy, and in deficient nervous sensibility, and almost every disease where there is debility, torpor, or impairment of function.

Dose.—From five to twenty drops of the tincture, repeated every three hours.

As a lotion for external use in the treatment of cuts, sprains, wounds, &c., add one ounce to a pint of water.

Plaster of Arnica Flowers.

Solid ext. of arnica flowers, one and a half troy ounces.

Resin plaster, three troy ounces.

Mix in water bath.

Glycerole of Arnica Flowers.

Fl. ext. arnica flowers, four fl. ounces.

Glycerine, sixteen fl. ounces.

Heat in water bath till alcohol is expelled.

For external use only.

Ointment of Arnica Flowers.

Solid ext. arnica flowers, four drachms.

Simple cerate, two troy ounces.

For external use.

ARNOTTO.—The medical properties of this agent are, carminative, slightly astringent, stimulant. A tincture of the seeds is a good method for administration; it is said to be a good remedy for colic.

ARTEMISIA ABSINTHIUM.—Wormwood grows in all parts of the world. It is a most valuable plant, being an anthelmintic, tonic and narcotic. It increases the vital tonicity of the brain; it acts as a bracing tonic to the mucous and muscular coat of the bladder,

intestines, stomach; may be used with advantage in malarial fever, jaundice, worms; it promotes the appetite, increases assimilation. As a local application in poultice, it raises the standard of vitality of any part to which it is applied. Santonine is a peculiar white crystallizable principle obtained from this plant; very efficacious as a vermifuge; also, in diseases of the brain and bladder. If long continued, it may become an irritant to the brain. The drug, when exposed to air and light, deteriorates, becomes yellow—has the same effect upon the serum of the blood, urine, and carried to the aqueous humor of the eye, tinges that in the same manner.

Its action is tonic, promoting assimilation.

ASPARAGIN.—This plant is indigenous to Europe, and is largely cultivated there and in America as an article of food, the young shoots being the parts of the plant used.

Properties and Uses.—As a remedy, both the shoots and root are employed, from which a tincture or syrup is prepared; there is also an active principle of asparagin obtained from the juice of the plant.

It acts as a sedative, reduces the heart's action, and has been of service in cases of hypertrophy, and other diseases of that organ, attended with excessive action. I have prescribed it in cases of headache, where there was a sense of fullness of the eyes and general congestion experienced, with satisfactory results.

Its leading virtue, however, is as a diuretic; it imparts its characteristic odor to the urine, and causes copious diuresis.

Asparagin is obtained from the plant by the process of dialysis, and is particularly serviceable in hypertrophy of the heart. I have found the following formula of intrinsic value:

R_y.—Asparagin, grs. x;
 Bromide potass., ℥ii;
 Sacch. alb., ℥iii.—*Mix.*

Make ten powders, one thrice daily. In dropsy, dependent on disease of the heart, it is one of our best remedies, given in doses of one grain three times a day.

In the lithic acid diathesis and chronic gout it is specially indicated. Its primary action, in doses of from one to five grains, is powerful in quieting the function of the brain and spinal cord, and nervous irritation generally; its secondary action is upon the blood, as a depurant; stimulating the skin, kidneys and serous tissue of the bowels. In this way it becomes a valuable alterative and diuretic.

ASPIDIUM FILIX MAS.—Male fern is an excellent remedy for the expulsion of tape worm. The ethereal tincture of the buds is made by digesting one ounce of the buds in eight ounces of ether.

Dose.—Half a teaspoonful every three hours for two or three days, followed by an active cathartic.

The ethereal oil or extract, from ten to twenty-five drops, as above. *Its effects are directly toxic.*

Between the doses I have found it good practice to allow the patient to drink freely of a strong decoction of pumpkin seeds or kousso.

ATROPIN.—This concentrated principle is derived from the belladonna, or deadly night shade, the part used being the leaves. There are various formulæ for the preparation of atropin laid down in our dispensatories. The dose varies from one-twelfth to one twenty-fourth of a grain. The extract and tincture are efficient forms; the former, in a quarter to one-eighth of a grain doses; the latter, in from five to thirty-drop doses, well diluted.

Its properties are narcotic, anodyne, antispasmodic, alterative, diuretic and resolvent.

Its physiological properties are, its positive action upon tubercula quadrigemina, in small doses, in relieving congestion; in still larger doses it affects the cerebral lobes and spinal cord in the same manner. This action on the brain is quickly manifested by an anodyne, sedative action on the heart, which renders this remedy a valuable one in all neuralgic disorders, fevers, inflammations.

Belladonna, by its action in relieving brain and spinal hyperæmia, becomes one of our most reliable remedies; hence its value in whooping cough, epilepsy, chorea, asthma, nervous cough, amaurosis depending on plethora, &c.

In the eruptive fevers, no remedy would seem to be of such great power as belladonna, more especially in scarlatina; its specific action on the medulla oblongata, and then on the throat and skin, are well known.

One of the most powerful results of this remedy is to be obtained in inflammation of the brain. Increased arterial action of the hemispherical ganglion exalts the intellect; and if the stimulus is continued the brain becomes oppressed, the muscles of the tongue sluggish, the speech thick, and, latterly, insensibility and coma. And how beautifully and rapidly will belladonna control these symptoms, given with or alternated with aconite.

In all inflammatory conditions of the throat, as quinsy, pharyngitis, laryngitis, diphtheria, this remedy is specific.

In neuralgia and hemicrania belladonna is the proper remedy, especially for the fifth pair and its tributaries, as the frontal, lachrymal and nasal.

In paralysis, depending upon hyperæmia of the spinal cord, belladonna will relieve; it will cause contraction of the vessels of the cord, diminution of the amount of blood in the part, and thus, with proper adjunct treatment, cure.

In incontinence of urine, rigidity of the os uteri, dysmenorrhœa,

retention of urine, &c., and like conditions depending upon a congested condition of the brain, belladonna will cure—cure diseases of the splenic nervous system, or of the abdomen or uterus, in which there is affection of the brain or cord.

The physiological sphere of action is, therefore, quite extensive, relieving turgescence of the brain and cord under all given circumstances. It is the principal remedy in convulsions, apoplexy, &c., when they depend on that cause.

In painful dysmenorrhœa there is no remedy to be compared to belladonna.

For the purpose of preventing the secretion of milk in the female breast there is no remedy like it; it is positive in its action, paralyzing the nervous influence of the nerves of the mammary gland, upon which the secretion of milk depends; and if already secreted, it will discuss it. Try the following formula:

R̄.—Ung. belladonna, ℥i;
Muriate ammonia, ℥iv;
Iodide potass., ℥iii.—*Mix.*

Keep constantly applied, spread on a piece of linen. This will not only disperse but prevent secretion.

For controlling spasm or spasmodic action, as in stricture, it is good; hypodermically, it has been quite extensively used in neuralgia, sciatica, &c., with excellent results; various lotions and liniments of belladonna, in different forms, are in use, all having a most salutary action.

To a scientific mind the question naturally arises, what would our resources be without atropin? It fills a place in our *Materia Medica* which no other remedy can supply.

The concentrated principle of atropin we prefer to the alkaloid for general use; next best is a saturated tincture, or good extract; beginning with small doses and gradually increasing.

Opium, calabar bean, and other remedies which contract the pupil, are, to some extent, counter-poisons to belladonna, and have been used as antidotes to this drug, as well as ammonia and mineral alkalies. The power of atropia in dilating the pupil is remarkable, no doubt due to a paralyzing or driving away the blood from the part; a non-stimulation of the retina.

Tincture of Belladonna Leaves.

Fl. ext. belladonna leaf, two fl. ounces.
Dilute alcohol, fourteen fl. ounces.

Dose.—Fifteen to thirty drops.

Plaster of Belladonna Leaves.

Alc. solid ext. belladonna leaves, one troy ounce.
Resin plaster, two troy ounces.

Unite with aid of water-bath or other low heat.

An excellent anodyne. Not to be applied to abraded surfaces.

Plaster of Belladonna Leaves—Compound.

Alc. solid ext. belladonna leaves, one troy ounce.

Alc. solid ext. conium leaves, one and a half troy ounces.

Powd. iodine, two scruples.

Resin plaster, five troy ounces.

Unite plaster and extracts at low heat, and when nearly cold add iodine.

A useful anodyne and discutient. Not to be applied to abraded surfaces.

Ointment of Belladonna Leaves.

Ointment of belladonna leaves, two drachms.

Simple cerate, one troy ounce.

Unite at low temperature.

An excellent anodyne ointment. Not to be applied to an abraded surface.

AVENS ROOT.—Tonic and powerfully astringent. A much neglected remedy; useful wherever a bitter and astringent are indicated.

Dose.—Of the tincture: thirty to sixty drops every four hours.

BALSAMODENDRON MYRRHA.—This concrete, gummy, resinous exudation is a stimulant, especially to mucous tissues. It is slightly antiseptic, promotes expectoration, excites the activity of the uterus when combined with aloes, betin and other drugs. As a local application to the mouth in aphthæ or otherwise—still more valuable when combined with capsicum, hydrastis or gold-thread.

As a direct and powerful stimulant to a relaxed kidney it has no equal, as follows, in the form of the "golden tincture:"

℞.—Gum myrrh,
 Gum guaiacum,
 Bals. tolu, āā ʒii;
 Bals. copaiba, ʒiv;
 Oil hemlock, ʒiii;
 Oil wintergreen, ʒii;
 Alcohol, 95 per cent., 1 quart.—*Mix.*

Dose.—A teaspoonful every three or four hours.

BAPTISIN.—This medicine is the active principle of baptisia tinctoria, or the wild indigo. Its medical virtues depends chiefly on two principles, viz: resin and neutral, which are two of its leading constituents. Though it manifests a remarkable power over all the organs and tissues of the body, yet we may well consider it as possessing such well marked effects as properly to demand a classification of its various uses.

Properties of baptisin.—Alterative, emetic, laxative, stimulant, emmenagogue, tonic and antiseptic.

In chronic affections of the liver, accompanied with constipation, I have found it to be a most valuable agent, but in such cases its benefit is even augmented when combined with leptandrin.

Ry.—Baptisin, ℥ij;
Leptandrin, ℥iij.—*Mix.*

Form mass with mucilage of gum arabic, and divide into twenty-four pills. Take one every morning and evening. It is indicated in pneumonia, in chronic rheumatism, in ulcerative inflammation of the stomach and bowels, in chronic diarrhœa, dysentery, in scrofula and cutaneous disorders, dyspepsia, with irritation of the stomach, acid eructations. It should not be used during the period of utero-gestation, as it is capable of producing abortion.

Its alterative and antiseptic virtues are well observed in erysipelas. One to two grains, four times a day, and if there be ulcerations or sloughings, cover the parts with dry baptisin, over which, if there be great pain or heat, place the cold water bandage. This is to be repeated thrice daily.

But, perhaps, one of its most wonderful curative actions is evinced as an emmenagogue. I have prescribed it successfully in the treatment of amenorrhœa and defective menstruation; also, in cases of vicarious menstruation, combined with podophyllum. Do not exceed two-grain doses twice or thrice a day. In virulent cases of leucorrhœa I have proved its worth in not a few cases. Use internally and apply locally. For internal use I usually combine with helonin. The following locally:

Ry.—Baptisin, ℥iij;
Boiling water, Oj.—*Mix.*

Inject with a proper syringe thrice daily. Its antiseptic property renders it valuable in ulcerated sore throat and mouth, chancres, sore nipples, mammary abscesses, ulcerations of the cervix uteri, and all affections having a gangrenous tendency.

In cases of open ulcers apply the dry powder, as in erysipelas, in phthisis, scrofula and most chronic affections. Wherever disintegration and waste of the tissues occur more rapidly than assimilation this is a sovereign remedy.

The physiological action of baptisin is exerted upon all the tissues of the body, preventing a metamorphosis; hence its value in all exhausted conditions of the body, in phthisis, diabetes, diarrhœa, night sweats, &c.

I have found it also to exert a powerful influence on the glandular system in doses of from one-fourth to one-half grain; if given in large doses it produces a very disagreeable prostration of the whole system.

BARBERRY.—This agent is tonic, purgative and astringent. The special action of this drug is best obtained in a simple infusion of the bark of the root. It possesses true cholagogæ properties, and acts well in all cases of dormant liver, dysentery, diarrhœa, &c. It is an astringent to mucous tissue, hence it is useful in aphthæ and chronic diarrhœa.

BAROSMIN.—This is derived from the *barosma crenata*, a plant indigenous to South Africa; buchu is the common name by which it is best known. The leaves are only officinal. The barosmin, or the active principle, possesses well marked diuretic properties, for it produces profuse elimination of water from the system through the kidneys. I have used it in the following cases with satisfactory results: In gravel, especially associated with a deposit of a pinkish-colored sediment in the urine, its efficacy is augmented by alternating it with podophyllum. In catarrh of the bladder it allays the irritation of the mucous surfaces; it seems to heal the abrasions of the mucous surfaces, and thus diminishes the amount of mucous voided. In enlargement of the prostate gland its value as a resolvent can scarcely be overrated. In hæmaturia its tonic property is manifested so fully that I really know not of a better remedy for the kidneys under any circumstances.

As rheumatic affections generally depend upon a uric diathesis I always employ this remedy, and it seldom disappoints me. In lumbago, also, it is indicated, but still better to alternate with podophillin. In dropsical affections, but principally those of an asthenic type, and where the kidneys, from want of tone, are defective in elimination of the absorbed fluid, or are surcharged with uric acid deposits. In cutaneous eruptions, eczema, tinea capitis, I have proved it to be of good service; lastly, it is a valuable auxiliary in the treatment of gonorrhœa, gleet, leucorrhœa and ulcerations of the uterus.

The *dose* is from one to three grains.

The special properties of the remedy consist in its power to produce most extensive elimination of water from the system, and its only physiological property is the way or manner it hastens those transformations essential to the elimination of fluid from the body, without producing any pathological or physical change.

BEARBERRY.—An astringent diuretic; it diminishes the lithic acid in the urine, and is valuable in all relaxed conditions of the kidneys.

BEBEERINE.—This remedy is obtained from a magnificent forest tree, which grows from sixty to eighty feet in height; is a native of British Guiana, and is named bebeeru. From its bark (some-

times seeds also,) two peculiar alkaloids are obtained, bebeerin and sipeerin. It is the former that is used as a tonic and antiperiodic, as well as its sulphate, which is prepared by a similar process to that made use of for the sulphate of quinia from the Peruvian bark.

Its medicinal properties resemble those of the cinchona, and may be given in all those cases where it might judiciously be administered. It increases the appetite, improves the tone of the constitution, and has no tendency to produce ringing in the ears, headache and vertigo, like Peruvian bark. In intermittent and remittent fevers it is of considerable value, but still more so in periodic headache, in atonic dyspepsia and general debility. It is peculiarly applicable to patients of a strumous or phthisical habit, checking the night sweats of the debilitated.

Dose of the sulphate is one to three grains as a tonic, and from five to twenty as a febrifuge.

BETIN.—This remedy is attracting great attention at the present time. It is prepared in the usual manner, from the common beet, cutting it up into small pieces or pulp, and covering over with alcohol and steeping it about four weeks, straining, and then evaporating till it attains the consistency of molasses suitable for a pill mass—the dose of which is from five to ten grains three or four times daily.

The action of this remedy is specifically upon the uterus, causing that organ to assume an hyperæmic condition; but it does more than merely produce congestion and determination of blood to the organ; it will bring on menstruation in the most obstinate cases of amenorrhœa. It acts efficiently but mildly—one of those positive agents that can be depended on in the most obstinate cases.

This agent enters largely into all our efficient emmenagogue remedies, as the following:

℞.—Betin,
Ergotine,
Extract sabina,
Aloes, āā.—*Mix.*

Equal parts or made into three-grain pills.

Dose.—Two, three times daily—some add iodide potass. and ext. hellebore to the same pills with good results.

In atrophy of the uterus there is no remedy like betin; this is its grand range of action. There is also a concentrated tincture, which is very active and reliable.

BISMUTH.—The trisnitrate of bismuth has a soothing influence on irritated mucous surfaces, even when in a chronic state of inflammation; hence, it is often useful in dyspepsia, chronic gastritis, heart-burn, gastrodynia, water-brash, colliquative diarrhœa, &c. It has been often used by me as a tonic and antispasmodic.

It makes a valuable remedy in abnormal conditions of the mucous membrane of the stomach and bowels; very valuable, triturated with hydrastin and nux vomica, in chronic diarrhœa. It is very beneficial on mucous surfaces where a sedative action is wanted on any part of the alimentary canal.

Valerianate of bismuth is a white powder, with a strong valerian odor; I have employed it with decided benefit in dyspepsia with nervous irritability.

The subnitrate is an excellent local application to ulcers.

The tannate of bismuth has proved of decided benefit in a relaxed condition of the bowels.

BLACKBERRY ROOT.—As a domestic remedy the bark of the root is highly esteemed in some complaints of the stomach and bowels. It is a simple tonic and astringent. It is used in various forms, but the comp. syr. and wine are most eligible. The following is the formulæ for the former :

R_y.—Fl. ext. blackberry root, ℥ii;
 Fl. ext. cinnamon, ℥iiss;
 Fl. ext. cloves, ℥iiss;
 Fl. ext. mace, ℥i;
 Syr. simplex, ℥xxx.—*Mix.*

Dose.—One to two teaspoonfuls.

The wine is prepared as follows :

R_y.—Fl. ext. blackberry, ℥iv;
 Sherry wine, ℥xi;
 Alcohol, ℥i.—*Mix.*

Dose.—One to two tablespoonfuls.

BLACK PEPPER.—The oil, an oleo-resinous substance, is a warm, carminative stimulant, and fulfills an admirable indication in the following pill :

R_y.—Sulph. quinine, grs. xx;
 Gelsemin, grs. ii;
 Prussiate ferri, grs. xxx;
 Podophillin, grs. iii;
 Oleo piper nig., q. s.—*Mix.*

Make twenty-five three-grain pills.

Excellent in malarial affections in alternation with large doses of sulphite of soda. This oleo-resinous substance incorporated in simple cerate makes a stimulating ointment for external use.

BLOOD.—Numerous cases of exhausted, bloodless patients having been rescued from death by the administration of blood. A series of experiments have been conducted with this agent, in patients

perfectly pulseless through loss of blood, in cases of menorrhagia, uterine hemorrhage, bloody diarrhoea, of typhoid and the like. A statistic of several hundred cases, treated by this agent alone, exhibits most remarkable results—a recovery in nearly every instance, and, what is astonishing, a most speedy return to health.

And it is a question whether the common method of killing animals for market, being bled to death, and much of the nutritive portion of its flesh lost, as may be inferred from the sameness of the composition of flesh and blood, is not a loss? Meat deprived of blood suffers most seriously by the waste of saline materials, especially the salts of soda, the carbonate and phosphate of soda, and salt, iron, &c.; the salts of potash are also drained off with this vital fluid. There can be no doubt but that the use of blood will prevent scurvy, and improve the quantity and quality of the blood more rapidly.

BRAYERA—(common name, *Kouso*.)—This is a tree indigenous to Abyssinia, growing about twenty feet high—flowers being the part used in medicine. They are reduced to a fine powder, which is brownish, like jalap, bitter, somewhat nauseous, and an odor similar to scammony.

A preparation named *koussine* has been obtained from the flowers. It is yellow, bitter, non-crystallizable, insoluble in alcohol and alkalies.

Properties and Uses.—Purgative and althelmitic. Considered and used by the Abyssinians for the removal of tape-worm from the intestines.

The dose of the flowers in powder is a small handful (ʒiv) macerated in about three gills of luke-warm water for fifteen minutes. The infusion, with the powder suspended in it, is taken at one or two doses, quickly following each other.

The diet of the patient should be light for one or two days previous to the administration of the remedy; also, a small dose of some purgative should be given to clear the bowels. The medicine to be taken upon an empty stomach before breakfast. Its operation is safe, speedy and most effectual; and, as far as it has been used, it has not failed to kill and expel the worm.

BROMIDES.—Pure bromine is a caustic—especially to the mucous membrane. It is directly destructive—leads to shrinking and slow death. It exerts a benumbing process—an antiseptic effect.

The physiological action of bromine itself is well understood. Inhalation of its diluted vapor produces a peculiar constricting action in the vessels which supply the secreting surfaces, so that these become dry and painful. After a while reaction takes place, due to the paralysis of the vessels, and then there follows a free excretion of fluid—a catarrh or flux.

Bromine acts primarily on the sympathetic or organic system of the nervous system, and is a modifier of vascular tension in whatever form it is administered. Bromine may be administered with any substance with which it will enter into chemical combination, and it is so very active in all cases that we can depend upon an independent action of the bromine, no matter with what combined.

BROMIDE OF MORPHIA.—Made by the same process as bromide of quinine. This combination entirely obviates any idiosyncrasy to opium or morphia. For instance, in that terrible affection, metro-peritonitis, we are often at a loss how to proceed when narcotism by opium fails. With bromide of morphia we can come boldly in and meet the indications.

The *dose* is the same as sulphate morphia.

BROMIDE POTASSA.—This is an invaluable salt—its range of action is very wide.

As an *alterative* it is slow in its action—depletes the blood but little, and still acts efficiently upon all glands as a stimulant.

It is a drug that meets indications wherever we have irritation reflected to the medulla or cord; hence, in hooping-cough, asthma, spinal congestion, as in tetanus, it is of great value. The following is a good form:

Ry.—Comp. syr. lobelia, ℥iv;
 Bromide potass., ℥ss;
 Bromide ammonia, ℥iii;
 Tinct. cimicifuga, gtts. xxx.—*Mix.*

Dose.—A teaspoonful, as indicated.

Bromide potassa mitigates convulsive movements or twitchings, which are dependent on the rapid conversion of sensory impressions into motor impulses, or of morbid reflex action through the medulla oblongata, and has a most marked influence over the phenomena exhibited in epilepsy, (congestion of the minute vessels of the medulla.) In this manner the salt relieves central irritation, congestion, and it has a most salutary effect upon every nerve emanating from the cord. It is thus a cardiac sedative—relieves laryngeal, bronchial and œsophageal spasm. It tends to procure an equilibrium in chorea and hysteria, and becomes valuable in all affections—all depressed conditions of organs supplied with spinal nerves.

Its action over the sexual functions is decided and beneficial; hence, it is indicated in nymphomania, priapism, spermatorrhœa and certain forms of menorrhagia, especially that occurring at the climacteric period, in convulsions arising from uterine irritation, in ovarian irritation, nervous debility, and spermatorrhœa caused by masturbation.

Some patients manifest a peculiar idiosyncrasy to bromide potass. It excites an irritation of the mucous coat of the entire

alimentary canal—a mucous or gastric catarrh. It is easily recognized by the appearance of the tongue, and as this takes place in but a small per cent. of the cases, it detracts very little from the great curative virtues of the drug.

The physiological action of the bromide of potass., then, would seem to be chiefly exerted upon the spinal cord and its membranes—having the peculiar specific property of removing congestion of that part; *hence*, its unexcelled power in diminishing the central irritation in epilepsy, chorea, whooping-cough, cerebro-spinal meningitis, bronchitis, cardiac affections; *hence*, its wonderful power on any part supplied with spinal nerves. The profession can scarcely appreciate the invaluable physiological action of this drug.

It is our best anaphrodisiac. In the sleeplessness of delirium tremens this salt, with gelsemin and capsicum, are specific.

BROMIDE OF QUININE.—Bromide of quinine is formed by subjecting the alkaloid quinia to hydrobromic acid. It is very soluble. In this form we have a most efficacious nerve tonic. It seems to have an effect in improving—invigorating the nervous system—an effect no other drug possesses, so that it is specially indicated wherever nerve depression exists, as in rheumatism, gout, syphilis, spermatorrhœa, loss of appetite.

Another advantage of this combination is, it completely wipes out cinchonism with cerebral disturbance.

The *dose* is from one to three grains.

BROMIDE OF STRYCHNINE.—This is prepared in the same manner as the above. It is a most excellent combination, and is of unquestionable service in nervous dyspepsia. It is a better combination than strychnine and camphor.

This new class of salts is destined to play an important part in a system of direct medication, and we would earnestly urge the liberal profession to make a good use of them.

BROOM.—The tops, twigs and seeds make an excellent decoction or fluid extract. Its action is decidedly tonic, diuretic, and, in large doses, cathartic and emetic. It is much esteemed as a domestic remedy, but its action at best is inefficient.

BRYONIA ALBA.—White bryony is of value in dyspepsia, especially occurring in hot or sultry weather; loss of appetite and aversion to food, alternating with a morbid craving for wine, coffee, acids, &c.; sour or bitter eructations after eating; water-brash.

I have found it of decided benefit in constipation arising from disordered stomach; in the puerperal state, associated with irritation of the abdominal organs, and in constipation, where the patient has a tendency to rheumatism; in hepatitis or inflammation of the

liver, where there are aching pains and tensions in the hypochondria, yellow-coated tongue, and the pain aggravated by motion; in carditis, where this is complicated by disorder of the pulmonary structures, or associated with gout or rheumatism.

In bronchitis, difficult respiration; pressure of a weight on the chest; cough, with stinging in the chest, or with severe headache; peculiarly appropriate when the symptoms are aggravated upon movements in the open air after eating, and toward midnight.

In pneumonia, when the inflammation is occasioned by exposure to dry and cold weather; by undue muscular exertion, the sputa white, slimy, may be mixed with blood.

In rheumatism, swelling and redness of the inflamed textures; pains, tearing and lancinating, worse by movement, by touch, by contact with the cold air, and by eating; where the symptoms are worse at night, and in menorrhagia, with stitching pains in the head, back and pit of the stomach when stooping or stepping; it suits admirably when the patient is bilious and choleric.

Dose.—Ten to fifteen drops every four to eight hours, in water.

BURDOCK ROOT AND SEEDS.—An invaluable alterative, aperient, diuretic, sudorific. It may be used freely in rheumatism, gout, venereal, psoric disorders. We have used the following in neuralgia and sciatica with unbounded success:

R.—Burdock seeds,
Valerian,
Skunk cabbage,
Skull cap,
Capsicum, āā ʒss.—*Mix.*

Macerate in half pint good Holland gin.

Dose.—A tablespoonful, as indicated; if for rheumatism, add the colosh.

CACTUS GRANDIFLORUS.—A saturated tincture, prepared from the roots, stem, leaves and flowers of this plant; has a direct action in increasing the vital power of the heart, and very slightly increases the function of the kidneys and skin. Its influence upon the heart is manifested, whether the disease be functional or organic. In palpitation, angina pectoris, rheumatism, pericarditis, atrophy, hypertrophy, valvular disease, it is serviceable. In acute rheumatism, given in large doses, its action is good, especially when troubled with catching pains about the heart; also excellent in chronic rheumatism, in alternation with—

R.—Comp. syr. stillingia, ʒiv;
Wine of the root colchicum, ʒii;
Iodide potass., ʒii;
Tinct. cimicifuga, ʒiii.—*Mix.*

Dose.—A teaspoonful every three hours.

In palpitation, caused by masturbation or sexual excess, *cactus grandiflorus*, in alternation with gelsemin and senecin, is decidedly beneficial. Its true sphere of action, in moderate doses, is a true cardiac tonic.

In large doses it causes congestion of the brain, with epistaxis, great tightness or constriction of the chest.

It is a drug we have experimented with a great deal, but have derived little benefit from it in any morbid condition, except in nervous and organic disease of the heart.

It fills a place usurped by no other drug, and is a most valuable acquisition to our *Materia Medica*.

Dose.—From ten to twenty drops, as indicated.

CADMIUM.—This metal is mostly obtained from the oxide of zinc, with which it is associated. As a metal, it has no importance in medicine, excepting that two or three of its salts have lately been used.

Iodide of cadmium has been used as a substitute for iodide of lead, in external applications, and is said to have all the beneficial effects of that remedy, without possessing its injurious effects. It is often dissolved in glycerine, and applied by friction—an ointment I have found very useful in chilblains, some forms of cutaneous disease, nodes, scrofulous tumors, and chronic inflammatory infections of the joints.

Sulphate of cadmium.—The effects of this remedy on the system are said to be very similar to those produced by the sulphate of zinc, only more powerful. Half a grain has produced a copious flow of saliva, nausea, vomiting and pain. It is a useful irritant and astringent—a good topical application in chronic ophthalmia.

Add from one to three grains to ℥j water in otorrhœa, but then double the strength of the solution; and in specks on the cornea, an ointment has often been used, containing one or two grains to four scruples of prepared lard.

CAFFEIN.—This is the active principle of coffee, and is remarkable as containing a larger proportion of nitrogen than almost any other proximate vegetable principle; and in this property it quite equals some of the most highly animalized products. It is believed to be identical with theine, the peculiar principle of tea. Its action is principally on the nervous system. It produces a warm, cordial feeling in the stomach, soon extending its influence on the cerebral functions, gives rise to augmented vigor of imagination and intellect, without producing any subsequent stupor, as narcotics do, but rather disposes to wakefulness, and even reduces the intoxicating and soporific influence of alcohol and opium. It is reckoned a very good panacea in cases of gout. I have found good service from it in some cases of asthma, in chronic diarrhœa, but in acute

inflammatory affections it is contra-indicated. It is a famous antidote in cases of poisoning from opium; but the stomach should, if possible, be evacuated before administering it. It acts as a great conservator of the tissues, by retarding the metamorphoses of plastic constituents.

CALABAR BEAN.—From what we can glean from the history of this remedy it is a large, herbaceous, climbing perennial, with *stem* woody at base, about two inches in diameter, twining, and sometimes fifty feet long. Its pods average six inches in length, and contain two or three beans, which are of a kidney-shape and measure about an inch in length. The shell of the bean is whitish, very hard, and tastes like an ordinary haricot bean.

This plant, the ordeal bean, is a native of Calabar, on the western coast of Africa, around the sources of the river Como. It is the only known species of this genus.

The beans are collected by the Calabar negroes, who call the seed *esère*, and use it as an ordeal for the purpose of deciding the guilt or innocence of persons accused of crimes. Calabar bean is a violent poison. It has a powerful influence on the arterial system; but did not attract attention until its power of contracting the pupil of the eye was discovered, having a direct action upon the ciliary muscle and on the iris. Even in cases where the dilatation was the result of injury, this property was plainly manifested. This would seem to imply a direct action on the circular fibres of the iris, and in all probability also on the tissue of the ciliary muscle—an action of stimulation producing a result the precise reverse of that of atrophine. The alcoholic extract of the bean is the preparation used in ophthalmic practice as a local application to the eye; or the alcoholic extract of the bean may be dissolved in glycerine, say two grains to two fluid drachms, and of which a drop may be placed upon the conjunctiva. More recently a mixture of the extract with gelatine has been preferred. It is formed into thin leaves, each one divided into small squares. One of these squares contains about $\frac{1}{300}$ of a grain of the extract, and dissolves rapidly when placed upon the conjunctiva of the lower lids. It induces a well-marked contraction of the pupil in from fifteen to thirty minutes.

In order to institute a comparison between the effects of Calabar bean and those of atrophine, an experiment was tried upon an animal, thus: Into the right eye a small piece of the extract was inserted; into the left, two drops of a solution of atrophine. In five minutes the right pupil was somewhat contracted, but the left was unaffected. In twenty minutes the right pupil was contracted very considerably, but the left only partially dilated. In forty minutes the right pupil was reduced to a point, the left fully dilated. In an hour and a half the right pupil was scarcely visible; the left iris had now almost disappeared. In six and in twenty-four

hours they were in the same condition. In seventy-one the right pupil was one-third dilated, and extremely sensitive to light; the left just beginning to contract, and but little sensitive to light. In ninety-six hours the right had regained its normal condition; the left was still somewhat dilated. From this experiment it is inferred that the action of the bean is manifested quicker than that of atrophine; that it is more transient in its effects, but that the effects may not pass altogether in four days.

It has a powerful influence on the arterial system in reducing the heart's action, and rendering it very irregular as well as feeble. It produces giddiness and faintness without uneasiness, loss of voluntary motion without loss of consciousness. It appears to act by depressing the function of the spinal cord, and thus preventing the transmission of nervous impulses through the cord. This special action on the spinal cord, and the result, though not entirely conclusive, seem to indicate that it may be of service in all hyperæsthetic conditions of the cord. In tetanus, whether *centric* or *excentric*, the morbidly existed conditions of the spinal system may be allayed. The success attending its administration, in conjunction with bromide potassium, in the treatment of tetanus, has led me to believe that it is our best remedy for this disease. It also has a decided and beneficial effect in asthma, epilepsy, reflex neuralgia, paralysis and chorea. Its use has also been advised in cases of fevers, erysipelas, delirium tremens, acute bronchitis and rheumatic fever, where the pulse is strong, rapid and hard. However, its therapeutical effects in these diseases are not fully decided.

The *anæsthetic action* may be applied to the treatment of all nervous irritations. Half a drachm of the tincture, rubbed on the seat of suffering for fifteen minutes, will remove severe pain for an interval of about two hours, and an ultimate cure may be produced by repeating the application for a limited number of times. It has been employed with great advantage in various neuralgic affections and in irritable stomachs. It probably acts by producing a local change in the nerves of the affected region, which interferes with their power of receiving or of conducting impressions. That it does not depend on any constitutional action of the kernel appears probable from the absence of any appreciable constitutional symptom. It has been proposed to employ it as an antagonist to poisoning by belladonna or atrophia. It has also been found to be decidedly successful in the treatment of several cases of impotence, the result of masturbation, and in a number of cases of imperfect erection, with premature seminal discharge on attempting coition.

But it is in ophthalmic practice, and in the treatment of epilepsy, chorea and tetanus, that it seems self-evident this remedy is destined to produce a new era in the treatment of these terrible diseases.

An important question arises: What should be the dose? Now,

the best plan is to begin with small doses and increase them until its constitutional effects are visible, for we must have the physiological effect of the remedy before a result can be obtained, so that we should give a sufficient dose, beginning small, increasing cautiously, but positively counteracting the disease under treatment. I prefer a fluid form for the administration of this remedy, as giving less probability of accumulating in the stomach, and being also more easily assimilated. The tincture prepared in the ordinary way is an eligible form. Begin with ten drops and increase. We might add a few formulæ that we use with great success.

For Asthma:

R_y.—Comp. syr. blood-root and lobelia, ℥iv;
 Bromide potass., ℥ss;
 Bromide ammonia, ℥ii;
 Fluid extract rosin weed;
 Fluid ext. Calabar bean, āā ℥v.—*Mix.*

Dose.—A teaspoonful every three hours.

For Sciatica:

R_y.—Comp. syr. stillingia, ℥iv;
 Iodide potass., ℥ii;
 Tinct. Calabar bean, ℥ss.—*Mix.*

Dose.—As above.

For Spermatorrhœa:

R_y.—Fluid ext. senecio,
 Fluid ext. gelsemin,
 Fluid ext. Calabar bean, āā ℥i.—*Mix.*

Dose.—Twenty to thirty drops every three hours.

CALENDULA, OR MARIGOLD.—The leaves and flowers are used, and yield their active properties to boiling water, but better to alcohol. It has been found useful in spasmodic affections, strumous diseases, suppressed menstruation, and in cancer. But as a local application after surgical operations, it is certainly not to be surpassed, if equaled, by any other remedy. When applied to a wound, suppuration very seldom supervenes, and the wound heals by replacement, or first intention. As a lotion, use one part of the tincture of calendula to ten parts of water.

CALX.—Various preparations of lime are of great utility in certain diseases. In retarded dentition, from a direct want of this element in the system, there can be no doubt of the propriety of supplying this want by the vegetable phosphates. Its use is also indicated in rickets, and other diseases of bone.

CAMPHOR.—The action of this aromatic is a stimulant to the brain and nervous system, an excitant to the vascular system. In large doses it is an irritant to mucous tissues, and narcotic. In medium doses it allays nervous excitement, subdues pain, arrests spasms, and induces sleep. Successfully administered in delirium tremens, whenever a nervo-stimulant and sedative is indicated. It may be advantageously combined with lupulin, bromide potass. and gelsemin in chordee. In masturbation and nymphomania, combined with tinct. green root gelseminum, it acts well. It relieves the strangury caused by the use of cantharides. It seems, to a certain extent, to antidote the toxic effects of nux vomica; prevents the twitching induced by nux. In obstruction of the kidneys it may be used with the best results, as follows:

R_y.—Aqua camphora, ℥iv;
Potassæ nitratis, ℥iii;
Tinct. ferri chloride, ℥ii.—*Mix.*

Dose.—A tablespoonful in a glass of water every three hours.

CANELLA BARK.—The properties of the bark of this tree are aromatic, stimulant and antiscorbutic. This latter property seems to be due to its stimulating properties.

CANNABIS SATIVA AND CANNABIS INDICA.—The former the common hemp, but little used, as it is much inferior, medicinally, to the Indian hemp, (*cannabis indica*.) In some countries the plant is extensively used for smoking, and a decoction of it as an intoxicating drink.

The action of the cannabinum is an anodyne, hypnotic and antispasmodic. It will often induce sleep where morphia fails, and, unlike that remedy, it does not impair the appetite or suppress the secretions. As it blunts the sentient nerves, it becomes valuable in allaying pain; if the above is increased, inebriation, with phantasma, catalepsy and illusory delirium, are produced; and the long continued use of the drug causes softening of the brain.

It does not create the appetite, the insatiable desire, that we have in opium; as a hypnotic, it induces a more natural sleep than any other drug. Like belladonna, it causes dilatation of the pupil; it seems to act like that remedy upon the lumbar portion of the cord, for it decidedly augments uterine contractions in parturition. For this purpose, it should be given in a weak decoction of the black cohosh.

The therapeutic action of the American hemp (*cannabis sativa*) is a most decided anodyne to the mucous membrane of the bladder and urethra, subduing inflammation, allaying burning micturition, effectually controlling irritation. The dose in a case of gonorrhœa is from five to fifteen drops, every three hours, in water.

Cannabis indica has a wider range of action, being a powerful anodyne, and an active conservator of nerve force; it acts specifically upon the brain and cord, and through them upon every part of the body. Its action is well developed whenever we have a toxical agent operating on the brain, as in typhus and bilious intermittent.

In suppression of urine, dependent upon inflammation of the kidneys, it acts best when combined with gelsemin.

Where the habit of opium eating has been acquired, and the patient lacks the resolution to give it up, the substitution of the *cannabis indica* fulfills a most excellent purpose.

CANTHARIDES.—When given internally, is a powerful stimulant, with special direction to urinary and genital organs. It often acts well in seminal weakness, and paralysis of the neck of the bladder.

CAPSICUM.—This substance is so well known as a diffusible stimulant that a description of its therapeutic or physiological action seems superfluous. To the taste it is extremely hot, acrimonious and burning. It is the most energetic, most permanent, diffusible stimulant that we possess, valuable in all conditions of depression, whether nervous or vascular. Those properties give it a wide range of action. Valuable in intermittent fever, as follows:

Ry.—Comp. tinct. cinchona, ℥iv;
 Tinct. capsicum, ℥ss;
 Chloride sodium, ℥iv.—*Mix.*

Dose.—A teaspoonful every three hours; or,

Ry.—Sulph. quinia,
 Prussiate ferri, āā grs. xii;
 Podophillin, grs. ii;
 Gelsemin, gr. i;
 Capsicum, ℥i.—*Mix.*

Make six powders.

Dose.—One every two hours, before the chill.

In that atrophied, anæmic condition of the brain which exists in delirium tremens—in that condition when the whole nervous system is paralyzed by the action of that terrible poison, alcohol—where secretion is arrested, assimilation suspended, capsicum in thirty grain doses is specific. It is true, the efficacy of the drug is much increased by gelsemin, digitalis or chloral hydrate. These merely soothe, relax, and permit the blood to flow through that bloodless brain.

The special action of capsicum, independent of being a powerful diffusible stimulant, is upon the throat, hence its value in croup, scarlatina, diphtheria and sore throat generally. Given in those diseases it displays most extraordinary power to control the capil-

lary circulation—to first bring an excess of blood to the part, stimulating a renewal of life, then, as vital action is renewed, congestion disappears.

This is the great property of capsicum—removing congestions by creating a renewal of life in the part.

In certain forms of dyspepsia, where fermentation is common, eruction of watery elements, capsicum is invaluable. It is sometimes necessary to combine it with bayberry, and precede the action by an emetic of green lobelia.

We have no agent like capsicum in typhoid fever. It is more beneficial than all other stimulants, producing in many cases complete reaction, and maintaining a stimulating effect upon the nervous system. We have no better agent when the mucous coat of the bowels and stomach seems dead; no secretion. We usually prescribe it in this form :

R_y.—Capsicum, pulv.,
 Bayberry, pulv.,
 Poplar bark, pulv., āā q. s.—*Mix.*

Dose.—Make a tea and sweeten; strengthen agreeable to the taste. Let patient drink it copiously. It restores the vitality of the mucous membrane—stimulates the assimilating and digestive apparatus. In chronic gastritis no drug can excel it.

The poison of Asiatic cholera spends itself upon the spinal cord, and creates a condition of depression with spasmodic action not known in other diseases. And how many cures can be traced to capsicum, combined with valerian and lobelia and stimulation to the spine? As a parturient it is superior to ergot or macrotin. It removes the inertia.

I rely solely upon this drug in surgical practice. It is my only dressing, and case after case could I recapitulate, where, under its use, I have obtained primary union in the most hopeless conditions. It is decidedly our best remedy in gangrene.

CARBON.—Various preparations of carbon are in use. The chlorate and terchloride are used with excellent success in all blood diseases, as scrofula or cancer. Its therapeutic properties are, a powerful sedative, antiseptic, brain and gland stimulant. The chlorate and terchloride, internally and locally, in the treatment of cancer stands unrivaled as a medicinal agent. Either preparation should be given alone or combined. Its effect is powerfully sedative, deodorizing, stimulating, leaving a beautiful, healthy, granulating sore, and giving the most perfect relief to suffering.

It promotes vital force, and is valuable in painful nervous diseases.

The bisulphate of carbon is formed by passing the vapor of

sulphur over charcoal. It is a colorless and volatile liquid. Taken internally it acts as a diffusible stimulant, accelerating the pulse, augmenting animal heat, and exciting the secretion of the skin, kidneys and genital organs. Some use it in rheumatism, paralysis and skin affections. When applied to the skin it diminishes the temperature and thus becomes valuable. It makes an excellent liniment in spinal irritation, as follows :

R_y.—Ether,
 Chloroform,
 Alcohol,
 Ammonia,
 Bisulphuret carbon, āā.—*Mix.*

Rub over the part with a sponge.
 If inhaled it acts as an anæsthetic.

—
 CARDAMON.—Warm, aromatic stimulant, used principally to cover and flavor other medicines, as follows:

R_y.—Bal. copaiba;
 Mucil. acaciæ;
 Tinct. cubebs, āā ʒi;
 Spts. nit. dulc., ʒvi;
 C. tinct cardamon, ʒi;
 Tinct. iodine, ʒi;
 Tinct. opii., ʒiss.—*Mix.*

Dose.—A teaspoonful morning and night.
 Valuable in gonorrhœa.

—
 CARYOPHYLLIN.—The concentrated crystalline principle of cloves is aromatic, stimulant and irritant. It is an excellent agent to add to liniments and plasters. Found it very valuable in the following:

R_y.—Ether,
 Aq. ammonia,
 Alcohol, āā ʒi;
 Caryophyllin, grs. xx.—*Mix.*

Dose.—Rub over the abdomen in cases of diarrhœa and cholera infantum.

—
 CATECHU.—A strong astringent to all mucous surfaces; beneficial whenever the mucous coat is relaxed, as in diarrhœa, chronic catarrh; a valuable local agent for removing cynanche tonsillar, aphthous ulcerations of the mouth, elongation of the uvula, and relaxation and congestion of the mucous membrane of the fauces; sponginess of the gums, the result of mercurial ptyalism. In abrasions about the nipples, painting the tincture on twice

daily is very valuable. An ointment composed of catechu is in great repute in external hemorrhoids:

R_y.—Stramonium ointment, ℥i;
Pulv. catechu, ℥ii to ℥iv.—*Mix.*

Spread on a piece of lint and apply.

CAULOPHYLLIN.—This is prepared from the blue cohosh, and is an antispasmodic, alterative, tonic, emmenagogue, parturifacient, diaphoretic, diuretic and vermifuge. It has been successfully used in rheumatism, dropsy, epilepsy, chorea, and all forms of uterine irritation. It is a valuable agent in the treatment of all chronic diseases, and those it seems to benefit by acting on the spinal cord, increasing its tonicity, for it is a well-defined rule, that when irritation has existed for some length of time the reflex centre suffers, becomes depressed, and requires the aid of a decided tonic like the blue cohosh.

A decoction is unquestionably the best mode of administration for nearly all purposes. To facilitate labor it is superior to ergot. To relieve after-pains it is extremely efficient. In all forms of dysmenorrhœa it may be given with unbounded success. Combined with helonin, it is very efficacious in prolapsus uteri.

In aphthous ulceration, combined with gold thread or hydrastis, it forms an excellent wash.

As an emmenagogue it has no equal. Its action is safe and certain.

The following is a good form:

R_y.—Fl. ext. blue cohosh, ℥iii;
Fl. ext. ergot, ℥i;
Fl. ext. water pepper, ℥iiss;
Oil sabina, ℥iii;
Alcohol, ℥ii.—*Mix.*

Dose.—Thirty drops every three hours.

CEANOTHINE.—A principle extracted from the red-root; very valuable in gonorrhœa or chronic irritation of the kidneys and bladder. Its action resembles cubebs, but more sedative and alterative.

CELANDINE.—This plant, sometimes known as *tetterwort*, is an evergreen perennial, growing two or three feet in height, branched, swelled at the joints, leafy, round, smooth, and has many tender, round, green, watery stocks, very brittle and transparent. The flowers, consisting of four petals, are yellow. After these come long pods, which, when touched, instantly fly to pieces. Celandine is a pale green-colored herb, indigenous to Europe and naturalized

in this country. It is found growing in meadows, by the sides of streams, and in low, wet places, and flowers from May to October.

When the plant is wounded, a bright yellow offensive juice exudes, which has a nauseous, bitter taste, with a biting sensation in the mouth and fauces. This plant has a faint, unpleasant odor, which is nearly lost by drying, although the taste remains. The juice, when applied to the skin, produces inflammation and even vesication. The root is the most intensely bitter part of the plant, and is commonly preferred. It yields its virtues to alcohol or water. The plant analyzed affords a bitter, resinous substance, of a deep yellow color, and a nauseous taste, also a peculiar acid, denominated *chelcedonic acid*, and an alkaline principle, forming neutral red salts with acids, which are narcotic and poisonous. It is called *chelerythin*. It is a gray powder, and excites violent sneezing when snuffed into the nostrils. There are two more alkaline principles—*chelidonin* and *chelidoxanthin*, forming crystallizable salts.

The general properties of this plant are, alterative, stimulant, diuretic, purgative, diaphoretic and vulnary. The juice rubbed on warts remove them. It is also useful in the cure of ringworms and for cleansing old ulcers. It is recommended for the removal of jaundice and in visceral obstructions of the liver, scrofulous affections of the glands, skin and eyes, externally in poultice or ointment, for cutaneous diseases of the skin and piles. It is supposed to exert a special influence on the spleen, and the juice has been used with success for the removal of specks and opacities of the cornea. An external application of the tincture will be found to be an unrivaled means to subdue traumatic inflammation. Some medical writers consider it superior to arnica.

Dose.—Of the tincture, from one to two fluid drachms; of the expressed juice, thirty to forty drops, in some bland liquid; of the aqueous extract, from five to ten grains.

CELASTRUS SCANDENS.—This is one of the best alteratives in the *Materia Medica*, and may be used with the best success in scrofula, syphilis and skin affections.

An ointment made from the fresh bark is successfully employed as a specific for burns and prurigo.

CERASEIN—A very valuable remedy, derived from the bark of the choke cherry. It is an excellent addition to our *Materia Medica*, inasmuch as it is a good substitute for quinine; and in some cases it supercedes its use, where, in certain conditions of the system, the latter is inadmissible.

Properties and Uses.—Tonic, antiperiodic, diaphoretic, febrifuge, antispasmodic, and slightly astringent.

It is an antiperiodic of great value. Cerebral excitement, dis-

ordered secretions, never result from its use, but, always acting as a nervine and antispasmodic, it allays irritability, quickens the action of the nervous system, and corrects disturbance of any kind.

It is highly diaphoretic, and renders the skin moist, soft, flexible; it reduces the action of the heart by improving the vital condition of the brain.

It allays irritation of the mucous coat of the stomach, and restores it to a healthy condition.

In great nervous prostration with exhausting night sweats—in epilepsy, chorea, spermatorrhœa, it seldom fails to give prompt relief. In debility of the genital organs, combine or alternate with senecioin.

Its physiological action very much resembles quinine; it augments nervous energy, increases vital force, imparts tone and vigor to the system, but especially the brain and spinal cord.

In administering cerasein, medium doses, well triturated in asclepias, is a good mode to begin with; increase the frequency, and also the dose, until there is a moist, velvety condition of the skin. In ague, give in the same way, but between the doses give alkalies. In typhoid fever give during the night, for the accession comes on in the afternoon, and time is wanted before the action of the remedy produces its full effect. There can be no doubt of its utility, well triturated with asclepias.

As a tonic in phthisis, give it in six-grain doses, three times daily, in a little wine, and persevere with it. Its effects are very manifest, producing an exhilarating effect on the system which nothing can equal. All cases of consumption improve under the *cerasein*, and the very fact of such an improvement would naturally lead us to the inference that instead of its being a great blood disease it is truly and essentially a condition, dependent upon impaired vital force.

CERIUM.—Oxalate of cerium is a white granular powder, odorless, tasteless, insoluble in water, alcohol or ether, but dissolves freely in sulphuric acid. It is very valuable in chronic intestinal irritation and in dyspepsia. It is unquestionably the best remedy we have in the reflex vomiting of pregnancy. The action of the cerium on the stomach is a pure, decided, sedative tonic, having a special action on the pneumogastric nerve.

Dose.—From five to twenty grains, three times daily.

CHELONIN.—The active principle of *chelona glabra*, or balmony. As a tonic and anthelmintic it has few equals. It increases the appetite, promotes digestion and aids assimilation. It is of great value in all conditions of depression of the stomach. It also acts efficiently upon the liver as a hepatic stimulant. It seems also to excite the pancreatic gland, so that both primary and

secondary digestion improves. This property gives the drug quite a wide range of action, indeed, it can be used wherever the powers of life are low, for its action upon the digestive apparatus is most salutary. It has also considerable reputation as an anthelmintic, but it does not do this by any chemical property, but by astringing and bracing up the walls of the intestines, thus preventing the lodgment of parasites.

The *dose* is from one to three grains, three or four times a day, well triturated.

Its therapeutic property, then, is that of a decided tonic, imparting a vital principle which few drugs can excel.

CHENOPODINA.—This remedy is chiefly used as an anthelmintic. It is used in various forms to expel the lumbrici in children; but the essential oil on which the vermifuge properties depend, is the best form for administration.

Dose.—From four to eight drops dropped on a little sugar, and continued for several days, and followed by a cathartic.

CHIMAPHILLIN.—This remedy is prepared from the winter-green or ground holly. The plant contains three active principles—a resin, resinoid and neutral—all of which are combined in the chimaphillin.

Properties and Uses.—Alterative, tonic, diuretic and astringent; useful in rheumatism, scrofula, dropsy, gonorrhœa, strangury, gravel.

In scrofula, its alterative properties are of great value, as it stimulates the functions of digestion, increases nutrition, but at the same time is an active depurant. It is well to alternate with phyto-lacca or iris. Its value in dropsical affections is inestimable, but here it should be alternated with digitalis, ampelopsin, elaterin.

The *physiological action* of the chimaphillin is a direct stimulant to the entire lymphatic system; this is its special and proper sphere of action, although it is a good astringent diuretic. Whenever the lymphatic system is torpid or depressed, we have here a drug so powerful, so depurating, that if taken for some time it will relieve engorgement. Its action is not unlike bromide of potass.; it causes atrophy of the uterus, testicles and mammary gland. It acts so energetically upon the lymphatics, liver and spleen, as a depurant, that the red corpuscles are quickly destroyed, and such diseases as anæmia and leucocythemia engendered. There can be no doubt but that the lymphatics perform their due share in the process of the elaboration of the blood, and if their activity is impaired by long-continued stimulation, a serious defect is produced. All the glands of the body are stimulated by this drug, still, no irritability is produced—no organic action disturbed. Few are aware of the very great value of this preparation in a morbid condition of the lym-

phatics. It should be given in small doses, well triturated, and frequently repeated.

CHIONANTHUS VIRGINICA.—This is one of the best drugs in the *Materia Medica*. Its action is aperient, alterative and diuretic, with slight narcotic properties. Its action in jaundice is specific. Torpidity of the liver is so common—the result of drinking, malarial and other affections—and in this drug we have the most positive action ever obtained upon any gland. An infusion of the root is the most efficacious. My learned friend, Prof. Goss, of Social Circle, Georgia, speaks of this remedy in induration of the liver in glowing terms. He says:

“As regards the treatment of hepatic torpor and jaundice, the profession differ as widely as in the pathology. I have tried all the reputed remedies of the Allopathic and Eclectic practice, but have found them unsatisfactory. As regards mercurials, I have found them better calculated to keep up, and even to produce the disease, than to cure it. I have tried leptandrin and podophillin, and they do aid in restoring the functional action of the liver. I have tried irisin, sanguinarin and dandelion, and, like the leptandrin and podophillin, they all act at the time of taking, but have often failed, in my hands, of a final cure. I have tried, also, the sulphate of soda and the sulphate of magnesia, and they proved worthless as a final cure. The only remedy that I have found positively curative, or to act specifically in restoring this suspended functional action of the liver, is the *chionanthus virginica*. I have treated a great many cases, and I mainly depended upon this remedy, and never have failed but in one case, and that was, doubtless, one of mechanical obstruction from gall-stones. I have used *chionanthus* (the tinct. or fluid extract) now for twenty years with the same unfailing success.”

CHLORAL HYDRATE—Proves itself to be, in painful affections, a very beneficial pain-relieving and sleep-producing preparation. When taken into the body it is decomposed, and the chloroform, which is one of the products of decomposition, causes sleep, unconsciousness and insensibility, conditions which persist as long as decomposition is carried on.

To produce sleep in an adult male, it generally suffices to administer a half-drachm dose of the preparation, either at once or on two occasions, with a short interval between the first and second half-doses. It may be dissolved in one ounce of water, or be given with syrup of orange-peel, or some other agreeable syrup.

The above dose soon produces sleep, which is usually preceded by a state of mental confusion resembling drunkenness. Bad symptoms have not been observed as a result of the sleep produced by this agent, and what is strange, since chloroform, as is well known,

when given as a narcotic frequently causes vomiting, no diminution of appetite follows the administration of hydrate of chloral; in fact, the appetite is generally somewhat increased.

The use of hydrate of chloral, therefore, may be attended with beneficial results, and it is indicated in painful affections. It is probable that, with painful affections due to morbid changes in the brain, this agent may bring about relief without producing any bad effect upon this organ.

The physiological effect may be embraced under three forms:

First degree.—Feeble soporific action and slight sedation of the sensory nervous system, which may be accompanied by a peculiar intermittent agitation.

Second degree.—Energetic and predominant soporific action with diminution of sensibility: to this period corresponds a calm sleep of variable duration, but without apparent disturbance of the chief functions of life; by successive doses, administered as soon as the action of the first has completely ceased, sleep may be maintained during a period relatively very long.

Third degree.—Anæsthetic action, with muscular resolution, complete loss of general sensibility, and death, almost always occurs when this stage has been reached, and the reason of this can be easily given; a considerable dose of hydrate of chloral must have been given, and one cannot at a given moment free the system of the action of a medicinal agent which works progressively until its complete transformation and elimination.

The peculiar advantages obtained from this are:

“It is a hypnotic which seldom fails to produce sleep, which usually lasts from four to eight hours.

“The sleep is natural, and one from which the patient can be easily aroused.

“It is more generally tolerated by the stomach than other sedatives.

“It does not constipate the bowels or disturb the secretions.

“It does not injuriously affect the appetite.

“It rarely produces headache or leaves unpleasant effects.

“It does not lose its power by repetition, but the dose may often be reduced after the patient has become accustomed to its use, and seldom demands to be increased.

“When the necessity for its use has ceased, it often, for the first time, becomes disagreeable to the patient.

“Thus far we have met with no case where its administration has induced the habit of its use, which is one of the dangers of opium, cannabis indica, &c.

“It allays muscular spasm and rigidity.

“No ill effects have been experienced from its use in cases of disease of the brain.

“We have observed no ill effects from its use in the reduction of the pulse or of the temperature.

"In cases of the opium habit, it has proved a valuable remedy to secure quiet and sleep, and allay nervous irritation until the system has rallied from the depressing influence of the former drug. In insanity, it is particularly useful to quiet restlessness and muscular activity. The strength of the patient is thus preserved, and time is gained for building up the general health by tonics and nutritious diet.

"It is of great benefit in cases of mental excitement and functional disturbance of the nervous system, where there is no organic disease of the brain.

"In all cases of delirium tremens it acts like a charm.

"In the sleeplessness due to atrophy of the brain in old age it is unexcelled."

Its injurious effects are:

In over-stimulation of the brain exhaustion follows and amaurosis. It is injurious in all cases of debility.

Its long continued use under any circumstance is injurious.

Its chief injurious effect seems to be in creating exhaustion of the optic nerve, hence the great increase of partial or complete blindness by its indiscriminate use by the old school profession.

CIMICIFUGIN.—This principle is obtained from the blue cohosh. It is a very active, powerful and useful remedy. Its action is chiefly upon the nervous system as a decided stimulant and tonic—useful in chorea, epilepsy, nervous excitability, asthma, hooping-cough, rheumatism and small-pox. To obtain a good action, triturate or precede its administration with an alkali, as borax.

CINCHONA.—This drug, in all its forms is, properly speaking, a pure brain stimulant; increases the activity of the nerve cell; aids the nervous system in overcoming disease. Quinia, cinchona, quinidinia, all possess excellent medicinal properties.

CLEMATIS VIRGINIANA.—An indigenous plant. Its action is that of a stimulant, diuretic, sudorific. The fresh leaves, if applied to the skin, vesicate; when well digested in lard, they make an excellent ointment in acne, sycosis, and to discuss indurated glands or swellings. In the form of tincture it makes a valuable alterative.

Dose.—From ten to fifteen drops, repeated according to indications.

CLOVER HEADS.—An infusion of the heads of the red clover is soothing, detergent, stimulant, antispasmodic. It has alone, and also combined with phytolacca, been very successfully used in the cure of cancer. In those cases it is given internally *ad libitum*, and applied locally as a plaster.

COCCULUS INDICUS—Is a shrub that grows luxuriantly in Malabar. It is the berries that are used, and they owe their properties to an agent called *pirotoxin*, which is found in great abundance in them. This substance forms white crystalline crusts or needles of an insupportably bitter taste.

Its action is chiefly upon the cerebro-spinal system as a powerful stimulant, causing congestion and effusion, which produce tetanic convulsions and death. Pirotoxin is never given internally, but, rubbed up in simple cerate, it makes a valuable ointment in barber's itch and some forms of tinea.

A mother tincture of *cocculus indicus*, in small doses, acts well in gastric and bilious affections, as sea-sickness, spasm of the stomach, &c., vertigo and tremor.

It is much used by brewers to give their beer a bitter taste and render it more intoxicating. It has, in this manner, a destructive effect in producing irritation and softening of the poor drinker's brain—a post-cervical headache.

COLCHICUM.—This is employed as a sedative, cathartic, diuretic and emetic. It is a valuable agent in both acute and chronic rheumatism, especially in such cases as have resisted other treatment, cases in which the skin is moist and urine turgid; in dropsy, palpitation of the heart, gonorrhœa, enlarged prostate, and in gout, it is considered by some to be a specific; and there seems to be some foundation for the opinion, for it is known to cause the free expulsion of urea from the system. The increase of urea is accompanied with diminution of urates in the urine. It is most suitable in those cases of regular gout, unassociated with injury of the organs, and in acute and chronic rheumatism I have found the following formula to be very efficacious, especially in the chronic form:

R.—Comp. syr. frostwort, ℥iv;
 Iodide potass., ℥ii;
 Vin. rad. colchicum, ℥iij;
 Tinct. macrotys, ℥ij;
 C. tinct. serpentaria, ℥i.—*Mix.*

Sig.—Teaspoonful every three hours.

This remedy is supposed to act through the nervous system. It often proves valuable in spasmodic and flatulent colic, occurring in nervous and hysterical females; also in metastasis of rheumatism to the stomach.

COLD.—This is a powerful anæsthetic, destroyer of sensibility, potent astringent, and often has an almost magical effect in disease, being a remedy indicated where we desire to destroy sensibility, remove congestion or arrest hemorrhage.

The value of cold in tetanus, in epilepsy, &c., conditions where

we have congestion of the spinal cord, is beautifully illustrated by the local application of ice to the spine. In cholera, where the poison operates specifically on the cord, causing spasm or cramp of the entire system, this remedy acts in the first stage with excellent effects. The arteries are supplied with a muscular coat, which enables them to contract or dilate at the bidding of nerves springing from an assemblage of nervous centres, or ganglia, constituting the great sympathetic; but these ganglia can be influenced by suitable applications of cold or heat on each side of the spine, as to cause directly either the contraction or dilatation of the arteries which govern, and that the spinal cord itself can be influenced in the same way, and thus have its functional activity increased or diminished at the will of the physician. It will now be readily seen that congestions of all parts, even in the nervous centres themselves, are easily subdued by applying to the appropriate part of the spine an india-rubber bag filled with ice. In the reverse condition—anemia—ice similarly applied is the effective remedy.

In convulsive affections, and in fevers, its beneficial effects are especially observed.

The headache accompanying fevers is so much relieved by an application of cold, that only the patient can describe its value. Applied upon the spinal column it augments the general circulation, checks the cramp of voluntary and involuntary muscles, restrains the sickness of pregnancy, cures sea-sickness and promotes menstruation.

Ice in the mouth in hæmoptysis—ice in the vagina in uterine hemorrhage, acts as an astringent, pure and simple.

COLLINSONIN.—This article is prepared from *Collinsonia canadensis*, and contains the two active principles derived from the root of that plant.

Properties and Uses.—Tonic, astringent, diaphoretic, alterative, resolvent and diuretic. It is useful in diarrhœa, dysentery, gravel, dropsy, leucorrhœa, &c. In diseases of the bowels and rectum, it seems to be unequalled by any other remedy in soothing, healing, and imparting tone to the intestinal mucous surfaces.

Combined with dioscorein, I have found it effective in removing cramp in the stomach, colic, both flatulent and bilious cholera morbus, and all spasmodic affections of the stomach, bowels and urinary apparatus.

From its peculiar stimulating influence upon the absorbent system, it is of great service in dropsy; in atonic conditions of the system; dyspepsia; and in chronic disease with feeble digestion, increasing secretion from the kidneys and skin, and in a marked manner relieving irritation of the nervous system and increasing innervation.

It is good for augmenting the action in the venous, absorbent

and lymphatic vessels, and greatly promotes renal depuration. It increases the activity of the cutaneous functions, and promotes diaphoresis, especially with warm diluent drinks. In chronic diseases of the respiratory apparatus, it relieves pulmonary irritation and acts as a stimulant expectorant. In heart disease, and that peculiarly distressing asthma simulating, and sometimes attending, phthisis; it has a superior influence in quieting irritation, giving increased strength to the heart's action, and increasing the vigor of the patient. One of the most efficacious remedies in chronic laryngitis and in clergyman's sore throat. I have proved its value in cases of leucorrhœa, catarrh of the bladder, with other excessive discharges; but in such cases its benefit is enhanced by combining it with hydrastin.

But it is in hemorrhoids, and diseases of the rectum generally, that it is of peculiar service. I have known it to suppress hemorrhage from the bowels; it is an excellent constitutional remedy in many affections, increasing the appetite and promoting assimilation.

This remedy should be given in large doses at first—five grains—and repeated frequently until the system is brought under its influence, and all the symptoms controlled; afterward continue in average two-grain doses, thrice a day, until the disease is eradicated.

COLOCYNTHIN.—This is the active principle of colocynthis, and is an irritant hydragogue cathartic. It increases the various secretions by accelerating the peristaltic motion of the intestines. In small doses it is employed in recurring quartan fevers, retention of the catamenia, hemorrhoidal discharges, indolent dropsies, &c.

Its irritant effect upon the rectum may influence the uterus by sympathy of contiguity and thus provoke menstruation, and on the same principle, dissolved in whiskey, it has cured gonorrhœa. This is an appropriate remedy in those chronic nervous diseases dependent on a general torpor of the nerves of sensation, or upon local paralysis of the abdominal and lower spinal nerves. So in mania, melancholy, epilepsy, chronic vertigo and headache, I have employed it with considerable benefit. It may be used in all diseases where catharsis is indicated. The powder applied to an ulcer or raw surface, affects the lower bowels in the same manner as when taken inwardly.

The *oil* of colocynth has been recommended as an external remedy for neuralgia. It is a good prophylactic of serous and mucous apoplexies, paralysis of the rectum and urinary passages. It is contraindicated, however, in an inflammatory condition of these organs. In dyspepsia, resulting from a paralytic condition of the stomach, it has frequently been employed with success. The dose is from a quarter to one grain, to be repeated according to the exigencies of the case, more or less frequently.

COLUMBIN.—A pure, bitter tonic, highly successful in all forms of dyspepsia.

Dose.—One-half grain to a grain, well triturated.

COMFREY.—A mild demulcent, astringent tonic. It makes an admirable tonic in diseases peculiar to women, as follows:

Ry.—Fl. ext. comfrey,
 Fl. ext. Solomon's seal,
 Fl. ext. unicorn root, āā ʒi;
 Fl. ext. chamomile,
 Fl. ext. gentian comp.,
 Fl. ext. columbo,
 Fl. ext. cardamons,
 Fl. ext. sassafras, āā ʒss;
 Alcohol, ʒiv;
 Sherry wine, Oiiiiss.—*Mix.*

Dose.—A tablespoonful every three hours.

COPAIBA.—It exerts an especial stimulating effect upon all mucous tissues—diminishes their secretion. It has also a stimulating effect upon the skin, and produces a papular rash. It makes an excellent injection in gonorrhœa—internally it is very valuable in the same affection, as follows:

Ry.—Comp. syr. stillingia, ʒiv;
 Bals. copaiba, ʒi.—*Mix.*

Dose.—A teaspoonful thrice daily.

COPTIS TRIFOLIA.—Goldthread is a pure bitter tonic, with a special action upon the mucous membranes in increasing their vitality; decidedly efficacious as a wash or gargle in all ulcerations about the mouth; most valuable injection in gonorrhœa. A decoction of equal parts of goldthread and golden seal is a most valuable combination in chronic inflammation of the stomach.

COROLLARRHIZA ODONTORRHIZA, or CRAWLEY ROOT.—*Description.*—This is a leafless, almost verdureless plant, and is indigenous to the United States. By some this plant is supposed to be parasitic on the roots of certain trees. The root is the officinal part, and is a collection of small, jointed, irregular tubers, jointed and branched very much like coral. From these arise a smooth, fleshy, striped flower, bearing a spike of from twelve to twenty brownish-green flowers, which bloom in July and August. The fruit is a large, strong-ribbed capsule. It is generally to be found in old woods, where there is much decayed herbage.

Properties and Uses.—Its principal value is as a diaphoretic, and

it is probably the most powerful and certain one in the *Materia Medica*, but its scarcity and high price prevent its general use. Its efficacy is well known in the low stage of fevers, especially typhus; also in inflammations. I have proved it to be of considerable value in acute erysipelas, cramps, flatulency, pleurisy and night-sweats. So marked an effect has this remedy over fevers, that it constitutes the fever powders of several practitioners. But it is thought by many that this remedy also possesses tonic and sedative properties, but I consider these as insignificant when compared with its diaphoretic and febrifuge properties. In all cases where a cooling, non-exciting, but efficient diaphoretic is indicated, it is a highly appropriate remedy. When combined with caulophyllin, it is one of the very best agents we possess in the cure of amenorrhœa, dysmenorrhœa, in after-pains occurring after the parturient period, and for the suppression of lochia.

Dose of the corallorhiza is from twenty to thirty grains, to be given in water as warm as the patient can drink.

Combined with dioscorein, I have found it quite a specific in flatulent and bilious colic.

CORNUS FLORIDA—(*Dogwood*)—Is a small indigenous tree, known as *boxwood*, *flowering cornel*, &c. Grows in various parts of the United States; abundantly in the Middle States; flowers during April and May.

The bark of the stem, branches, root, is the officinal; that from the root is the best. Its properties are taken up by water or alcohol.

A dried aqueous extract is extensively prepared and sold under the name of *cornine*, but it is less efficacious as a remedy than the powdered bark. The same may be said of the so-called *cornine*, obtained by precipitation from the tincture of the bark.

Properties.—The bark is tonic, slightly astringent, with stimulant properties. It is a good substitute for Peruvian bark. During the war, it was used quite extensively in the Southern army, and was proved to be a sovereign remedy for malarious diseases, and rarely failed to cut short attacks of intermittent and remittent fever. Its internal use increases the strength and frequency of the pulse, and elevates the temperature of the body. *Dose* of the bark, from twenty to sixty grains. An extract, prepared by boiling it in water and evaporating to the proper consistency, will be found the best form in which to administer it.

Dose.—From five to ten grains.

CORYDALIN.—This valuable agent is derived from the *corydalis formosa*, which yields four principles: a resin, resinoid, alkaloid and neutral, all combined in the corydalin. It possesses alterative, tonic, diuretic, antisyphilitic, antiscorbutic and resolvent properties.

I have proved it to be most valuable in syphilitic affections and in scrofula. I put it to the test in a case of secondary syphilis, and in the course of two months a radical cure was effected.

This invests it with peculiar importance, when we consider how impotent all the old school remedies are in such cases.

In scrofula, associated with feeble digestion and poverty of the blood, it is of rare value.

In these cases give two or three grains thrice daily. Some special visceral derangements may indicate the propriety of alternating it with some other remedy.

In cutaneous eruptions, dropsies, gravel, and the various affections of the urinary organs, it is highly valuable. I consider its action as a diuretic to be very valuable, not on its direct influence in increasing the secretion of the urine, but on account of its resolved and alterative properties. In passive leucorrhœa, catarrhal affections of the bladder, incontinence of the urine, &c., this is a most valuable remedy. Average dose is two grains. I have never observed it disagree with the stomach, and it is an excellent remedy to employ as a tonic in irritable conditions of that organ.

Its action is a stimulant to the absorbent and glandular structures. It is, perhaps, as good an agent as we possess for removing systemic poison from the system. The body is endowed with the power to eliminate any virus from the system. If it had not this power remedies would be useless, for drugs may arouse sluggish capabilities, but can bestow none originally inherited.

CRAMP BARK.—A powerful antispasmodic, with a special action upon the uterus, relaxing, soothing, bracing. In the following form it is unexcelled:

R̄.—Fl. ext. cramp bark, ℥ii;
 Fl. ext. skunk cabbage,
 Fl. ext. skull cap, āā ℥i;
 Fl. ext. cloves, ℥ss;
 Fl. ext. capsicum, ℥ii;
 Sherry wine, Oiiiss.—*Mix.*

Dose.—A tablespoonful; repeat as indicated.

CROCUS SATIVUS, or SAFFRON.—Though this remedy is not extensively used, yet I consider it unsurpassed as an emmenagogue, at least for some cases. It is used in amenorrhœa, dysmenorrhœa, chlorosis, hysteria, and in suppression of the lochial discharge. It is sometimes used in febrile and exanthematous diseases.

Dose of the tincture is from twenty to forty drops.

An infusion in small-pox and scarlet fever is of great utility, given so as to maintain the eruption upon the skin.

CUNDURANGO.—This shrub, or vine, is a native of South America, and belongs to the family of *asclepiadaceæ*, and is a climbing, milky shrub. One of a number of the various species is cultivated in the gardens of Europe, (*asclepias syriaca*,) and known by the name of wild cotton or silk plant, from the silky fibres to which the seeds are attached.

The properties of this numerous family are so varied that some are emetic, others tonic, deobstruent and diuretic.

The white cundurango has lately been brought to the notice of the medical profession; and besides its tonic, deobstruent and diuretic properties, it is distinguished by its singular and providential quality as being *anti-cancerous*.

This remedy appears to have many admirable qualities, especially in the following affections: In rheumatism, (tendinous or muscular,) in various neuralgias, in cutaneous affections, in many diseases of the blood; and in cancerous diseases it is looked upon as almost a specific. Many well attested cures of cancers appear to leave no room for doubt about the efficacy of cundurango in this terrible disease. Those using the plant ought to be careful to get the right species. Besides the botanical character by which it is distinguished, and the smallest quantity of the resin peculiar to the cundurango, evident at first sight, the following peculiarities may be useful to distinguish the true article: A concentrated decoction gives no reaction with test paper. A decoction of the other varieties give an alkaline reaction. That of the cundurango treated by ammonia, gives a fine orange-yellow tint, whereas, the others yield a greenish-yellow. The cundurango gives out an odor of pyroligneous acid, treated by concentrated nitric acid, which is not the case with the other varieties.

The decoction has a straw color and a characteristic odor, somewhat balsamic, like nutmeg, which by itself distinguishes it from the others, which is turbid, mucilaginous and inodorous.

The above characteristics are meant for the white cundurango, of which the bark is generally used, the woody fibres being too weak administered in the form of decoction, fluid extract, tincture and solid extract.

CYPRIPEDIN.—This is the active principle of cypridium, or wild ladies' slipper, and possesses antispasmodic, nervine, tonic, narcotic and diaphoretic properties. It is useful as a nervine and antispasmodic, and is often useful where opium will not agree; it must not be forgotten, however, that it possesses some narcotic power, and so may be contra-indicated, as in opium. I have used it in the treatment of fevers, pleurisy and rheumatism with satisfactory results, having found it to allay pain, abate delirium, promote perspiration, and to procure sleep. In fevers, however, it is usually combined with *asclepin*. Rheumatism, gout, neuralgia, hysteria and nervous headache, all indicate its use, as well as

chorea, hysteria, hypochondria and nervous debility. Its action is generally more marked and curative when combined with some of the other tonics, selecting always the one that is most specific to the case on hand.

Dose.—Two to five grains, three or four times daily, as may be required.

Its physiological action is manifest in those cases where the gray nerve tissue is disordered, as the result of over-excitement, mental exertion, reflex or other irritation; hence its value in epilepsy depending on nervous irritation. So also in chorea it is very beneficial. In spermatorrhœa, with great nervous prostration, mental despondency; in fever, where the cerebro-spinal forces have become exhausted, and in delirium tremens, where we have a true anemic condition of the brain, cypripedin will effect most extraordinary results.

Wherever there is lack of nerve power, either enfeebled or exhausted, wherever there is a drain on the vital forces, wherever there is pure exhaustion, this remedy fills the vacuum in our *Materia Medica* too much neglected.

From my experience with this remedy, I regard cypripedin as having the effect of staying a destructive change, and equalizing the system. The origin of life is in the nervous system, so that if a destructive force is brought to bear upon it, it destroys the equilibrium, and some part is deadened and sluggish. The restoration of this balance is to be effected by raising the defective vitality of the nervous system by appropriate remedies.



DATURA—The active principle of the stink weed, and is obtained by exhausting the bruised seeds with boiling rectified alcohol, and then proceeding as for the active principle of hyoseyamus. An empyreumatic oil, of a poisonous character, has been obtained from the stramonium plant by submitting it to destructive distillation.

Properties and Uses.—In large doses, an energetic, narcotic poison, producing dryness of the throat, thirst, nausea, nervous agitation, dilatation of the pupil, perspiration, occasional relaxation of the bowels, and in some cases diuresis. In medicinal doses it acts as an anodyne antispasmodic without causing constipation, and will prove serviceable in cases where opium cannot be given.

It has proved valuable in mania, epilepsy, gastritis and enteritis, and may likewise be used to allay rheumatic and neuralgic pains.

In combination with quinia it forms an invaluable preparation, which has been found very beneficial in intermittent fever, all periodic headaches, delirium tremens and dysmenorrhœa.

It is said that the seeds exert an influence to prevent abortion superior to anything else. Seven seeds at first, then one every hour, as may be required.

In plethoric habits, and in patients with determination of blood to

the head, stramonium must be administered with caution, keeping the excretory organs in an active condition during its employment.

An ointment is an excellent application over the bowels in severe forms of gastritis, enteritis, peritonitis, and to all species of painful ulcers, acute ophthalmia, swelled breasts, inflammatory rheumatism and hemorrhoidal tumors; and in many instances, when applied to the perineum in cases of retention of urine from enlarged prostate, when it was impossible to introduce a catheter, and after having allowed it to remain for half an hour, have been enabled to pass the catheter with ease and facility, and thus afford relief to the patient. It acts with similar good results in urethral stricture.

In cases where the ointment cannot be obtained, a plaster of the alcoholic extract, or inspissated juice, may be applied over the affected parts; or the extract may be rendered thin by heating it in diluted alcohol, and then formed into a poultice, with meal or moistened bread applied.

Where you wish to produce dilatation of the eye in the absence of belladonna, the extract of stramonium may be mixed up with lard and rubbed over the eye-lid, or a solution of it dropped into the eye previous to the operation for cataract.

It is strange that such a powerful agent, and one so readily obtained in this country, should have so little attention bestowed upon its peculiar properties. It is supposed to be identical, in medicinal virtues, with belladonna, but this supposition is based upon no positive investigations, but only upon an apparent identity of action. It possesses antagonistic power to the poisonous effect of opium, and, as far as known, may be substituted for belladonna in almost all cases.

Dose of the extract, which is the best form for administration, is from one-eighth of a grain to two grains; of the tincture, from five to thirty drops, gradually increasing the dose.

DELPHINIA.—This is the alkaloid of the staphisagria. It is prepared by digesting the seeds in water, acidulated with sulphuric acid, and precipitating the acid liquid by an alkali. Wash the precipitate and digest it in boiling alcohol, which treat with ivory black. Filter and precipitate the delphinia by ammonia; dissolve this in alcohol, and we then have the alkaloid in fine powder.

It is odorless, amber-colored, acrid, and of a persistent taste, soluble in alcohol or ether, fuses at 248°, and forms salts with the acids.

Delphinia possesses peculiar properties, having a special affinity to the brain and spinal cord. Its toxicological symptoms are vomiting, giddiness and convulsions. Medium doses cause a depressed condition of the mental faculties, dullness, with a disposition to vertigo, and even prostration.

In some of its physiological properties it very much resembles

cannabis indica and opium, having a specific action upon the pneumogastric and great sympathetic nerve—the solar plexus.

In proof of this, I have proved this remedy to be a specific, as an anti-emetic when the stomach is most irritable, and I like it better in the sympathetic vomiting of pregnancy than cerium. It calms an irritable stomach speedily, and, by its peculiar action on the centres of life, the patient experiences a most exquisite relief.

The dose for this purpose is from two to ten drops, repeated every two hours, in a little water.

I have found staphisagria a most excellent remedy in dropsy, amenorrhœa; also, in those morbid conditions where calculi are secreted or formed in the kidneys or bladder, and also in gonorrhœa. It undoubtedly acts by its relaxing properties, unlocking, as it were, the serous and other tissues through the agency of the nerves.

It is this peculiar property that renders the remedy so exceedingly valuable in relaxing the spasmodic indications of asthma. Small doses, for this purpose, are to be preferred.

By some this agent is considered to be a specific in controlling irritation of the urino-genital organs, as in the prostaticorrhœa resulting from masturbation in chronic irritation of the neck of the bladder, especially when the result of gonorrhœa or cold, and accompanied with temporary enlargement or irritation of the prostate in chordee, and in prostatic gonorrhœa. It has also been found useful in uterine affections, attended with deep-seated soreness, dragging, bearing-down pains, painful or scalding micturition and leucorrhœa; in mental irritability and hypochondria, restlessness attending painful exhausting diseases, give a teaspoonful of the tincture three or four times a day. Its use is contra-indicated in active inflammatory conditions.

If we give the drug in large doses, and gradually increase it till the patient is brought completely under its influence, we have an inimical and destructive agent to worms. For external use the diluted tincture of staphisagria, or the alkaloid delphinia, made into an ointment, may be used with the best results in infectious or contagious skin diseases to destroy the various species of vermin that invest the human body.

It may also be successfully used in neuralgia, rheumatism, paralysis; in strength varying from ten to twenty grains of the delphinia to the ounce of simple cerate. The ordinary dose of a saturated tincture is fifteen drops every three hours.

DEWBERRY, RASPBERRY AND BLACKBERRY.—These plants all possess similar properties, and may be substituted the one for the other. The bark of the old roots, or the smaller roots of dewberry and blackberry should always be preferred, as the woody portions are inert; their odor and taste are similar, and they impart their virtues to water, alcohol or port wine. They contain a large

quantity of tannic acid, with bitter extractive; no accurate analysis has been made of them.

Properties and Uses.—These plants are useful astringents. An infusion or decoction of the leaves of raspberry, or the bark of the roots of the other two, has been found an excellent remedy in diarrhœa, dysentery, cholera infantum, relaxed conditions of the intestines of children, passive hemorrhage from the stomach, bowels or uterus, and in colliquative diarrhœa. The decoction used as an injection is useful in gonorrhœa, gleet, leucorrhœa, and prolapsus uteri and ani; in prolapsus uteri it may be used either alone or combined with the internal use of decoction of equal parts of black cohosh and blackberry roots, taken freely. The leaves of the raspberry in decoction with cream will allay nausea and vomiting, and, combined with aromatics, has been found useful in diarrhœa, cholera morbus and cholera infantum.

It is said that raspberry will, during labor, increase the activity of the uterine contractions when these are feeble, even in instances where ergot has failed, and that it has been found serviceable in after-pains.

The *fruit*, especially that of the blackberry, makes an excellent syrup, which is of much service in dysentery, being pleasant to the taste, mitigating the accompanying tenesmus and sufferings of the patient, and ultimately effecting a cure. Raspberry syrup added to water forms a refreshing and beneficial beverage for fever patients and during convalescence. That of the blackberry being more astringent, is better adapted to cases of diarrhœa, dysentery and cholera infantum.

Dose of the decoction of these plants, from one to four fluid-ounces several times a day.

DIGITALIN—Is the active principle of *digitalis purpurea*, or fox-glove, and possesses narcotic, arterial, sedative, alterative, resolvent, diuretic and antiseptic properties.

This remedy has a very extensive physiological action. When given in small repeated doses, to a healthy person, in from twenty-four to forty-eight hours the following symptoms will be developed: The secretion of urine will be augmented, as well as the secretions of mucous membrane; impaired digestion, with nausea, pain in the stomach, loss of appetite, and colicky pains in the bowels. It may either diminish the pulse to half the normal number of beats, and may become small, soft and feeble; or it may produce the opposite effect upon the arterial system, giving rise to local congestions, hemorrhage of the lungs and the like.

In cases of general debility, however, the depressing power of digitalin is uniformly manifested. When administered in larger doses, it first stimulates the arterial system, producing vomiting, diarrhœa, obscured vision, *muscæ volitantes*, dilatation of the pupil,

vertigo, stupor, intense headache with congestion; but these soon pass away, and symptoms of great depression, antithetical to those first produced, set in, and frequently continue for several days.

When digitalin is given in very large doses, its action upon the stomach and intestines is similar to that which caustic potash produces—a severe burning sensation in the throat and stomach, salivation, thirst, spasm of the glottis, painful retching and vomiting of greenish matter, diarrhœa, delirium and convulsions. These symptoms are succeeded by insensibility, general paralysis, &c.

This powerful agent depresses and retards the activity of the *positive vital forces* engaged in the process of organic formation and reproduction; but it stimulates and quickens the activity of the negative force—acting in the former case on the *arterial* system, and in the latter on the *venous* and lymphatic systems.

It has been somewhat disputed whether digitalin acts primarily upon the heart and arterial system in producing sedation, or whether this is the result of counter-stimulation, and only secondary. From extended observations at the bedside, I consider the former to be the correct opinion.

This remedy is indicated wherever there is a morbidly increased activity of the arterial system. This may arise from two distinct causes: 1st, from a superabundance of the materials of excitement in the blood; or 2d, from a morbid irritability of the heart and arterial vessels. In either of these conditions digitalin is of great use; but where both of these causes are operating together, it is better to alternate it with veratrin.

In rheumatic fevers it is of great service, for it not only reduces the fever, but checks the profuse sweats which arise from capillary congestion. So, also, in acute exanthematous fevers. One grain in two ounces of water, of which a teaspoonful should be given every hour, is a specific in scarlet fever, in lingering hectic and pneumonic fevers, in inflammations, in phlegmasia dolens, and in erysipelas.

It relieves the asthmatic and syncoptic symptoms connected with organic disease of the heart, and removes the chronic inflammation existing in diseased parts. In dilatation and aneurism of the heart, in carditis polyposia, in chronic dropsies, as chronic hydrocephalus, chronic hydrothorax, chronic ascites, &c., and in controlling the pneumonic symptoms accompanying phthisis pulmonalis, it is employed with good results.

It is contra-indicated in all cases of vital debility or atrophy. It is employed externally in the treatment of scrofulous ulcers and tumors, chronic exanthemas, psoriasis, &c., either dissolved in alcohol or made into an ointment with lard.

The average dose of digitalin is one-fifth of a grain; but perhaps, in most cases, it will be better to commence with a smaller dose. Neutralize undue acidity of the stomach prior to its administration, and render it as diffusible as possible by the free use of diluents.

This is done to avoid its cumulative action. I am extremely partial to the following combination in the most obstinate dropsies:

R_x.—Podophyllum, grs. xxx;
Bi-tartrate potassa, ℥ij;
Nitrate potassa, ℥i;
Digitalin, gr. i.—*Mix.*

Make ten powders, and give one every four hours, or combine it with the comp. powder of senna and jalap and bi-tartrate potassa in the same proportions.

Physiological action.—It exercises a special influence on the circulation—a sedative, calming action, which can only be explained by its excitant action on the ultimate branches of the sympathetic system.

DIOSCOREIN.—This remedy contains the three active principles, resin, neutral and mucilage, that are met with in the *dioscorea villosa*, or yam root, and is an excellent antispasmodic, diaphoretic and expectorant. It is a specific in bilious colic, and it is a valuable remedy in cholera morbus, nausea attending pregnancy, spasms, coughs, hepatic disorders, after-pains, flatulence and dysmenorrhœa.

This is, without exception, the best remedy in the cure of bilious colic that we possess, affording prompt and certain relief. In cholera morbus it should be given in one-grain doses every twenty minutes, until the symptoms are subdued. Be sure and first neutralize the acidity of the stomach by combining a few grains of soda with each dose.

I have found it most valuable in the treatment of hepatic disorders, especially when accompanied with irritability of the stomach and spasms; but in these cases it is usually combined with leptandrin or juglandin, thus:

R_x.—Dioscorein, ℥j;
Leptandrin, ℥ij;
Mucil. acacia, q. s.—*Mix.*

Make a mass and divide into twenty pills, and take one or two of these twice daily, or

R_x.—Dioscorein, ℥j;
Juglandin, ℥j.—*Mix.*

Divide into twenty powders, one to be given every four or six hours, the latter to be preferred in cases of indigestion, accompanied with acidity, flatulence and spasmodic pains.

In hysteria, dysmenorrhœa and after-pains it is of great value, only it is better to combine it with caulophyllin, viburnin, scutellarin, cypripedin or lupulin. It is also recommended for the nausea accompanying pregnancy, and as an expectorant in the cure of asthma, hooping cough and bronchitis. In asthmatic affections combine it with apocynin, sanguinaria, hyoseyamus or eupatorin.

In whooping cough, with macrotin, asclepias, or wine or tincture of lobelia. For bronchitis, with ampelopsin and stillingia. This is pre-eminently antispasmodic, and a diaphoretic remedy safe and harmless.

Dose.—One or two grains, to be repeated as often as required.

Its physiological action would seem to be directly upon the nerves supplying the liver, stomach and bowels, and the organs of the pelvic viscera, producing profound relaxation.

DROSERA ROTUNDIFOLIA, OR SUNDEW.—This is an excellent remedy for affections of the throat and windpipe, caused by cold, especially whooping cough, hoarseness, associated with dry and scraping sensation in the throat; spasmodic cough, with discharges of blood from the nose and mouth; vomiting of food after coughing, water brash, bleeding at the nose, confused hazy sight, and frequent sneezing; chills, with coldness of face, feet and hands, or shivering fits, with great coldness of extremities and flushes of heat to the head; headache, pain as if it were tightly held, and pains felt upon every muscular effort. It is thus a good remedy in coughs, asthma and ulceration of the lungs. It is also used as a rubefacient.

Dose of the tincture, from ten to thirty drops.

The *physiological action* of drosera very much resembles belladonna and bromide potassa, acting specifically upon the great nerve centres, having a special action upon them in removing congestion. It is mild but positive in its action, and affords the patient suffering from bronchial irritation prompt relief.

DULCAMARA—*Bitter-sweet, or woody nightshade.*—This remedy possesses narcotic, diuretic, alterative and diaphoretic properties to a greater or less degree. It is of value in *scrofula*, where there are brain-like eruptions, swellings of the cervical, sub-maxillary and inguinal glands, swelling of the calf of the leg, and scrofulous inflammation of the eyelids.

I have proved it of great value in *rheumatic inflammations* caused by dampness or exposure to cold. The affected parts feel as if they had been bruised or beaten, alleviated by the patient moving about when the pains are worse in the back and joints of the arms and legs.

In *coryza*, especially when the patient is worse at rest than when in motion.

In *dropsies*, arising from exposure to cold, and general anasarca, dependent on fever and ague, scarlatina or rheumatic fever, where the patient's limbs, abdomen and face are bloated, urine scanty and fetid, dryness of skin, loss of appetite, thirst for cold drinks, nausea and constipation; symptoms worse at night and better on motion.

Dysentery, as a sequence of cold; the patient complains of cutting pains in the intestines, bloody discharges, sensation of burning and itching of the rectum, great thirst and heat of skin.

Diarrhœa.—It is especially applicable in cases of watery diarrhœas, but I have used it with great success in many cases where it arose from teething, worms and errors in diet, whether the discharge was mucous, slimy, bilious or sanguineous. Indeed, I regard this agent as one of the best known for the treatment of this disorder. It is very useful in *urticaria*, when brought about by taking cold, and where the patient complains of nausea, hot skin, thirst and bitter taste; worse in his room, and feels better in the open air.

In the form of ointment it is used as a discutient to ulcers, and in some forms of cutaneous diseases. Equal parts of the dulcamara, yellow dock root and stillingia, made into a syrup, form a valuable preparation for scrofulous affections as well as syphilitic.

Dose of tincture, from fifteen to twenty-four drops.

The medicinal virtues of dulcamara are not well understood. There can be little doubt, from the symptoms developed under the use of the remedy, but that it acts upon the nervous system very much like some of the acro-narcotics, as is demonstrated by the nausea, vomiting, faintness, vertigo, convulsions, numbness and pricking dryness of the mouth, palsy of the tongue. Dulcamara, either in its primary or secondary action, is a most valuable remedy; perhaps as an alterative unequalled, at least in skin and other affections.

ELATERIN—Is the principle on which the active properties of the drug depend. It is obtained by exhausting elaterium thoroughly with boiling rectified spirit, concentrating the tincture so long as no separation takes place, and then pouring it while hot into a weak boiling solution of potassa. The potassa retains the chlorophylle, and the elaterin crystallizes on cooling in capillary colorless crystals.

Properties and Uses.—Elaterin is an energetic hydragogue cathartic, operating with great violence in doses of a few grains, causing diffuse inflammation of the stomach and bowels, characterized by vomiting, griping pain, and profuse diarrhœa.

In ordinary medicinal doses it produces copious watery evacuations, attended with considerable depression of the circulation and nervous system, and most generally nausea and vomiting; hence it is often used in dropsy to aid in removing the effused fluid, as a revulsive in cerebral affections, and wherever a revellent effect is indicated. It also augments the urinary discharge.

Elaterin has lately been used extensively in chronic inflammation of the neck of the bladder, and it is considered to be a specific in those cases. It is more especially useful in cases in which there is

a constant more or less painful sensation in the region of the neck of the bladder, when the urine passes in a torrent, as if poured through the urethra, and when, after micturition, there is a violent cramp-like aching in the parts, often extending over the whole lower pelvic region and thighs. The saturated tincture is employed, in doses varying from five to thirty minims; mix it with simple sarsaparilla or other syrup, so that a teaspoonful of the mixture may be taken at a dose, and repeated three or four times a day.

It must be used carefully, so that it does not purge, although occasionally cases will be met with in which, if its purgative effect is produced by the first doses, its subsequent influence will be more decided. The dose should be small at first, and gradually increased as it can be borne. It proves useful in chronic gastritis, and chronic inflammation of other mucous membranes.

Dose of the elaterin, from a quarter to half-grain every hour or two.

ELDER FLOWERS.—*Sambucus canadensis* is an indigenous shrub, growing in all parts of the United States in low, damp grounds, flowering in June and July. The officinal parts are the flowers, the berries and the inner bark. The odor of the flowers is heavy and quite powerful when fresh, but faint when dried; they are slightly aromatic and bitterish, and impart their virtues to hot water.

Elder flowers contain volatile oil, acrid resin, tannic acid, malates of potassa and lime, mineral salts, a trace of sulphur, &c.

Properties and Uses.—In warm infusion the *flowers* are diaphoretic and gently stimulant; in cold infusion they are diuretic, alterative and cooling, and may be used in all diseases requiring such action, as in hepatic derangements of children; and in erysipelas, a decoction of the blossoms, locally and internally, is a specific excelling other forms of treatment.

The expressed juice of the berries, evaporated to the consistence of a syrup, is a valuable aperient and alterative; one ounce is sufficient to purge. An infusion of the young leaf buds are likewise purgative, and sometimes act with violence. Large doses produce emesis; in small ones it proves an efficacious deobstruent, promoting all the fluid secretions, and is much used in dropsy, especially that following scarlatina and other febrile and exanthematous diseases, as well as in many chronic diseases. An ointment prepared with lard or cream is an excellent discutient, and is of much value in burns, scalds, and some cutaneous diseases. The inner bark has been successfully used in epilepsy, by taking it from branches one or two years old, scraping off the gray outer bark, and steeping two ounces of it in five ounces of hot water for forty-eight hours. Strain, and give a wineglassful every fifteen minutes when the fit is threatening, the patient fasting. Resume it every six or eight days.

ELECAMPANE—(*Inula Helenium*.)—This herb is common to Europe and cultivated in this country, growing in pastures, along roadsides, &c.

The root is the part used; should be gathered in the second year of its development. It yields its properties to alcohol or water, but especially to the former.

Inulin, one of the principles of elecampane, is a fine white starchy powder, tasteless and inodorous. Iodine gives it a yellow color, which distinguishes it from starch, and also renders it insoluble in water. In addition to this principle, elecampane contains another, called *Helenin*, which forms in colorless prismatic crystals.

Properties and Uses.—It is an aromatic stimulant and tonic, expectorant, emmenagogue, diuretic and diaphoretic. It is used in affections of the lungs, weakness of the digestive organs, hepatic torpor, dyspepsia; and internally and externally in tetter, itch and other cutaneous diseases. The alcoholic extract, combined with powdered extract of liquorice, benzoic acid, sanguinaria and morphia, forms a pill, valuable in pulmonary irritations.

Dose of the infusion, one fluid-ounce.

EPILOBIUM.—Attempts have been made to isolate the active principle of this invaluable plant, but all have resulted in glaring failures; so that, to obtain its invaluable properties, we must hold on to a simple infusion as the most eligible mode of administration. The leaves and roots are the parts used.

The properties and therapeutic action are those of an astringent, demulcent and tonic to mucous surfaces; hence, it is beneficial in chronic diarrhœa, dysentery, leucorrhœa and all ulcerations of mucous surfaces.

It is, perhaps, the most valuable remedy we possess in ulceration of the bowels, dysentery, cramp, colic, &c.; as a poultice for foul, flabby ulcers, it has no equal.

ERGOT.—The principal and well-known use of this remedy is its efficacy in parturition. It produces a constant unremitting contraction and rigidity of the pregnant uterus, rather than that alternation of spasmodic effort and relaxation which is noticeable in the natural process of labor. Consequently, unless the os uteri and the external parts are sufficiently relaxed, the medicine is apt to produce injury to the foetus by the incessant pressure which it maintains, and the death of the child may occasionally result from its injudicious employment. It is especially adapted in those cases of lingering labor where the os uteri is sufficiently dilated and the external parts sufficiently relaxed, when no mechanical impediment is offered to the passage of the child, and the delay is solely ascribable to want of energy in the uterus.

Other cases are those in which the death of the foetus has been ascertained, and great exhaustion, or dangerous constitutional irritation, imperiously calls for speedy delivery.

This remedy may also be given to promote the expulsion of the placenta, to restrain inordinate hemorrhage after delivery, and to hasten the discharge of the foetus in protracted cases of abortion.

As a prophylactic, a dose of ergot given women subject to dangerous flooding immediately before delivery often produces the happiest effects.

It is very useful in uterine hemorrhage, unconnected with pregnancy.

We can safely recommend it in pulmonary hemorrhage, having proved its efficacy in such cases. Gonorrhœa, gleet, leucorrhœa, dysmenorrhœa, chronic dysentery and diarrhœa, inordinate thirst, excessive sensitiveness of the eyes, paraplegia, paralysis or debility of the bladder and rectum, spermatorrhœa, hooping-cough, hysteria, intermittent fever and pulmonary consumption are among the complaints in which it has been recommended.

Dose.—In cases of parturition, ℥j to ʒss; in cases of leucorrhœa, five to ten grains, three or four times a day.

But it is usually given in decoction, ʒj of it bruised, ʒvj boiling water; boil ten minutes, sweeten, and give one-third every half hour in parturient cases.

Ergot is administered daily by physicians without a moment's consideration of its physiological effects on the human system.

It is true, it is given empirically to excite uterine contractions or arrest hemorrhage, but why it does so very few pretend to know. It is also a well-ascertained fact that other remedies, as belladonna, macrotin, electricity, &c., act in an analogous manner. Ergot will cause dilatation of the pupil, produce stupor, delirium, clearly showing that it possesses what are termed narcotic properties. Besides this remarkable action on the nervous centres, if given in large doses and frequently repeated, it will act as a destructive poison, acting by catalysis, and so impregnating the whole circulating fluids, endangering the life of both mother and foetus, more especially the latter; consequently, its free use in the early stage of labor is highly dangerous and inadmissible in the practice of all true Eclectics.

It is impossible to estimate the destructive effects of this agent in our infant mortality records, but there can be but little doubt that a large per centage of still-born children owe their untimely fate to this drug; and it is a question, which naturally suggests itself to the philanthropic mind, whether the great increase of brain disease among our infantile population is not due, in a great measure, to the abuse of this remedy? Very true, we are prone to attribute the nervous disorders of the age to our advanced civilization, to the remarkable impressibility of the female character and the like; but there often exists a cause which the observing physician only can

detect, and that one is due to the indiscriminate use of ergot in labor.

In an extensive and highly successful obstetrical practice of over a quarter of a century, I can safely assert that I never administered a dose of ergot until the head had distended the perineum. Its use earlier is fraught with danger.

If given before complete dilatation of the os uteri has taken place it will produce constant unremitting contraction and rigidity, and rather tend to retard labor, and no doubt the death of the child, or a predisposition to convulsive disease is often the result; and in the mother we often have puerperal convulsions, hour-glass contractions of the uterus and general derangement.

The cases in which some think it applicable are those of tedious labor, *where* the os uteri is sufficiently dilated, *where* the external parts are sufficiently relaxed, *where* no mechanical impediment exists or is offered to the passage of the child, *where* the delay is solely due to want of energy in the uterus.

Given at the time when the second stage of labor is about terminating, it may be useful to promote the expulsion of the placenta, to restrain inordinate hemorrhage after delivery, to hasten the discharge of the fœtus in protracted cases of premature labor, to expel coagula of blood, polypi, hydatids, &c., from the uterine cavity.

Ergot has been recommended as a hæmastatic, and there is no doubt of its therapeutic power, but very grave doubts exist as to its beneficial effects for this purpose.

Its action as a styptic is not in causing contraction of the capillaries, or in interfering with the current of the circulation, but it acts by its poisonous effects as a direct paralysing sedative.

Physiological effects of ergot.—Very much resembles belladonna, being the two most powerful remedies we possess in removing or diminishing congestion of the spinal cord and its membranes. *Both* dilate the pupil, *both* produce contractions of the uterus, *both* are powerful excitants of unstripped muscular fibres in the uterus, bowels, iris, &c. Belladonna, however, acts more powerfully than ergot on the bloodvessels of the iris and breast, on the muscular fibres of the bowels and sphincter of the bladder. So that for dilatation of the pupil, the removal of congestion in the brain for the relief of strangulated hernia, for the arrest of the secretion of milk in the female breast, and for the effectual cure of nocturnal incontinence of urine, belladonna is specific.

Ergot acts more than belladonna on the muscular fibres of the uterus, and on the bloodvessels of the cord, producing violent contractions of the former.

The excitability of smooth fibres and of striated muscles varies exceedingly in different parts of the body; for example, cold, heat, galvanism, belladonna, ergot, macrotin, &c. *Excitants* will produce more powerful contractions in some parts than in others. Galvanism

stimulates the smooth fibres of the uterus to contract most powerfully; cold applied to the spine causes the smooth fibres of certain bloodvessels to contract more energetically than galvanism; ergot, as an excitant, produces powerful contractions in the bloodvessels of the spinal cord, and this, by reflex power, is at once propagated to the uterus, inducing powerful contractions.

A knowledge of the properties of ergot at once opens up a wide field for its use; in all morbid states, where congestion of the cord is the prevailing type of diseased action, as in spermatorrhœa, hysteria, paraplegia, paralysis, hooping-cough, dysmenorrhœa, &c., the most promising and encouraging success attends the exhibition of this remedy, for it has been incontrovertibly demonstrated that ergot does diminish the amount of blood in the cord and its membranes.

To induce uterine contractions half a drachm in a little hot water, repeated every twenty minutes; to remove congestion of the cord give five-grain doses every three hours; to expel polypi:

R_y.—Ergotin, ℥j;

Aqua cinnamon, ℥iv.—*Mix.*

Dose.—A teaspoonful every half hour. The ethereal extract is an efficient form.

ERYNGIUM AQUATICUM—(*Water Eryngo, or Rattlesnake's Master.*)—This plant is indigenous to America, and is abundantly met with in swampy districts, especially on the prairie lands.

The root is the officinal part, from which a syrup, decoction and tincture are prepared.

It possesses diuretic, stimulant, diaphoretic and expectorant properties. I can confidently recommend it in dropsy, nephritis and calculous affections; also in scrofula and syphilis, and in pulmonary diseases.

Two ounces of the pulverized root, added to one pint of good Holland gin, has effected cures in obstinate cases of gonorrhœa and gleet. In hemorrhoids and prolapsus ani, two or three-grain doses of the pulverized root have proved effective in removing those diseases.

It is used internally and externally to cure the bites of snakes and insects. It also exerts an influence upon the reproductive organs, lessening erectile power, and proving effectual in cases of seminal losses, pain in the testes, &c.

Dose of the decoction is two to three ounces several times a day.

ERYTHROXYLON COCA.—This grows luxuriantly in South America to about six feet in height. Its leaves are about one inch in length and of a light-green color; its flowers are white and produce a red berry. In its cultivation the soil is well prepared previous to the sowing of the seeds, and then divided into different compartments. After the sprout has come out, which takes place in a few weeks,

and when they have grown to two or three feet in height, they are transplanted to other grounds, within two or three feet of each other, which are called *cocales*. These plantations are formed in the most shady places for the purpose of protecting them from the heat of the sun, which is very powerful in the deep valleys of these regions. Indian corn is also sown between them, the broad shady leaf of which serves as an additional protection to them.

The coca plant grows luxuriantly in all the valleys, and arrives at perfection in about two years; the time is known by the height of its branches and the bitterness of its leaves, which break or fall on touching them. The Indians are careful in gathering the leaves, as they are delicate and easily broken from their stems. As soon as they are gathered they are laid upon the ground for the purpose of being dried by the sun, which, as this process gradually takes place, changes the color of the leaf from a light to a dark green. The leaves, when perfectly dried, are wrapped up in palm-leaves and covered with flannel, and are then fit for use.

The coca has been known to the Indians from a very early period, and is in general use among them.

The properties of the coca have been clearly defined. In large doses it is a powerful stimulant of an intoxicating kind; whereas, in small doses, it is the most powerful supporter of nerve life in the *Materia Medica*—being a potent agent in causing a renewal of life in the entire nervous system.

The physiological effects of the coca eater or smoker are, a high grade of vitality, physically as well as mentally; countenance and eyes unusually brilliant and animated; pulse strong and frequent; a great desire for activity and work; all the organs of the body in a high state of vigor; and it seems to lengthen out the period of human life. Besides, the coca is both salutary and nutritious, and is a remedy of inestimable value to all who use it. It seems to be a true prophylactic against all mental depression.

There are few plants that can be compared to the coca, its therapeutic effects are so varied and excellent. Independent of its great nutritive properties, it is undoubtedly the best nerve tonic we possess.

The leaves are the part used. From them cocaine is extracted.

In our practice we have used both with unparalleled success in several hundred cases of seminal weakness and sexual exhaustion.

Of all the parts of the human organism, the nerves that supply the genito-urinary seem to be directly under the influence of this drug. It seems under all possible conditions to be capable of giving tone, vigor, renewed life to those parts.

EUONYMIN—Is prepared from euonymus, or burning bush, and contains three principles, a resinoid, neutral and alkaloid.

It possesses tonic, laxative, alterative and expectorant properties.

In the treatment of indigestion, arising from hepatic torpor, it is

of peculiar value. Where there is acidity as an accompaniment, the juglandin will be found an excellent adjunct. It is one of our best remedies in obstinate constipation, though not as prompt as many other laxatives in its operation; it more than makes amends for its tardiness by the permanency of its influence.

It has also been used in affections of the respiratory apparatus, as bronchitis, laryngitis, coughs, colds, influenza and incipient phthisis.

I have found it useful in the treatment of dropsy; proves efficacious by reason of its resolvent, diuretic and tonic properties.

EUPATORIN PERFO.—Is derived from *eupatorium perfoliatum*, which contains three principles, a resinoid, neutral and alkaloid. It is alterative, resolvent, tonic, aperient and antiperiodic, when taken in small doses, and administered in powder or pill; and emetic, diaphoretic and febrifuge when exhibited in a warm fluid menstruum.

It is used considerably in solution in warm water to facilitate the action of other emetics.

I have cured intermittent and remittent fevers by its use in full emetic doses. During the intermission or remissions, administered as near the time of the expected chill or exacerbation as possible, following with small repeated doses to the production of free diaphoresis, which continue for six or eight hours, afterwards employing the remedy in cold solution, pill or powder, as a tonic.

It is of benefit in typhoid, typhus, epidemic dysentery, erysipelas, putrid sore throat, acting as an antiseptic. When given in small and frequent doses, it is a valuable diaphoretic and febrifuge in all febrile diseases; as such, give from one to three grains, every hour or two, in warm water; as an emetic, give from five to ten grains in warm water, repeating every half hour until it operates; and as a tonic and aperient, from three to five grains, three times a day, in cold water, pill or syrup.

EUPATORIN PURPU.—This remedy is derived from *eupatorium purpureum*. It is prepared from the root, and contains three principles, a resinoid, neutral and alkaloid. It possesses diuretic, stimulant, astringent and tonic properties. It cures gravel more from its alterative than from its direct diuretic influences. It is of great benefit in the treatment of almost all affections of the kidneys and bladder. In dropsy, stranguary, hæmaturia, gout and rheumatism, it is a valuable auxiliary agent. It acts beneficially in dropsy, on account of its stimulating influence upon the absorbent vessels, as well as by its diuretic powers. In this disease it is well to join it with helonin. I have arrested and cured several cases of hæmoptysis, hæmatomesis and other hemorrhages by the use of this remedy;

also have found it of value in dysentery, both as an astringent, and in the convalescing stages, as a tonic. It promotes assimilation, and restrains the diarrhœal tendency.

I set a high value on it as an expectorant in hooping-cough, asthma and other affections of the respiratory system. If the patient partakes of warm diluent drinks in connection with the eupatorin, a mild and pleasant diaphoresis is produced. Average *dose* is from three to five grains.

EUPHORBIN—Is derived from *euphorbia corollata*, or blooming spurge, and possesses emetic, cathartic, diaphoretic, expectorant and vermifuge virtues.

In repeated small doses it acts as a diaphoretic, inducing free perspiration, deterges the mucous coats of the stomach and bowels, stimulates the functions of the liver, and corrects the tendency to colliquative diarrhœa. It is emetic and cathartic in large doses. If acidity predominates in the stomach, its emetic powers are suspended, unless care be taken previously to neutralize the acidity by means of an alkali.

It powerfully excites the absorbent and venous systems, and is, therefore, an excellent remedy for the removal of dropsical effusions, often removing them when other means fail. When combined with podophillin, it is most valuable in the early stages of typhoid and other fevers, dropsy, cerebral congestion, obstinate menstrual suppressions, and for the removal of biliary concretions.

I have frequently found it effective in the treatment of cholera infantum, diarrhœa and dysentery.

It appears to have a peculiar influence over the glandular structure of the intestinal canal, promoting assimilation of fœcal matters. As a diaphoretic, the dose is from one-fourth to one grain, repeated every hour or two; as an emetic and cathartic, from two to three grains. Its diaphoretic and expectorant powers will be increased by combining it with asclepin, thus:

R \bar{y} .—Euphorbin, grs. x;
Asclepin, grs. xj.—*Mix.*

From one to two grains of this compound may be administered once every one to three hours, and will be found very valuable in fevers, acute rheumatism, pneumonia, pleuritis, acute bronchitis and dysentery.

In partial deafness, with tinnitus, from chronic catarrhal inflammation of the mucous membrane of the nares, fauces, &c., probably extending along the eustachian tube. In these cases cures have been effected almost invariably. Probably it will be found serviceable in other diseases of mucous tissues attended with debility and discharge.

Diminish the dose should nausea arise; but in some cases our

object is to induce and maintain a degree of nausea. It is contra-indicated in dropsy, accompanied with much debility. As an anthelmintic, give from half a grain to one grain, thrice daily, so as to keep the bowels relaxed somewhat. It is a famous remedy for those symptoms that are so well known as the concomitants of worms, and it very seldom fails us in such cases. I have also used this remedy with decided benefit in Bright's disease, alternated with helonin.

Its special therapeutic action is to increase the flow of bile, causing the pouring out into the intestinal canal of a large quantity of this agent.

FRAZERIN.—This remedy is of great value, and highly appreciated by all who have given it a fair and impartial trial. *Dose*, from three to five grains, thrice daily, well triturated in sugar of milk.

Its physiological action is an increaser of absorption. It braces up and tones the mucous membrane of the stomach. Hence, exosmosis is lessened and endosmosis increased. Digestion is rendered more rapid and effectual; nutriment is taken up more copiously and quicker. Give frazerin to a healthy person, digestion is quickened, appetite sharpened. This is its pure action, a tonic generally to the digestive tract. It is peculiarly suited to all temperaments.

GELSEMIN.—This most valuable remedy is derived from the *gelseminum sempervirens*, or yellow jessamine, being prepared from the bark of the freshly-dried or green root of the plant. We have proved the great value of this remedy again and again as a febrifuge, this action resulting from the relaxing and antispasmodic properties which it possesses. In this class of diseases it possesses a wide-spread as well as a peculiarly powerful influence; for its use is indicated in all the multifarious forms of fever, unless, indeed, those of a congestive form.

Gelsemin possesses a most perfect control over the nervous system, removing congestion and irritability. Combined with guaiacum and colchicum, it is a perfect antidote to gout and rheumatism.

But in order to secure the full benefit of its therapeutic effects, we require to give it in doses sufficient to produce its constitutional effects, and the patient kept under its influence until all the symptoms of the disease have disappeared.

Dimness of vision, double-sightedness, and inability to open the eyes, are some of its effects in the healthy body; but they are temporary, passing away in a few hours after the remedy has been discontinued.

In the treatment of fevers it is often beneficial to combine this remedy with asclepin and juglandin, thus:

R_y.—Asclepin,
Juglandin, āā grs. iv;
Gelsemin, gr. j.—*Mix.*

This combination will produce a cathartic effect. Acute rheumatism is often benefited by gelsemin; but it is desirable first to regulate the general system by the exhibition of podophillin and leptandrin.

But next in importance to its use as a febrifuge is the valuable service it renders us in the diseases of females, as dysmenorrhœa, pains after parturition, and hysteria convulsions; on the gravid uterus it excites contractions. In chordee, spermatorrhœa, spasmodic stricture, &c., gelsemin, combined with bromide of potass., lupulin, &c., is specific.

In all forms of convulsive diseases it is one of our most positive agents. It frequently is of good service in neuralgia; and, with tonics, in chorea, epilepsy, &c. In these cases about half a grain of the gelsemin is the average dose.

In delirium tremens it is superior to all other remedies, even capsicum. It is used in gonorrhœa, and it is about the best remedy we could employ for allaying the urethral inflammation. Doubtless this remedy is destined to occupy a more conspicuous place in our *Materia Medica*, as soon as its properties become better known than they are at present; although, even now, we derive such valuable aid from its administration, in cases where its use is indicated, that we could not carry on a successful treatment without it. There is no morbid condition that is not benefited with gelsemin. It is scarcely possible to classify its therapeutic or physiological powers, its mode of action is so varied; but after a long and extensive experience with it, I am satisfied that its primary action is on the nervous system; an action which arrests the destructive metamorphosis of disease.

The nervous system is least affected by vital decay—the part upon which disease has the least decomposing influence; so that it more frequently remains energetic, sensitive, motive, while others become deadened and inactive. But if we come in with gelsemin, we place a restriction upon the inconvenient force of the nervous system, we get a state near health, and guard the tissues against any abnormal disturbance. These remarks are verified when we see gelsemin positively arresting diseased action, as in intermittent fever, dysentery, chronic diarrhœa, neuralgia, bilious colic, convulsions, the passage of calculi through the gall-duct and ureters.

In the cough and hemoptysis of phthisis it is invaluable, arresting both with great promptness. The best form for exhibition is the tincture, made with diluted alcohol or whiskey, in doses of half a teaspoonful every two hours till its effects are experienced.

GERANIN.—This remedy is derived from *geranium maculatum*, and is one of the most valuable of the vegetable astringents. Unlike most astringents, it promotes, instead of suppresses, the secretive power of the mucous surfaces. It has a peculiar power of stimulating and contracting the calibre of the capillary vessels, especially those of the mucous surfaces. I have found it to be an excellent remedy, both in the first and second stages of dysentery, diarrhœa and cholera morbus; but it is exceedingly good in checking hemorrhages from the lungs, stomach, bowels, kidneys and uterus. In such cases give five grains every hour until the hemorrhage is arrested. In leucorrhœa, gleet and other affections of the mucous surfaces, its use is indicated.

The diarrhœa in the latter stages of phthisis pulmonalis is controlled better by this agent than any other I know of; as is also the vomiting in cholera.

Externally, it may be applied to ulcers, and combined with alum and gum arabic, it forms an excellent application to bleeding wounds and in epistaxis. As an astringent, this remedy can scarcely be overrated. Its true physiological properties are those of a pure astringent; a reviver of health in ulcerated parts of the intestinal canal; a tonic generally to the digestive tract. It restrains the formation of mucus, and in this way aids absorption of nutriment.

GOLD.—The chloride of gold acts as an energetic alterative, and it has no superior in primary and secondary syphilis, scrofulous and cancerous affections.

It is a remedy of decided efficacy and positive power, free from all deleterious effects, producing a constitutional change, and being freely eliminated by the kidneys.

The *dose* is from one-twentieth to one-thirtieth of a grain, three or four times daily.

It should be given on an empty stomach, well triturated in sugar of milk.

Its therapeutic action is to remove from the system effete matters which are toxically noxious to healthy life, and also to remove systemic poisons which are the cause of disease.

In other words, natural elimination is aided—it aids the system to destroy a virus or produce a change. The nervous system is stimulated by it; the skin, kidneys and bowels have increased work to perform; the glandular system is powerfully aroused; all of which render it a powerful, decided alterative.

I have used this substance as a caustic for several years, and have a high opinion of its usefulness.

It causes no pain when applied to the skin, and hardly any when applied to a mucous membrane. When applied to unhealthy surfaces it penetrates them, causing a great deal of pain; but its spreading is always prevented by the sound parts. I have found it

particularly useful in syphilitic, serofulous and scorbutic ulcers, and I have applied it with advantage to cancerous growths and ulcerations of the neck of the uterus.

. In a variety of similar cases I have proved it to be of great value, and would recommend it as well deserving a trial. It is used in the form of solution.

GOSSEPIIN.—This remedy is the active principle of the *gossypium herbaceum*, or cotton root.

Its Properties and Uses.—It is an emmenagogue of very great value; also, a diuretic. It is used in chlorosis, amenorrhœa and dysmenorrhœa, and will seldom disappoint the physician in such cases. It possesses a peculiar influence over the uterus, and seldom fails to bring on the menses, and renders good help in tardy cases of parturition, from its power of producing strong uterine contractions.

It is beginning to supersede the use of ergot in the aforementioned diseases. It has decidedly diuretic properties; also, acting in this way by augmenting the activity of the kidneys.

The average *dose* is from three to five grains.

Its action resembles a union of ergot and betin. It not only causes an increased determination of blood to the uterus but excites powerful uterine contractions.

HÆMATOXYLON.—In diarrhœa and dysentery, and diseases of destructive tendencies, an arrest or stoppage of the metamorphosis is to be effected by astringents that brace or tone the intestinal tract. The extract of logwood is one of those remedies. We regard the following formula as an excellent one:

Ry.—Extract hæmatoxylon, ʒj;
 Gelsemin, grs. x;
 Leptandrin, q. s.—*Mix.*

Make twenty-five four-grain pills; one every three hours.

HAMAMELIN.—This is the active principle of the *hamamelis virginica*, (*witch-hazel*), and is obtained from the bark of that shrub.

Properties and Uses.—While it contains tonic and sedative properties it is celebrated as an astringent, and certainly is one of no little value.

It may be employed with advantage in all cases where the use of astringents are indicated, but it is of the greatest value in all those diseases dependent upon an unhealthy condition of the mucous membrane of the vagina, intestinal canal, urethra, bladder and uterus.

It is highly valuable in hæmoptysis, hæmatemesis, hemorrhoids and other hemorrhages; also, in diarrhœa, dysentery, ulcerations of the stomach and bowels, leucorrhœa and gleet.

I have often cured cases of catarrh of the uterus and bladder with this remedy. It is of advantage in phthisis, in allaying the gastric irritability and checking the diarrhœa.

As a topical application it possesses a healing influence over inflamed mucous surfaces; thus, as a wash or injection for sore mouths, bowel complaints, bleeding piles, prolapsus uteri, ophthalmia, and in eczema, tinea capitis, as well as in other cutaneous diseases.

The average *dose* is from three to five grains, but there are cases where five to ten grains might be given both with safety and advantage.

The hamamelis virginica I have found to be of rare value in varices and other diseases of the veins; also, in all cases of injury, accompanied by *bleeding*, when *arnica* would otherwise be used.

It was used by the surgeons of General Wayne's army, in 1794, in the treatment of gunshot wounds, bruises, sprains and hemorrhages.

A lotion of sufficient strength for external use is made by adding one part of the tincture to ten parts of water, applying this to the affected part.

Its physiological action is a decided tonic to mucous surfaces, with a special action upon the veins. In the radical cure of varicose veins of the lower extremity, the elastic stocking constantly worn, under which the veins are kept moist with the extract of hamamelis, at the same time giving this remedy internally in teaspoonful doses, thrice daily, will effect a cure in the most obstinate cases. The salutary results are derived from its use in varicocele, circocele, hemorrhoids, &c.

HELENIN.—This is the active principle of *elecampane*, a plant much cultivated for its root, which was a favorite remedy with the old reformers of medicine, although almost comparatively neglected by the moderns. The active principle resembles camphor in many of its characteristics, having a faint aromatic odor, and a bitter, acrid taste.

One grain of the helenin, well triturated in sugar, and administered every two hours, acts as a mild diffusible stimulant to the organs of secretion, promotes expectoration, and is an excellent diuretic and sudorific. Altogether its action is pleasant, positive and salutary.

HELLEBORUS NIGER.—Black hellebore, a herbaceous plant, a native of Europe, and is cultivated in England as an ornamental flower. The root fibres are the officinal parts used. It possesses emmenagogue but especially cathartic properties.

It is useful in some cases of chlorosis and amenorrhœa, especially adapted to plethoric habits. Some regard it as an anthelmintic, and employ it to destroy worms in children.

Formerly it was much in vogue as a remedy for the cure of mental derangement, and for nervous diseases, epilepsy, palsy and apoplexy, but now it is seldom used.

I have found it of service in dropsy, particularly when complicated with intermittent fever, in anasarca of children, and in dropsical effusions of the brain. This is a powerful poison, producing inflammation of the stomach and bowels, vomiting, purging, convulsions, and even death. The recent root produces rubefaction, and even blisters, when held in contact with the skin.

Average *dose*: grs. x of the powder, or gtts xx of the tincture.

HELONIN—Is prepared from the root of the *helonias dioica*, or unicorn root, starwort, &c. An indigenous plant, abundant in the Western States. It possesses alterative, tonic, diuretic, vermifuge and emmenagogue properties.

It is, perhaps, unsurpassed in its curative virtues by any other remedy in nearly all those diseases that are peculiar to females; for it is alike appropriate in the treatment of diseases seemingly calling for dissimilar remedies, as, for instance, amenorrhœa and menorrhagia.

While these morbid conditions in their results are antithetical the one to the other, in both the power to secrete is wanting, though in the one case it is suppressed on account of the interposition of certain obstructions; in the other, the inactivity of the vital forces. In either case it is necessary to restore the secreting power, so as to bring back the functional equilibrium of the organs. This the helonin effects. It is of the greatest benefit in amenorrhœa resulting from or accompanied with disordered digestion and an anæmic habit. It restores the appetite, aids digestion and depuration, and thus favorably effects both the quantity and quality of blood. Besides this it has a marked influence over the organs of generation.

In this way it also is indicated in cases of prolapsus uteri, where there is a tendency to miscarriage, sterility and impotence.

To aid in the cure, in prolapsus uteri, place the stimulating plaster over the sacral region, and recommend the use of a vaginal enema, such as:

℞.—Hydrastin, ʒss;
Myricin, ʒi;
Boiling water, Oi.—*Mix.*

Infuse, strain and inject two ounces, twice or thrice a day. In dysmenorrhœa and menorrhagia:

℞.—Helonin;
Senecin, āā ʒij.—*Mix.*

Divide into twenty powders, and give one four times a day during the intermenstrual period, but discontinue during the catamenia,

and, instead, prescribe gelsemin or erigeron—the patient resuming the use of the former prescription when the period has ceased. It is often valuable in dropsies, but its good effects are better secured by being combined with some other remedy; thus, for general anasarca, combine with ampelopsin; dropsy of the abdomen, combine it with apocynin; for hydrothorax, hydrops-uteri, combine it with digitalin.

As a general tonic, in the convalescing stages of fevers, dyspepsia and dysentery, it can almost always be relied upon, for, as it is entirely composed of a neutral principle, it is soluble in water, and so will be tolerated by the stomach when other tonics might be rejected on account of the resinoid principle which they contain.

But, perhaps, this remedy is as efficacious in the cure of diabetes as in uterine diseases. I have found it of rare value in diabetes in diminishing the quantity of saccharine matter in the urine. In conjunction with this, in Bright's disease, an irritating plaster over the region of the kidneys, alkaline baths, nutritious diet and outdoor exercise are excellent adjuvants. Average *dose* is from three to five grains, three times a day.

HYDRANGEA VULGARIS—Is indigenous to North America, and grows freely under the most disadvantageous circumstances. It grows to magnificent luxuriance in the Susquehanna and Schuylkill valleys. It has great affinity for water, and it seems almost impossible to water it too freely; and in favorable circumstances it becomes a splendid shrub. The flowers are of different hues, pink, blue, &c., depending altogether on the nature of the soil in which it grows. But its botanical history is of little interest, when we look at its value as a remedy in the cure of a class of diseases often deemed incurable.

Properties and Uses.—This plant was used by the Indians from time immemorial in diseases of the pelvic viscera. The root of the plant contains all its medicinal properties, which are of the most active description. An analysis which I made shows the root to contain gum, albumen, starch, resin, and large quantities of soda, lime, iron, potassa, magnesia, sulphuric and phosphoric acids, so that its chemical properties at once stamp it as an agent of intrinsic worth.

An infusion of the cut root I esteem the most valuable; two ounces of the cut or pulverized root to a pint of water, of which a wineglass should be given every three hours. A saturated tincture is also active, in doses of a teaspoonful every four hours.

The *dose* of the fluid extract is the same. A syrup is not an eligible form.

The physiological action of this remedy is most remarkable; it is an active tonic, powerful solvent, efficient sialagogue, mild cathartic, and a most potent diuretic of peculiar character.

Its tonic power is manifest by administering this remedy in

inveterate chronic gleet, in mucous irritation of the bladder in the aged, in incontinence of urine in the young, and in all cases where there is debility of the pelvic viscera.

Its solvent power is most energetic in removing and dissolving calculous or gravelly deposits in the bladder, ureters or kidneys.

I do not claim the removal or dissolution of large calculi; but I do emphatically assert, from an experience of nearly a quarter of a century in its use, that there is no remedy like it in the *Materia Medica*.

It will perform what no other remedy will do, dissolve phosphatic deposits. Under the prolonged use of this remedy strictures will dissolve; the prostate gland, if enlarged, will subside to its normal condition; it will remove enlarged testicle; and altogether there are no obstructions about the urino-genital system but what it will effectually eradicate.

Besides this specific action upon the bladder, as a solvent for calculi, it is very beneficial as an alterative in syphilitic, strumous and gouty affections. As a cathartic and diuretic it is mild, but very efficient.

If it is administered in over-doses it seems to act as an irritant poison, producing emesis, dizziness of the head, tightness of the chest, and toxical symptoms.

Its therapeutic action is undoubtedly *chemical*; the soda, lime, iron, potassa, magnesia, phosphorous and sulphur forming a combination which all the science and art of our profession has so far failed to even approximate.

HYDRASTIN.—This is the active principle of *hydrastis canadensis*, or golden seal, and possesses laxative, cholagogue, alterative, resolvent, tonic, diuretic and antiseptic properties. This remedy is a powerful tonic, but exerts a marked influence upon the mucous surfaces.

It often acts as a laxative, without producing any astringent effects; and it seems to rank in therapeutic value between rhubarb, nux vomica and blood-root.

It is invaluable as a tonic during convalescence from exhausting diseases, such as bilious and typhoid fever, acute hepatitis, gastritis, enteritis, diarrhœa and dysentery.

I have found it of great service in chronic derangement of the liver. It possesses an especial influence over the hepatic structures and portal vein, in resolving biliary deposits, removing obstructions and promoting secretion.

I scarcely know a better remedy for the treatment of hepatic torpor than hydrastin; but still it may be combined with leptandrin. Such a combination I have found to be of rare value in such cases. It is one of the best remedies known for the cure of leucorrhœa, especially when associated with hepatic disorder.

The hydrastin is of inestimable value in indigestion, accompanied

with acidity, eructations, flatulency and ulceration of the mucous membrane of the bowels.

It is a superior remedy for cancerous and other ulcers applied externally; it corrects the acrimony and fetor of the discharges. Applied in the same way, it is used in ophthalmia, otorrhœa, catarrh and eczema; in ophthalmia use it as a collyrium, and in otorrhœa as an injection.

I have found it of great benefit as a gargle in sore throat, and in sore nipple used as a lotion. It is valuable, also, in gleet, chronic gonorrhœa and leucorrhœa, used in injection, five grains of hydrastin to one ounce of water. When employed externally, we use an infusion of the hydrastis, thus: ℥ss in powder, to ℥viiij of cold water. For internal use the average dose of the hydrastin is from three to five grains.

There are various valuable preparations of the hydrastin, as the sulphate, iodide and chlorate of hydrastin. Its physiological action is a pure tonic to all the tissues, but more decidedly to mucous membranes.

It is by far the best tonic in the *Materia Medica*, suitable for all temperaments; increases absorption, builds up tissue, braces and heals weak or abraded mucous surfaces. A pure tonic, applicable in every case where such is wanted.

HYDRIDES.—When hydrogen combines with the organic radicals it forms hydrides of them. The hydrides of methyl, ethyl, &c., are highly inflammable gases, but the hydride of amyl is a liquid, so light that it boils when held in the hand. It is obtained by careful distillation from the ordinary petroleum. The hydrate of amyl is a solvent to many medical substances, and this fact will unquestionably render it a valuable agent.

Iodized hydride.—Iodine dissolves readily in amyl hydride, and produces in the proportion of twenty grains to the ounce, a solution of great service in practice. When this solution is applied to the skin, the volatile hydride passes off as a vapor, and leaves the iodine in considerable quantity behind, stranded on the part in an equal state of distribution. This article is unquestionably the most active form of iodine we possess; it is so simple, painless and effective. In this form also it deodorises, destroys decomposing organic products, prevents absorption.

It may also be used with good success in all forms of ulcerated sore throat. The iodized hydride is the best disinfectant we possess for the sick room.

Oils and other fatty substances are freely soluble in this agent, which renders it very valuable in sensitive skin affections.

Ammoniated hydride.—Ammonia to a limited extent is dissolved in amyl hydride. It makes a valuable compound for the purpose of inhaling ammonia, but still better for the purpose of preserving pathological specimens.

HYOSCYAMIN.—Hyoscyamin is derived from *hyoscyamus niger*, or henbane. This remedy is a powerful narcotic and very poisonous; it produces deranged vision, dilated pupils, giddiness, headache, loss of speech, coma, convulsions, nausea, vomiting and intestinal pain.

When given to persons of full plethoric habit it stimulates the arterial system, but generally it reduces the force and frequency of the pulse.

It is an admirable anodyne, allaying pain, soothing excitability, and inducing sleep; so it is often given instead of opium. It does not produce constipation like opium, but has a tendency to act as a laxative.

It is useful in neuralgic and all spasmodic affections, asthma, gout, rheumatism, chronic cough, irritations of the urinary organs, and inflammatory cases, associated with nervous irritability, and not with high fever.

It promotes the action of the cutaneous exhalents of the lungs and mucous membranes generally, and also of the glandular structures, kidneys, &c. It is indicated in nervous affections, including those associated with hyperæsthesia, in all cases where there is an exalted condition of the sensibilities, such as painful acuteness of touch, &c. Hyoscyamin is useful in amaurosis resulting from nervous sensibility, nervous headache and toothache; useful in convulsions, accompanied with hyperæsthesia, and unaccompanied with fever or cerebral excitement; and in epilepsy, hysteria, tetanus and trismus, chorea, and in convulsions of children, especially during dentition. It allays the painful and inflammatory condition of ulcers and tumors, inflammation of the mammæ, &c.

The *dose* varies, according to the nature of the case, from one-eighth to one grain.

HYPERICUM.—St. John's wort grows extensively in this country and in Europe. It imparts its virtues to alcohol or water.

Properties and Uses.—Slightly astringent, sedative and diuretic.

It has been used in chronic urinary complaints, suppression of the urine, &c.; occasionally of benefit in diarrhœa, dysentery, worms, jaundice, hysteria and nervous affections, with depressions. Used externally, in the form of an ointment, it will dispel tumors, caked breasts, swellings, ulcers and ecchymosis.

Infuse the blossoms in sweet oil exposed to the sun, and you will have a fine red balsamic ointment which can be used with advantage for dressing wounds, cuts, ulcers, &c.; or it can be made in the same manner as the stramonium ointment.

Dose of the powder, from half to one drachm.

The saturated tincture is nearly as useful for an application to bruises, &c., and can be used in the same manner as the tincture of arnica.

IGNATIA AMARA, or *St. Ignatius' Bean*.—This is a tree indigenous to the Philippine Islands. The bean contains strychnia, more of it even than the nux vomica, though it is always prepared from the nux. Its medicinal properties are similar to the nux, only more energetic.

It is recommended in ague when purely nervous, especially if caused by fright or terror; in urticaria especially adapted, when occurring in nervous hysterical females; in sleeplessness when caused by grief or shame, the result of vexation; mirthful insanity, and in hemicrania with clonic spasms.

This remedy has a specific action on the spine, from which all the symptoms proceed. It is quite specific in trismus following an injury; is also of much benefit in tetanus, where the patient has extreme precipitation, involuntary lifting of the knees in walking; is obliged to sit down; tottering walk and false steps at the slightest obstacle; in epilepsy, in chlorosis, especially when the stomach is very delicate, and in diabetes, when associated with cerebro-spinal irritation.

Dose.—Of the powdered seed, one or two grains; of the alcoholic extract, from one-eighth to a quarter of a grain; of the tincture, ten to fifteen drops.

Its physiological action is the producing a specific congestion of the spinal cord and its membranes, causing an increased determination of blood to that part. In large doses it produces spinal irritation, and, if continued for an indefinite period of time, softening of the cord. Its use for two or three weeks in moderate doses excites sympathetic pain in the bifacial nerve, hence the frequency of clonic spasms under its use.

IODINE.—The action of this drug in large doses is an irritant and corrosive poison, having a special affinity to the mucous membrane and glands, exciting the sexual organs, and producing debility of the digestive organs, muscular weakness and emaciation.

In small or medicinal doses it is a stimulant, tonic, alterative, diuretic, emmenagogue and diaphoretic. It excites especially the absorbent and glandular system, and it has been detected in the urine, saliva, perspiration, milk, blood, in the form of hydriodic acid. It is supposed to undergo this change in the stomach and is then absorbed.

The salts of iodine, such as the iodide potass., have a remarkable affinity for metallic agents in the human body, as mercury, lead, &c., and freely eliminates them by the skin, kidneys and bowels.

The diseases in which iodine may be given with the best results, are scrofulous and syphilitic affections.

For internal exhibition, the pure iodine is best given in tincture in a glass of milk.

As a local application in diphtheria, iodine is unexcelled.

R_y.—Tinct. iodine;
Tinct. ferri chloride, āā.—*Mix.*

Paint the affected mucous membrane three times daily.

In scrofulo-syphilitic affections we have found the following excellent:

R_y.—Iodine tinct.;
Iodide potass., āā ʒi;
Aqua dist., ʒii.—*Mix.*

Sig.—A few drops in water, repeated as indicated.

The local use of iodine has been entirely superseded with iodoform.

The use of this compound, first brought prominently into notice by Bouchardat, is now employed extensively, not only for glandular enlargements, but, also, owing to its anæsthetic properties, in skin diseases accompanied with intense pruritus. Its odor is much more agreeable than that of chloroform, resembling that of saffron. Moretin and Humbert recommend it for internal use as possessing all the advantages of iodine, of which it contains 90 per cent., without any of its inconveniences. It exercises upon the sphincters a local anæsthetic effect so powerful, that defecation is sometimes performed unconsciously after its use; it therefore forms an admirable suppository in cases of hæmorrhoids, &c. Moutre's formula is: iodoform, powdered, twenty grains; cocoa butter, one ounce; melt, mix and divide into six suppositories. For frictions, the ointment is used in the strength of one drachm to the ounce of simple ointment.

Iodoform has proved itself singularly useful in all scrofulous affections.

To enlarged glands it is one of our best discutients. We sometimes use it as follows:

R_y.—Simple cerate, ʒi;
Iodoform, grs. xxx. to lx.—*Mix.*

Apply freely to the gland, swelling or tumor.

It is much more active when stramonium or phytolacca ointment is used instead of the simple ointment.

R_y.—Yolk of egg, (by weight,) 4 parts;
Glycerine, 5 parts;
Iodoform, grs. xl.

First rub up the iodoform with the egg and then the glycerine. Shake well, and paint the affected surface with a soft brush or feathers as often as judgment may dictate. On drying, an impervious film or layer is formed, which may be increased by repeated applications. We most confidently recommend the above as an admirable local remedy in chronic ulcers or sores, (whether cancerous or otherwise,) painful cutaneous diseases, and especially so in

erysipelas. In most instances a drachm or two of collodion may be advantageously added to an ounce of the above. A few grains of tannin, or even a thick mucilage, in lieu of the iodoform, furnishes a harmless though sovereign remedy for sore nipples. Again, one part of carbolic acid to six of the glycerine compound makes a truly efficient application for scalds and burns.

Incorporated with phytolacca ointment, iodoform has no equal as a discutient.

R \acute{y} .—Iodoform, gr. i;
Iron, gr. i;
Lupulin, grs. ij.—*Beat.*

To pill mass, without any adjuvant—make out pill. Give one or two every night as a pain-relieving, sleep-producing and tonic alterative. An excellent pill given as an auxiliary to the iodides and bromides administered through the day.

R \acute{y} .—Iodoform, gr. j;
Iron, gr. j;
Sulph. bebeerin, grs. ij.—*Mix.*

Sig.—One pill to be taken morning and noon, after meals, and three at bed-time. The above pill, conjoined with other appropriate treatment, we have found very efficient in almost all chronic uterine ailments.

The range of action of this drug is quite extensive. With iron it is specially indicated in all exhaustive diseases. In goitre its action has been most satisfactory. The principal diseases in which we have derived the most efficient results have been phthisis, amenorrhœa, syphilis, glandular tumors, cutaneous eruptions. In a suppository it can be used with great benefit in chronic enlargement of the prostate. Iodoform has many advantages over iodine for internal administration; it is stronger, more active, more uniform on the glandular system; never acts as an irritant, and can be given uninterruptedly.

IPECACUANHA.—This remedy is a valuable emetic, diaphoretic, and a mild cathartic. In full doses it is an active emetic; in small doses it will arrest the most obstinate vomiting; and in cholera infantum it is specific, arresting the vomiting and fecal discharges when all other agents fail. I am partial to the following combination, and rely upon it entirely in the treatment of the above disease:

R \acute{y} .—Tr. aconite, rad.,
Tr. ipecac., āā ʒi;
Aqua, ʒiv.—*Mix.*

Sig.—Teaspoonful every hour or two.
If we give ten or twenty grains of ipecac., it at once makes its

impression on the sentient extremities of the nerves of the stomach. This sensation is referred to the brain; the natural energies of the brain are diminished by the prostrating influence of the toxical effects of the remedy, and there is languor, mentally and physically. The excitement in the brain produces the sensation which is felt in the irritated organ, and the sensation of nausea is the prompt result of diminished excitement of the brain referred to the stomach.

In spasmodic asthma, pertussis, and all affections of the respiratory organs, its effects are very beneficial. Many cases of pneumonia yield readily to this remedy, given in small doses, and repeated often enough to allay the cough and promote free expectoration. I have found it to act as a nauseant sedative in all local inflammatory diseases, for which purpose it may be extensively used, and will be found extremely valuable in peritonitis, controlling the worst symptoms occurring in puerperal women. Dysentery yields readily to a combination of one grain each of the extracts of leptandra and ipecacuanha and half a grain of podophillin, to be given every three hours until it operates freely. In some cases where it could not be given by mouth, I have used an injection of two drachms of the powder to one pint of warm water for an adult. This will operate kindly and thoroughly as an emetic. Emetia, the active principle of this drug, is so severe in its action that it is not used in medicine. Two grains will kill a dog.

The *physiological effect* of this remedy, then, is a toxical stimulant to the brain, for it is the brain exclusively that acts or is depressed; hence we have spasmodic contraction as a result of debility, the stomach being a mere passive instrument. The peculiar action of the remedy on the nervous system is indispensable to the production of the act of vomiting, for if we, by any poison, as alcohol, or any injury, suspend the nervous energy, emesis will not take place. The primary effect of ipecac. is an emetic; its secondary effect in one-sixteenth to half a grain to the dose, an anodyne to an irritable stomach, an arrester of vomiting, imparting tone and vigor to the stomach.

IRISIN.—This is the active principle of the *iris versicolor*, or blue flag, one of the most valuable remedies in the *Materia Medica*. It possesses alterative, cathartic, emetic, diuretic, anti-syphilitic and vermifuge properties. It is a most efficient resolvent, and exerts a powerful influence over the whole glandular system, resolving morbid deposits, quickening the activity of the secreting organs, and promoting depuration through the skin, kidneys and bowels. It stimulates the salivary glands without in any way vitiating the saliva. The best success has attended its use in the treatment of scrofula; it is peculiarly useful where that diathesis is associated with glandular disease.

There is no drug so efficient in eliminating and thoroughly eradicating the poison of syphilis from the blood. It may be given alone or combined with any other alterative, according to the nature of the case. Irisin, then, may be termed the *potent alterative*, and can be used wherever such is indicated, in all congestions, ulcerations, chronic rheumatism, glandular enlargement, skin eruptions, indeed, all diseases arising from any cachexia or blood poison. Average dose of the irisin is grs. iii, well triturated; a larger dose is required if a cathartic effect is desired.

An aqueous extract is of great value in cancerous infiltrations, as follows:

R_y.—Root iris versicolor,
 Root phytolacca,
 Tops clover, red,
 Oak bark, āā q. s.—*Mix.*

Make an extract by boiling; evaporate to the consistency of molasses and apply.

The physiological action of this drug is apparent; it hastens destructive metamorphosis by influencing the secretions and excretions, aiding natural elimination of morbid products, hastening absorption, assisting the vital forces in the work of repair. Its pathogenetic effects are quickly manifest on the salivary glands.

JALAPIN.—The active principle of *ipomœa jalapa*, or jalap. It is so well known and understood that we need do little more than name it.

It is an irritant hydragogue, and it principally affects serous tissues; so we use it as an evacuant with great advantage in chronic inflammation of the serous membranes, as in peritonitis, pleuritis, pericarditis, &c.; and in dropsical effusions it is necessary to administer about a quarter of a grain, every few hours, until hydragogue catharsis is produced. To be employed in all cases in which it is desirable to produce a speedy evacuation of the bowels, excepting in cases of gastric or enteric inflammation. When combined with podophillin, I have proved its worth in restoring a torpid liver to its natural healthy function. It is said to induce purgation when applied to the wound.

Average *dose* is from one to five grains.

JUGLANDIN.—This valuable remedy is derived from *juglans cinerea*, or white walnut, which is a tree indigenous to this country. It is the bark of the root that is employed in the preparation of the active principle, or juglandin. It possesses numerous medicinal properties, acting as an alterative, tonic, cholagogue, laxative, deobstruent, detergent and diuretic, and also emetic and cathartic in large doses.

As a laxative and cathartic it is of great value, as it does not

produce any irritation, but rather, like rheum, acts mildly, without inducing constipation afterward, as rheum is apt to do; hence, this is a useful agent in all forms of bowel complaints, in fevers and other disorders accompanied with gastric or enteric irritability. It is, therefore, indicated in intermittent, remittent and typhoid fevers. It neutralizes acidity, corrects the acrimony of the secretions, it soothes the irritability of the mucous membranes, and promotes peristaltic activity.

It acts as a stimulant and tonic in cutaneous diseases; and I have used it as such in chronic eczema, herpes, acne, lichen, prurigo, molluscum, and all other forms of skin diseases.

It has been recommended as an anthelmintic, but we have more efficient remedies than it is for the cure of worms.

The average *dose* is grs. v; but, as an emetic or cathartic, grs. x and xv. Its action is specific over the mucous lining of the alimentary canal, acting as a mild laxative, never griping nor producing any uneasiness in the bowels.

In large doses its impression on the sentient extremities of the nerves of the alimentary canal is depressant, which effect is propagated to the brain, which gives it the various properties enumerated.

KINOVIC ACID.—The presence of kinovic acid is the predominant cause of the tonic properties of cinchona bark.

When given even in large doses it produces no cerebral congestion, symptoms of which, it is known, readily come on with continued large doses of the nitrogenous components of cinchona bark. Adults do not experience the slightest bad effects after taking daily from 15 to 20 grammes of kinovate of lime.

The kinovate of lime, as a bitter and tonic, is superior to most of the agents hitherto used as bitters.

The action of fresh prepared kinovic acid upon the intestinal secretions is strikingly perceptible; the tonic is at once absorbed, and causes an abatement of the peristaltic movement of the intestines. The acid has been administered in cases of severe dysentery with the most satisfactory results.

The following methods of administration are recommended:

(a) In the form of powder: 2.8 grammes of kinovate of lime with finely-powdered white sugar or phosphate of lime, to be taken in the form of a lozenge once or twice in the day; or from one-half to three drachms of the kinovate, with powdered phosphate of lime, to be taken every twenty-four or every thirty-six hours.

(b) In the form of mixture: from two to six drachms of the kinovate of lime, to be rubbed up with some gum tragacanth, and from five to eight ounces of water; into this mixture, while it is being well shaken, dilute phosphoric acid is to be added by drops until the chalk and the kinovic acid are separated in a finely divided condition.

LACTUCARIUM.—The concrete juice of the garden lettuce is one of the most admirable remedies in the *Materia Medica*.

It is a sedative of a peculiar kind—it diminishes the rapidity of the circulation, the frequency of the respirations, and lowers animal heat; it does not create any mental excitement—nor produce constipation, nor any unpleasant sensation whatever. It will allay cough, quiet nervous irritability, and produce a most agreeable quiescence. It may be given whenever opium cannot be tolerated—where the idiosyncrasy exists—still, it must be admitted that there is a sort of unreliability about its action.

From my experience with it I usually give it for a gentle laxative, mild diuretic, efficient diaphoretic, and a mild sedative. Average dose is from 10 to 15 grains.

Lactucin is the bitter principle of lactucarium; it is very seldom used.

The physiological action of this remedy is on the nervous system, where it acts by husbanding the vital forces, and thus becomes a renewer of life, an increaser of vitality, causing an augmented stimulus in the centres of life, the brain and spinal cord. Its peculiar action on the nervous system as an excitant renders it a peculiar laxative and diuretic, for it seems to act specifically upon the nerve filaments that supply the epithelial cells of the *tubuli uriniferi*.

Its chief value is in cerebral disease, where the brain is irritable—where quiescence and repose is wanted.

LEPTANDRIN.—This is the active principle of *leptandra virginica*, or black root, and occupies a prominent place in our *Materia Medica*.

It possesses alterative, deobstruent, cholagogue and tonic properties. It is of especial value in stimulating and correcting the hepatic secretions and functional derangement of the liver, without weakening the system by copious alvine evacuations.

It is just as valuable in chronic affections of the mucous surfaces, in chronic dysentery, diarrhoea, cholera infantum, and for the removal of false membranous formations occurring in the small intestine, and produced by the exudation of plastic lymph. In constipation and piles it will usually render good service.

Its employment is indicated in typhoid and other fevers. It both regulates the functions of the liver, and corrects and restores the secreting power of the whole extent of the alimentary canal.

The entire glandular system with the skin is favorably affected by its use; indeed, when brought under the constitutional influence of leptandrin, the hot, dry and constricted skin soon becomes soft, moist and flexible, expectoration becomes easy, the arterial excitement diminished, and the patient, formerly restless, wakeful and delirious, becomes calm, rational and inclined to sleep. When

administered in such cases, it should be repeated every hour or two until the desired effects are produced; and it is often advantageously combined with the asclepin.

It is especially indicated in the treatment of diseases incident to delicate females and infants; for, although a resolvent and depurative agent, it does not debilitate, but, contrariwise, is tonic in its effects. It is a remedy of sterling worth in dyspepsia.

Average *dose* is from three to five grains.

Its physiological action is manifest upon the whole glandular system as a stimulant; but its action upon the liver is most decided, promoting the biliary secretion in a positive manner, and determines the action to the skin.

LITHIA.—The salts of lithia possess remarkable solvent powers over uric acid calculi—powers which much exceed those possessed by any other agent. Carbonate of lithia completely removes gouty deposits of the urate of soda from cartilages incrustated by them. This drug, besides its solvent properties to uric acid calculi, is a more powerful diuretic than the salts of potash or soda, and may be given with great advantage as a prophylactic in chronic gout, calculus. Its dose is from three to six grains, given in a state of free dilution. The value of the lithia salts, especially the carbonate, has been generally recognized. The action of the lithia depends upon its alkaline properties, and its extraordinary power to dissolve uric acid, with which it forms a soluble salt; also, the urate of soda. In all gouty affections of the joints, or sheaths of tendons and nerves, where the gouty deposits take place upon the membrane of the brain or heart, in rheumatic dysmenorrhœa, asthma, paralysis, and every morbid condition dependent on the acid diathesis, this remedy is indicated.

In large doses, long continued, an exciting or stimulating effect is produced upon the brain—exhaustion takes place, which gives us tremor and other nervous symptoms, which disappear on the omission of the remedy. Its physiological effects are, increased elimination, profuse perspiration.

LOBELIN.—This is the active principle of *lobelia inflata*, wild or Indian tobacco. The part of the plant used is the leaves and seeds.

It possesses a wide range of action, being an emetic, nauseant, expectorant, relaxant, sedative, antispasmodic, diaphoretic, alterative, astringent, &c.

It is one of the best emetics in the *Materia Medica*, and may be given in all cases where an emetic is indicated. In order to secure its prompt and efficient action, the acid condition of the stomach should be overcome by the patient drinking copious draughts of

bi-carbonate of soda water, followed with a decoction of the lobelia as follows:

R_y.—Lobelia leaves, pulv.,
Bi-carb. sodæ, āā ʒii;
Boiling water, O_{ss}.—*Mix.*

Infuse for a few minutes, cool, then drink freely. Follow up with copious warm alkaline drinks. Where we suspect the presence of the yeast plant on the stomach, as we have in some forms of dyspepsia, the addition of bayberry is excellent.

In infantile catarrh, green lobelia is specific.

R_y.—Pulv. green lobelia, ʒi;
Boiling water, teacupful.—*Mix.*

Infuse half an hour, cool, sweeten, then give in doses as indicated, from a half teaspoonful to a teaspoonful.

Water, nature's solvent, is the only agent that can give us the true properties of this wonderful drug. A hydro-alcoholic tincture is also a very eligible form. In the preparation of this equal parts of the seeds and leaves should be used.

It is of decided value in all forms of asthma, especially when combined, as follows:

R_y.—Comp. syr. blood root and lobelia, ʒvi;
Bromide of potass., ʒss;
Bromide of ammonia, ʒiii;
Tinct. Calabar bean,
Tinct. black cohosh, āā ʒii.—*Mix.*

Give in teaspoonful doses, as indicated. The best remedy we have in this troublesome affection.

In small doses, it excites diaphoresis, increases expectoration, diminishes cough, overcomes spasmodic action. In all diseases of the respiratory organs, as croup, pneumonia, pertussis, catarrh, bronchitis, emphysema, &c., it proves very serviceable. In the most terrible of all forms of spasmodic action—tetanus—what could the physician do without Thompson's third preparation of lobelia? No other remedy can control spasmodic action. When lobelia does not act death is inevitable. So also in all forms of convulsions.

In inflammation of the lungs, lobelia, aided with quinine and external stimulation, is superior to any other mode of medication.

In hooping-cough, lobelia, black cohosh, bromides of ammonia and potass., are pre-eminently abortive.

In both forms of emphysema lobelia acts like a charm, and if not essentially curative, renders the morbid condition very bearable and even comfortable to the patient. The following is well adapted for such cases:

R̄.—Green lobelia, pulv.,
Sulph. quinine,
Ext. hyoscyamus, (Eng.), āā.—*Mix.*

Make three grain pills.

Dose.—One morning, noon and night.

Wherever depression exists, lobelia will control or modify arterial excitement incidental thereto, thus equalizing the circulation, aiding the vital powers to eliminate morbid humors. To overcome rigidity of the os uteri, it is unexcelled by all other drugs.

But it is not as an internal remedy alone—as an external one it is of inestimable value. Have you tried it combined with phytolacca to discuss a tumor? Have you tried the oil or a saturated tincture in periostitis? Have you tried it in any form of external inflammation? It is decidedly a renewer of life—emphatically curative.

A fluid extract made from equal parts of the lobelia seed, lobelia herb, is an elegant and reliable form, and is that which is indicated in the following:

Lobelia Compound.

Each fluid ounce of this extract represents two drachms of each, lobelia seed, lobelia herb, skunk cabbage root and blood root.

Dose.—Ten to thirty drops.

Vinegar of Lobelia.

Fl. ext. lobelia, two fl. ounces.

Dilute acetic acid, fourteen fl. ounces.

Dose.—Thirty to sixty fl. minims.

Tincture of Lobelia.

Fl. ext. lobelia, two fl. ounces.

Dilute alcohol, fourteen fl. ounces.

Dose.—One to two fl. drachms.

Infusion of Lobelia.

Fl. ext. lobelia, one fl. ounce.

Water, fifteen fl. ounces.

Dose.—One to three fl. drachms.

Tincture of Lobelia and Capsicum, comp.

Fl. ext. lobelia, cayenne and skunk cabbage, each two fl. ounces.

Dilute alcohol, two pints.

Dose.—Half to one fl. drachm.

An excellent antispasmodic.

Syrup of Lobelia.

Fl. ext. lobelia, one fl. ounce.

Syrup, fifteen fl. ounces.

Dose.—One to three fl. drachms.

Lobelia acts specifically upon the pneumogastric nerve, and also affects promptly all organs supplied by this nerve; also the vagus and the pharyngeal and laryngeal. It also operates specifically upon the skin, and if it is given in small doses, long continued, alone, it will produce a peculiar form of herpes; if given in large doses, and repeated at proper intervals, it will completely and thoroughly suspend the nervous function. In this way, in prostrating or suspending the activity or impressibility of the nervous system, this remedy has been found curative in counteracting the poison of hydrophobia. It is also a specific antidote to other animal poisons, as well as relieving that dreadful condition of the nervous system which is present in tetanus. There is no remedy like it in potency.

LUPULIN.—This agent does not receive the attention it merits. It is an invaluable drug; it procures sleep, without producing narcotism or constipation. We trust the profession will not longer ignore the great virtue of this important agent, being a positive nervine, hypnotic, febrifuge, diuretic and tonic. To those who have been disappointed with this invaluable drug, we would recommend the following formulæ:

R̄.—Lupulin, ℥ii;
Spirit. ammon. arom., Oi.—*Mix.*

Macerate for seven days, agitating occasionally; then filter and add sufficient of the menstruum to make up to a pint. The dose of this is from twenty minims to one fluid-drachm. This might be called "*tinctura lupulinæ ammoniata.*" We consider this preparation of the hop as the best we at present possess. The dose of the *tinctura lupuli* should be from one fluid-ounce to one fluid-ounce and a half to produce any hypnotic effect; the ordinary dose consists of as many drachms. The tincture of lupulin is an effectual hypnotic in restlessness, the result of nervous irritability, and in delirium tremens. Some advantage, too, is derived from the presence of ammonia in considerable quantity, and this whether the preparation be exhibited as a hypnotic or as a tonic combination of bitter and ammonia.

LYCOPIN—The active principle of *lycopus virginicus*, or bugle-weed, possesses sedative, tonic, astringent and narcotic properties. It acts somewhat like digitalin in reducing the velocity of the pulse, but is free from the danger associated with the use of digitalin. It is an excellent remedy in incipient phthisis, hæmoptysis, leucorrhœa, hemorrhages generally, chronic diarrhœa and dysentery, diseases of the heart, and in intermittents.

It is of more than average worth as a tonic in promoting diges-

tion, invigorating the appetite, and allaying gastric and enteric irritability.

For the cure of ulcerations of the stomach and bowels, alternate with leptandrin, and thereby enhance its curative value.

I have found it of peculiar service in the treatment of diabetes, and it should never be omitted in such cases.

This remedy may be relied upon as being uncommonly positive and uniform in its effects.

The *dose* varies from three to ten grains, according to the effect contemplated.

Its physiological action is directly on the nervous system, removing congestion and irritation, thus soothing, equalizing and controlling.

It is its sedative action on this particular tissue that renders it so valuable in phthisis, hæmoptysis and inflammatory affections of the bowels.

MENISPERMIN.—This is derived from *menispermum canadense*, or yellow parilla.

Its properties are alterative, tonic, laxative, diuretic and stimulant. In large doses this remedy increases the volume of the pulse, the appetite and the action of the bowels. In large doses it induces purging and vomiting.

It is especially adapted to atonic conditions of the system. It stimulates the whole vascular system. It increases the appetite, promotes digestion, absorption and assimilation, imparting tonicity to all the organs and structures of the body. From the foregoing statement of its physiological properties, it may be manifest that this remedy is excellent in scrofula and all other diseases accompanied with a strumous diathesis, including amenorrhœa and chlorosis, when iron should be combined with the menispermum. It is indicated in cases of syphilis, where the mercurio-syphilitic symptoms prevail; in chronic rheumatism and in dyspepsia, especially when associated with constipation. I value this remedy very much in the treatment of cutaneous diseases.

It has a peculiarly remarkable influence over the skin in promoting cutaneous depuration, and will be found most efficacious in scaly eruptions of the skin, herpes, erysipelas, &c. When so indicated, combine it with iron, and recommend the alkaline sponge bath.

Medium dose—Three grains.

MEZEREON—(*Daphne or Spurge Olive.*)—In large doses, mezereon is an irritant poison, causing redness and vesication of the skin when left in contact with it, and causing, when swallowed, dryness and burning of the throat, vomiting, hypercatharsis, and frequently renal irritation.

In small doses it acts as a stimulant, alterative, diuretic, diaphoretic, in warm decoction and cathartic.

It acts favorably in syphilis, mercurio-syphilis, scrofula, chronic rheumatism, and some forms of obstinate skin diseases.

Dose—Of the decoction, one to three fluid ounces; of the powder, ten grains.

Externally.—Sometimes employed to produce rubefaction and vesication, and in form of ointment as an application to blistered surfaces, indolent ulcers and issues, in order to excite suppuration.

When vesication is desired, the bark is soaked in hot vinegar and water to soften it, and applied to the part by a compress and bandage. Renew the application night and morning until vesication is produced.

MILLEFOLIUM—(*Yarrow*.)

Properties.—Alterative, astringent and diuretic. This remedy is employed in cases of congestion of blood to the head and face, lungs, heart, &c. It has proved efficacious in uterine hemorrhages, hæmoptysis, hæmaturia, incontinence of urine, diabetes, hemorrhoids and dysentery; also in amenorrhœa, flatulency and spasmodic disease, and in the form of infusion in leucorrhœa; also in cases of suppressed lochia.

It is now recommended in low forms of exanthematous fevers with difficult eruption, in colic, and in infantile convulsions.

Usually administered in form of infusion, which may be made in the proportion of an ounce to the pint, and a wineglassful to be given for a dose.

MYRICIN.—This is derived from *myrica cerifera*, or bayberry. This remedy possesses tonic, astringent and emetic properties. It acts specifically upon the mucous membrane as a tonic and astringent, and braces that tissue better than any other drug.

In typhoid fever no remedy acts so efficiently; a tea of bayberry drank freely will keep the mucous coat in good activity during the progress of that disease.

In gastric catarrh, either alone or combined with capsicum, it is specific. Also in dyspepsia it acts well. In diarrhœa and dysentery there is no drug acts so well; even in Bright's disease it seems to have the faculty of astringing the kidneys.

Myricin combined with lobelia has the peculiar property of allaying labor pains. It is a most efficient local and constitutional remedy in aphthous affections of the mucous membranes, as in ulcerative and nursing sore throat, and in all forms of ulceration of the stomach and bowels. As a gargle, two drachms to one pint of boiling water. It is also very efficacious as an injection in gonorrhœa and leucorrhœa. Combined with blood root, and used as a snuff, it eradicates nasal polypus. Made into an ointment, it is valuable wherever a healing process is desired.

NARCEINE.—This is the most valuable of all the alkaloids of opium. The following may be enumerated as its chief physiological action: 1st, narceine is unquestionably, of all the alkaloids of opium, that which has the greatest narcotic power. *In the majority of cases*, morphia and codeia do not produce as sound or prolonged sleep as results from the use of narceine; 2d, narceine differs from the other alkaloids of opium in producing little perspiration, and causing no loss of appetite or nausea; 3d, so far from producing constipation of the bowels, it causes relaxation, and in large doses actually gives rise to diarrhœa; 4th, it not only produces sleep, but diminishes pain; 5th, it has one peculiar action—it suppresses the flow of urine. For this reason it might be advantageously employed in cases of nocturnal incontinence of urine among children; but it seems to us that until its action can be shown to be on the bladder rather than on the kidneys, its employment in such cases would be highly improper.

NEW CURE.—The acid cure is attracting a great deal of attention at the present time in some parts of Europe. It has been introduced by Dr. F. Coutts in a very able essay on the subject. He begins by stating that the brain and spinal cord are the centres of nerve power; that when an irritation or disease is manifest in any portion of the body, that an analogous condition of irritation is reflected to the cord by the nerves of sensation; so that in diseases of long standing there is a central irritation—a lack of nerve power; and in order to reach all diseases, it is necessary to strike at the origin—the root of the nerve that supplies the organ diseased.

The acid proposed to effect a perfect revolution in medical science is acetic acid. It has the faculty, the author asserts, of effectually breaking up all fevers and inflammations; in the former case it is applied liberally to the spinal column, and then over the entire body; in the latter, to the spinal cord and the organ affected. The acid seems to stimulate a renewal of life in the part, then to neutralize the poison and overcome the morbid condition. In all diseases the acid is potential, and as a prophylactic never found to fail.

As a preventive to disease, daily bathing the entire body with the acid has been found to ward off the most pernicious fevers, infectious and contagious diseases, and is productive of a high grade of animal and mental life.

In disease, the acid is applied by means of a sponge until a sense of numbness is produced, followed by a feeling of warmth. Immediately after this stop the acid, and bathe the part to which it has been applied with hot water; immediate relief is experienced. This should be continued for half an hour or more and repeated as indicated.

NICOTINE OR TOBACCO.—An authentic case has been published of a man who enveloped his whole skin in tobacco leaf, for the purpose of evading the payment of the duty. He labored under the following symptoms: extremely weak small pulse, cold sweats, general prostration, with nausea, trembling of the limbs and vertigo.

But besides these physiological effects produced by tobacco, still more marked when taken internally, its use is generally followed by other symptoms, or, rather, narcotic effects.

First.—The smoker often feels a pain—dull, not acute, still distressing, from the sense of oppression which attends it. Its seat is behind the ensiform cartilage, and rather to the left side. It generally comes on during the day, and passes off the following morning. From the vagueness of its seat and its transitory character, it would seem to be semi-paralytic, and so a neuralgic affection of the central and anterior portions of the diaphragm.

Second.—Smoking or chewing tobacco gives rise to a condition known as narcotism of the heart, and characterized by intermission in the movements of the heart and in the pulsations of the radial artery.

Third.—Its use sometimes causes cerebral amaurosis, impairing the vision, or even terminating in complete loss of sight. The infusion affects the heart, and its smoke acts rather on the brain; but its physiological actions are numerous and powerful, so are its medicinal virtues, only, like digitalis, it possesses the questionable character of either killing or curing.

Properties.—Sedative, emetic, diuretic, expectorant, antispasmodic, cathartic, &c.

In strangulated hernia, obstinate constipation from spasm of the bowels, retention of urine from spasmodic stricture of the urethra, lead colic, hysteria, convulsions, croup, asthma, and in inflammation of the peritoneum, to produce evacuation of the bowels, and in dispelling tympanitis—in all such cases it has been employed with considerable success. The smoke is injected into the rectum, or the leaf itself used as a suppository in tetanus and convulsions. To obtain the infusion of smoke, blow the smoke into milk or water. It is one of the best cures for piles, seldom failing us in these cases; apply a wet leaf to the part, and allow it to remain for a few hours. I can recommend it highly in facial neuralgia; rub along the track of the affected nerve with the inspissated juice. It is of eminent use in tetanus—*first*, it immediately relaxes the special muscles concerned in expression, respiration and deglutition; *second*, it affords a cessation of delirium, and feeling of relief from agonizing pain; and *third*, it reduces the pulse from one hundred and thirty to about eighty. If properly watched, the nervous circulation can be perfectly controlled, or even suspended, by its use. Too great care cannot be observed in watching its effects. Should it produce undue depression, or too lasting a sedative influence, then stimulants, as ammonia or brandy, ought at once to be administered. I

always administer the enema myself. Never leave the patient until all symptoms of tobacco sickness have left and reaction sets in.

Nicotina, the active principle of tobacco, is not volatile in tobacco, on account of its existing in the form of a salt. It is a most virulent poison. One drop kills a dog, and smaller animals are killed by its odor. In respiring the smoke of tobacco, smokers inhale a certain quantity of the vapor of nicotina; and a portion of the empyreumatic oil of tobacco is deposited in the pipe of the smoker, also an active poison, and consists of nicotina united with a true volatile oil.

NITRO-MURIATIC ACID.—This is formed by mixing three troy ounces of nitric acid with five of muriatic acid. This remedy has been employed with success in diseases of the liver internally, and in the forms of a bath for the feet and legs, six fluid-ounces of the acid being added to three gallons of water, the feet to be bathed daily at first, and afterward twice or thrice a week. Sponging the body with a solution of similar strength may be resorted to at the same time.

An acidulous bath is effective in promoting the passage of biliary calculi. The bath should have a temperature of about ninety-seven degrees, which may be secured by heating part of the acid solution and throwing it back into the remainder. It is used in cutaneous affections. It cures excessive flow of saliva, tenderness of the gums and contaminated breath. In large doses it increases the salivary flow, but does not, like mercury, cause mortification of the gums, unless it be applied in full strength. It forms an important part of white liquid physic, or Dow's physic. It is made as follows: sulphate of soda, half a pound; water, a pint and a half; dissolve, and then add nitro-muriatic acid, ℥ij, and powdered alum, ℥i. It acts as a cooling purgative; also to allay nausea and vomiting, for colic, hepatic diseases, diarrhoea. It is of service in intermittent fever, especially when occurring in broken down constitutions, also in dysentery. In order to protect the teeth from the action of the acid, *each* dose should be sucked through a reed or glass tube.

Dose.—Six drops in a wineglassful of water every three hours.

Its action is prompt and decided on the biliary secretion, being very valuable in all indolent conditions of the liver, and in engorgements of the capillary and parenchymatous structures. It produces excessive secretion of bile, exerts a stimulating or curative influence on all diseases of the parenchymatous structures, the glandular system, secreting and absorbing surfaces; hence its utility in constipation, dyspepsia, scrofula, syphilis, &c.

Its secondary action is a tonic to every tissue of the body, bracing and invigorating.

OILS.

ALCOHOL.—From experiments that have been made we are led to infer that a moderate quantity of alcohol with food increases the quantity of urea daily excreted, and, in a less degree, that of chlorides and sulphates; but it does not increase the aqueous part of the urine, and it decreases the quantity of phosphates.

This augmentation is temporary, and is followed, after a time, by a reduction to the normal measure; this circumstance being coincident with loss of appetite.

It is now generally conceded that the best guide to the effects of any agent on the diseased state is to possess a knowledge of its physiological action on the healthy system. Alcohol presents no exception to this fundamental principle.

It is not strictly an aliment, but if it facilitates the appropriation of aliment it may be considered as an accessory food in health, and as a medicine in disease. But what is its action upon life? It is generally defined as a stimulus to the nervous system. What are its first physiological effects, increased life or function? No; but lessened consciousness, lessened sensibility to light, to sound and to touch.

It also produces a peculiar sensation of stiffness, with swelling of the skin; most conspicuous in the upper lip and cheeks. This is due to arrested sensation and motion.

The symptoms of advanced intoxication by alcohol show that it almost immediately depresses the nervous centres, and in cases of poisoning the cause of death is the cessation of muscular respiratory movements.

Its primary as well as its secondary action is a diminution of vitality in the nervous system. It may, then, naturally be asked, how can it be a restorative? Seeing that it depresses one of the chief manifestations of life, how can it be a renewer of life?

First.—By blunting the nervous system it renders less rapid the influence of mind over it; and thus all external agents which act through the mind on the nervous system become less powerful for evil. Resistance is increased, just as by deadening sensation with ice the shock of an operation is not so dangerous to life.

Second.—After a longer period it lowers the action of the nervous system on destructive metamorphosis, and in this manner saves the substance of the body.

It is well known that the exercise of nervous functions, bodily or mental, increase destructive metamorphosis, and that when either bodily or mental action is in excess there is an arrest of the constructive appropriation of food by the stomach.

Then anything which, either sensibly or insensibly, interposes between the sensible or insensible nervous action and the digestive viscera must tend to restore that balance of the two in which health

consists. A friend of mine, having placed himself on an insufficient allowance of food, found his mental and bodily powers deficient. The balance was overthrown. He subsequently took a small quantity of alcohol with each meal; and then, without any increase of diet, he gained weight of body, and was more vigorous in mind. Again he added alcohol to a full diet, when his mental powers were blunted, with feverishness of body.

I submit the following rules that may serve as a chart to guide when alcohol may be wisely administered:

First.—Give alcohol whenever you find that the nervous system is exhausting itself and the body by an activity in excess of the other bodily functions.

A. In delirious fever, especially in typhus fever. Here the high sp. gr. of the urine shows the great amount of destructive metamorphosis that is going on.

B. In pneumonia, in surgical injuries, in erysipelas, &c.

C. Alcohol increases the power of resistance to some poisons. Anguish and neuralgic cases in their *protean* forms bear well, and are benefited by it in very considerable quantities.

The poisonous wounds of rattlesnakes and other venomous reptiles are almost exclusively treated by the administration of alcoholic stimulants, given in quantities sufficient to produce intoxication, which state being an evidence that the effects of the poison have been overcome.

D. After violent shocks, produced by mental emotion or extreme bodily labor.

E. Where the patient has been accustomed to excess, it would tax the system too much to have to endure the natural reaction and the disease at the same time.

Second.—Give alcohol and regulate its use under the guidance of the appetite for food. As long as a sick person takes and digests food better with alcohol than without it, so long should its use be continued.

Third.—When the characteristic feature of the disease consists in the retention of effete matters, which ought to be discharged, abstain from the use of alcohol, as in:—A. Uræmia. B. Jaundice. C. The uric acid diathesis. But here we may meet with exceptional complicated cases, which seem to derive benefit from its occasional use.

Fourth.—Divide the daily allowance into at least two or three doses; but this depends considerably on the peculiarities of each case, which must be judged of by the physician in attendance.

The shape in which alcohol is administered is often not a matter of choice, but has to be decided by pecuniary considerations.

In cases, however, where circumstances will allow, I always prescribe it in the form most agreeable to the patient. This would seem to be a trifling matter; but from extended observation I can testify that it is not so unimportant but that it should be attended to.

OIL OF LOBELIA.—This is a fixed oil, and is obtained by crushing the seeds between heated rollers, and pressing, while hot, in a strong linen cloth between iron plates. It is of the same consistence as linseed.

Properties.—Expectorant, antispasmodic and relaxant. It is an active emetic, but is not kindly in its action. Asthma and other diseases of the respiratory organs are greatly benefited by its use; as also in all spasmodic affections.

An excellent formula is—

R_y.—Oil of lobelia,
Oil of capsicum, āā ʒi;
Alcohol, strongest, ʒij.—*Mix.*

Of this preparation from fifteen to sixty drops may be given.

Invaluable in a large number of diseases, as apoplexy, asphyxia, convulsions, suspended animation, Asiatic cholera, tetanus; in cases of fainting, falls, concussions, drinking ice water too freely, violent spasmodic pains in the stomach and bowels, and wherever it is requisite to relax spasm, equalize the circulation so as to bring about a reaction, this remedy cannot be surpassed. When it cannot be swallowed, double the quantity, and administer as an enemata.

In tetanus, hysteria and other convulsions, pour a little between the teeth, and as soon as it reaches and acts upon the muscles of the throat it will relax the spasm and soon enable the patient to swallow.

By bathing rheumatic pains, neuralgia, toothache, &c., with the oil of lobelia, great benefit will speedily ensue.

It affords prompt relief in spasm of the glottis, croup, &c., when externally applied to the throat; when applied to the chest, relieves dyspnœa.

In spasmodic croup one-drop doses may be given, and repeated every half hour until relief is obtained.

OIL OF POPULUS TREMULOIDES, OR AMERICAN POPLAR.—The value of this agent, as an internal remedy, is so uncertain in its actions that we will only call attention to it as an external application. As such, it is of great value for burns, sore nipples, abrasions of the skin, and various eruptions. It soothes irritation, corrects the acrimony of eruptive exudations, and favors cicatrization.

In eruptions of the scalp it will be found particularly useful; also, in several forms of eczema.

It is applied in the form of ointment, which is prepared by adding one ounce of lard, fresh butter, or simple cerate, to two drachms of the oil.

OIL PUMPKIN SEED.—The expressed oil of pumpkin seed in fifteen-drop doses is a most certain and efficient diuretic, giving

speedy relief in all forms of irritation of the urinary passages. Half a fluid ounce of the same oil, taken upon an empty stomach, repeated in a few hours, and subsequently repeated with a large dose of castor oil, containing the same amount of oil, is the most effective remedy we have for tape-worm. The crushed seeds have been successful, so has a decoction and fluid extract, prepared as follows:

Take of pumpkin seed sixteen troy ounces; alcohol, sp. gr. 835, a sufficient quantity. Bruise the seed with an equal bulk of washed sand until they are thoroughly comminuted; transfer to a conical percolator; pour upon it the menstruum until three pints have passed, reserving the first twelve fluid ounces, and reduce the remainder to four fluid ounces by distillation; mix this with the reserve tincture and filter.

This extract has proved, in the hands of all physicians, a valuable remedy for *tænia solium*, and is an indispensable addition to the list of new remedial agents. Having given it in the dose of a tablespoonful three times a day for a short period, its action was such as to destroy nearly the whole of the worm, and by continued use it was completely eradicated.

OIL OF SANDAL-WOOD.—This oil is a direct stimulant to all mucous surfaces, and restores the mucous membrane of the urethra when it is depressed by the action of a poison. It produces no disagreeable effect, like some of the other essential oils, besides, it is more efficient. In gonorrhœa it may be termed a specific.

OIL OF STAPHYSAGRIA.—This oil has been obtained by distillation from the seeds of the *staphysagria*, and is more active than the seeds themselves in destroying pediculi.

The oil amounts to as much as half of the weight of the seeds. Ether also extracts the oil. Digesting the crushed seeds in hot lard makes a splendid ointment for certain skin diseases.

OIL OF STILLINGIA.—Derived from *stillingia sylvatica*, or queen's root. This oil is generally reckoned too acrid for internal use, but when administered possesses nearly the same properties as the active principle of *stillingia*. Nevertheless, we have found it of great value when administered, internally, in cases of bronchitis, laryngitis, defective menstruation, chronic gleet, leucorrhœa, &c.

Dose.—One drop in water or upon sugar.

It overcomes the spasm and difficulty of respiration, and facilitates expectoration; and, hence, is useful in asthma, hooping cough and similar affections.

For the relief of asthma it may be combined with oil of lobelia. Used externally, the oil is an invaluable stimulant, counter-irritant and relaxant.

OIL OF XANTHOXYLUM.—Derived from the bark of the *xanthoxylum fraxineum*, or prickly ash.

It is a permanent and diffusive stimulant.

The oil possesses properties analogous to those of the xanthoxylin, being, however, more decidedly stimulating, although containing less of the alterative and tonic properties. Being apt to produce too much irritation of the mucous surfaces, it is more appropriate in asthenic than in sthenic conditions. Often employed in colic, chronic rheumatism and syphilis.

Dose.—Three to five drops.

OPIUM.—In medium doses, in the first instance, *stimulating*, followed by a condition of diminished sensibility and a desire to sleep.

All the secretions, except that of the skin, are either suspended or diminished.

In small doses, it sensibly excites the nervous and vascular systems. The cerebral functions are rendered more active and energetic. Vivacity, joyfulness, courage, ambition, defiance to the ills of life, &c., arise from a dose of opium of the necessary size. If the quantity be increased the narcotic effect will be more conspicuous.

The blood is congested in the vessels of the brain; the mind is unsettled and incoherent; less freedom of voluntary motion; sensation is diminished; the eyes suffused and vision indistinct.

Finally, the voluntary motions are suspended. The sensorium commonly ceases to exercise control over the animal functions of the system, and profound and heavy sleep weighs down every conscious faculty.

Its habitual use loses its power to such an extent that incredible quantities may be taken, and it may produce such a torpor of the stomach as to render it insensible to every other agent. Nothing can be more uncertain than the effect of opium upon infants. Very small doses have often proved fatal.

The effects of opium vary in different persons, and sometimes in the same individual under dissimilar circumstances. In some persons the smallest dose will cause nausea, emesis and gastro-intestinal spasm; in others it will occasion feverishness, headache, watchfulness, restlessness, disagreeable visions, delirium, anxiety; afterward, an aggravated degree of the more familiar subsequent effects of the remedy. An unpleasant pricking sensation on the surface of the body, or a troublesome itching, occasionally accompanied by a slight eruption, is sometimes produced by opium. Certain states of disease lessen the narcotic power of opium, as in the advanced state of pneumonia or peritonitis, hemorrhage, especially uterine, &c.

Instead of enumerating all the diseases, in the treatment of which the use of opium is indicated, we will show its extensive applicability to the cure of disease by the following conditions, which it is calculated to fulfill:

First.—It is excitant in its primary action. In low or typhoid complaints, requiring a supporting treatment, it benefits by exciting the action of the arterial and nervous systems.

Second.—It relieves pain more speedily and effectually than any other known remedy. On reflection, this will be conceded as an incalculable advantage to suffering humanity.

Third.—Beyond any other narcotic it produces sleep, and that in two ways: by its direct operation on the brain, and by allaying that morbid, nervous irritation upon which wakefulness often depends.

Fourth.—Opium is powerfully antispasmodic. No medicine is so efficient in relaxing spasm and controlling those irregular muscular movements which depend on unhealthy nervous action; hence, an important remedy in tetanus, colic, &c.

Fifth.—It possesses the property of allaying general and local irritations, whether of nerves or bloodvessels, provided the action does not amount to positive inflammation, though even then beneficial. Accordingly, it is of great service in composing restlessness, quieting cough and relieving nausea, tenesmus and strangury.

Sixth.—In suppressing morbid discharges, it becomes useful in the treatment of a long list of diseases.

This effect is likely brought about by the opium diminishing the nervous energy, upon which secretion and muscular motion depend; hence, its utility in diabetes, diarrhœa, certain forms of hemorrhage, &c.

Seventh.—It is valuable in producing perspiration, especially in cases of rheumatism, pectoral diseases and bowel affections.

From the great diversity of its properties it is often prescribed in the same case to meet several indications. Thus, in idiopathic fevers, we often meet with morbid vigilance and great nervous irritation, combined with a low condition of the system.

There is hardly a disease which does not occasionally present a complication of symptoms demanding the use of this remedy. But many cases arise, presenting one or more symptoms indicating its use, and presenting other symptoms that are incompatible with it.

Opium is contra-indicated where there is a high state of inflammatory excitement, which ought first to be subdued by other agents, and then, if necessary, employ opium. But it is also contra-indicated in inflammation of the brain and mucous membranes.

The medium dose, in ordinary cases of disease, to secure the anodyne and soporific effects of the medicine, is one grain. Externally, opium is employed to subdue pain and arrest local inflammatory action. It is employed in the form of lotion, liniment or plaster, and is of service in neuralgia, rheumatism, diseased mucous surfaces, erysipelatous inflammations, &c.

The action of opii in peritonitis is positive; as a parturient it is very valuable in relaxing the circular muscular fibres.

OXYGEN.—This agent is one of the most valuable tonics in the hands of the physician. Its effects may be considered as follows:

1. Oxygen is not a poisonous gas; and two pints of this gas in the pure state can be inhaled for several days without any accident. It is only at the end of two or three weeks that fever is produced.

2. Oxygen is a valuable resource in cases of asphyxia, especially when this is due to accidental suffocation. It may be useful in cases of strangulation, hanging and drowning, as well as in poisoning by noxious gases and vapors.

3. Oxygen is a valuable remedy in nervous asthma. In humid asthma—*i. e.*, the catarrh which complicates emphysema—it will also be of good service, provided its use be persisted in.

4. In phthisis, oxygen has not given such good results as were expected. It produces immediate relief, and this is very valuable; but fresh exacerbations follow, more intense, perhaps, than the first. It can then be regarded only as a palliative. It hastens the ulceration of the lungs when this exists. All intelligent physicians discard it here.

5. In albuminuria, oxygen may become a valuable remedy, if it be found, by further observation, to cause the albumen to disappear from the urine, as was observed in a case under the author's care. In any case, the remedy should be tried.

6. The same remark is applicable to diabetes.

7. In local gangrene, if there be no obliteration of the arteries, oxygen is a sovereign remedy.

PEPSIN.—This is a peculiar organic matter—a digestive solvent, whose chemical constituents are unknown. It is indispensable to induce proper changes in the elements of the food, which enables the gastric acids to exert their proper action on them. Its use in certain forms of dyspepsia is attended with excellent results. It supplies a direct deficiency in the animal economy.

A popular and eligible form is the wine of pepsin, made by cutting up a cleaned calf's stomach in small pieces, and covering over with sherry wine, macerating for two weeks, and to every pint add half a pint of brandy to preserve.

Dose.—A teaspoonful after eating.

Experiments made several years ago demonstrated that by far the best form of pepsin is obtained by scraping the mucous membrane of the pig's stomach after it has first been lightly cleansed with a sponge and a little water; the mixture obtained, of mucus, gastric juice, and epithelium, being dried on glass plates at a temperature not exceeding 100° Fah. When dry, the mucus is to be separated from the glass, powdered in a mortar, and carefully sealed in a well-stoppered bottle.

Of this powder eight grains, with ten drops of hydrochloric acid, and an ounce of distilled water, is sufficient to dissolve 100 grains

of hard-boiled white of egg in from twelve to twenty-four hours. This powder retains its activity for an indefinite period, if kept dry, and a solution of it is nearly tasteless and inodorous.

When administered as a medicine, from two to five grains may be given at a dose, a little dilute hydrochloric acid in water being taken at the same time. The pepsin powder may be mixed with the salt at a meal.

PHENOL SODIQUE.—This preparation of carbolic acid is deservedly popular with the medical and dental professions. The formula from which it is prepared, is the following:

℞.—Carbolic acid, in crystals, 188 grs;
 Caustic soda, 31 grs;
 Pure water, 4 fluid ounces.—*Mix.*

The carbolic acid should be free from offensive odor, such as is prepared for medicinal purposes. When first mixed it is nearly colorless, but in time assumes a wine color; does not deposit any tarry residue, too often found in the commercial article. This formula is the result of numerous experiments, and gives an article that will compare favorably with the best French phénol sodique.

PHLORIDZINE.—The active principle of the root and trunk of the pear, apple, plum and other trees.

It is a most decided antiperiodic, and may be used in intermittent fever with excellent success.

Dose.—Ten to twenty grains, either alone or combined with gelsemin.

Its action resembles quinine, but never produces cerebral disturbance.

PHOSPHORUS.—This was accidentally discovered in 1669, by Brandt, as he was attempting to extract from human urine a liquid capable of converting silver into gold.

It is a constituent of animals, being found in bones, urine, nerves, brain, flesh, &c.; also found in various vegetables, combined with lime, potash or iron.

It is now solely obtained from bone, that tissue containing phosphate of lime in great abundance.

It is of a light amber color and semi-transparent, tasteless, but has a garlicky odor, and in the atmosphere its fumes are luminous in the dark, undergoing slow combustion. It is insoluble in water, but slightly so in alcohol and ether.

Properties and Uses.—It is a valuable stimulant, acting on the nervous and vascular systems and secreting organs. It excites the mental faculties and sexual feelings; raises the temperature of the

skin; increases the frequency of the pulse, and promotes the secretions.

In the solid form it is very apt to produce serious results, especially when white phosphorus (purest variety) is taken, three grains having caused convulsions and death.

A well authenticated case is reported of a person who took one grain, on the same day two grains, next day three grains, and died in spasms on the seventh day.

It is converted in the stomach into hydrophosphoric acid, which is very corrosive; hence, the necessity for always administering it properly diluted and in small doses.

Valuable as a stimulant to the nervous centres in convulsive and old paralytic cases, and in low fevers; as an aphrodisiac for impotency; as a cutaneous stimulant in some exanthematous diseases, where the eruption has receded from the skin; in cases of ozæna; invaluable in second stage of pneumonia, covering a greater number of symptoms than the Allopaths even claim for tartar-emetic; indicated in adynamic apoplexy of old people where, with other symptoms, there are these: face pale and sickly, eyes sunken, coldness, great tremor of the hands and feeble pulse. In paraplegia, phosphorus imparts vitality to nervous matter, and its deficiency may lead to paralysis. Thus, it may act curatively by replacing the constituent which is deficient.

In epilepsy, which has followed protracted masturbation or excessive venery, its value is enhanced by being alternated with cinchona; in pleurisy, especially in cases where the countenance is pale, alternating with redness, expectoration slimy and bloody, eyes hollow and surrounded by a blue circle, respiration short, difficult and noisy, tongue dry, pulse quick and hard; in incipient and confirmed phthisis, in persons of meagre, slender frame, fair complexions and strong sexual feelings; in scrofulous ulcers; in gastritis, complicated with *heartburn*; in vertigo, accompanied by headache, and a feeling of pressure on the top of the head. Lucifer and Congreve match-makers are liable to necrosis of the jaw-bone.

The deleterious effects are likely due to hypophosphorous acid contained in the surrounding atmosphere. Good ventilation and personal cleanliness are the best preventives. In poisoning by phosphorus, an emetic should be given to produce speedy evacuation of the stomach; afterward, magnesia in water, in order to neutralize the phosphoric acids which may be found.

Dose: of the alcoholic solution, 30 to 60 drops.

Dose: of the oily solution, 5 to 10 drops.

Dose: of the diluted phosphoric acid, 15 to 20 drops, mixed in some mucilaginous liquid.

Having tried various means of administering phosphorus, we have at length succeeded in effecting this in the form of pills; and as other medical men are now ordering phosphorus in this form,

we have thought it desirable to publish the formula for the information of our readers. Take of—

Phosphorus, 6 grains.
Suet, 600 “

Melt the suet in a stoppered bottle capable of holding twice the quantity indicated; put in the phosphorus, and when liquid, agitate the mixture until it becomes solid; roll into three-grain pills, and cover with gelatine. Each pill will contain $\frac{1}{3}$ of a grain of phosphorus.

Physiological action of Phosphorus.—We can never separate the nervous centres and their communicating nerves from the study of the human functions, healthy or morbid. The brain and spinal cord, with their multitudinous ramifications, constitute the forces of the living organism. If these forces are impaired, either functionally or organically, we have disease. But it is a most remarkable fact, that of all parts of the human body the nervous system is the least affected by decay. It therefore remains energetic, sensitive, motive, while others may be dead; but once affected with diseased action, as in typhoid fever, where the nervous system is functionally deranged by the operation of a poison, as in phthisis, where the nervous system is organically impaired, recovery is slow. This is characteristic of the tissues involved.

Phosphorus is one of the principal ingredients of the brain or nerve tissue—an active, living ingredient. If there is impaired nervous energy, weak vital force, there is a deficiency of phosphorus. Give it internally in any form, which is easily assimilated, and we supply the want, the vacuum, the loss.

Its action is directly constructive, creating nervous energy, renewing life, increasing vitality, repairing injured nerve force. It creates renewed life in every tissue or organ in the body. The smaller the dose, the more easily and perfectly is it taken up. *It is the best, most direct and positive nerve tonic in the whole range of medical science.*

PHYSALINE.—This is the bitter principle of the *physalis alkekengi*, or winter cherry of Europe.

When pure, physaline is of a yellowish white powder, and its taste, at first bitter, subsequently becomes intensified, thus resembling nux vomica in its producing an increasingly bitter taste. It is only sparingly soluble in cold, but more soluble in hot water, chloroform and alcohol. The physaline is obtained from the fruit which contains citric acid. This remedy, although it is but little employed by the profession, I have found to be of considerable value in febrile and inflammatory diseases, especially when associated with great vascular excitement, wakefulness and restlessness; also indicated wherever there is high-colored or scanty urine and torpor of the bowels. In a word, physaline possesses tonic,

laxative and diuretic properties, and may be recommended in all cases where these are indicated.

Average dose is one grain, highly triturated with sugar.

PHYTOLACCIN.—This is the active principle of *phytolacca decandra*, or poke, and when obtained from the freshly-dried root, is of a light-brown color, with a pleasant mucilaginous taste; soluble in water, and insoluble in alcohol or ether.

Properties and Uses.—Poke is cathartic, alterative, emetic, and acts slightly like a narcotic; large doses induces emeto-catharsis, with loss of muscular power; and when given in excessively large doses, spasmodic action is liable to take place, and occasionally a pricking or tingling sensation over the whole surface. In from one-fourth to one-grain doses it acts as a decided and powerful alterative, which proves of great benefit in scrofula, consumption, indurated glands, syphilis, &c. There is no agent that acts with so much vigor and certainty on the different glands of the system as the phytolaccin; indeed, it is one of our best alteratives—one that deserves our fullest confidence, and one that will never fail to fulfill the indications for its use. One of the best remedies for diphtheria, given internally in the form of tincture, in from five to fifteen-drop doses every hour or two; and applied externally, the tincture, diluted in water, or the green roasted root mashed, and applied hot. I have found it to answer a better purpose combined with tinct. veratrum, as—

R_y.—Tinct. phytolacca;
Tinct veratrum, āā ʒij;
Aqua, ʒiv.—*Mix.*

Dose.—A teaspoonful every hour or two hours.

The above proves to be specific in the treatment of inflammation of the breast; also used in cases of cancer; the remedy is administered internally, and the juice of the berries applied externally; a decoction of the fruit, given freely, is one of the best agents for croup, giving immediate relief.

The root roasted in hot ashes until soft, and then mashed and applied as a poultice, is unrivaled in films and tumors of various kinds. The extract, made into an ointment with fresh lard, forms an excellent ointment for scald-head, itch, and many other obstinate skin diseases.

Dose of phytolaccin, from one-fourth of a grain to a grain, three times a day.

PLATINA.—While this metal is of peculiar interest and value to the scientific chemist, it is also of considerable value as a remedial agent.

Its physiological actions are very numerous—the following are a

few of the more prominent: Low-spirited, taciturn; the individual imagines that he is abandoned by everybody; anxiety, trembling of the hands and flushes of heat; anguish, as of death, which is thought near; hysteric mood, loud cries for help; easily angry and vehement; cold, absent, indifferent in company of friends; loss of consciousness, dullness of the forehead, violent vertigo.

Headache, as if the head was jammed in; cramp pain in the forehead and right temple; it begins feebly, increases in violence, and ends feebly; violent pressure in the forehead, as if everything in the forehead would come out; roaring in the head, as from a mill.

Burning sensation in the eyes, or as if a grain of sand had got into the right eye; twitching of the eyelids.

Cramp pain in both ears; tingling of the ears; whizzing in the ears; dull roaring and rolling in the ears.

Dry coryza in one nostril, afterward profuse fluent coryza, with sneezing.

Burning heat in the face, with glowing redness; great dryness and roughness of the lips; corrosive gnawing in the chin, as if sore; lock-jaw, paroxysms of drawing in right side of the neck, afterward in a hollow tooth and in the ear; throbbing, digging in the teeth, viscid and slimy mouth; sensation on the tongue, as if burnt; scraping sensation in the throat, as if constricted; aversion to eating; nauseous feeling in the region of the stomach; pressure in the pit of the stomach; creeping feeling from pit of stomach to the throat; dull stitches in the middle of the umbilicus; distension of the abdomen after a meal.

Constipation, with frequent desire for stool; creeping tenesmus in the arms, with itching; violent pressing in the rectum without stool.

Slow but frequent flow of urine; excessive sexual desire; discharge of prostatic fluid; embrace with little pleasurable excitement; excessive sexual desire, especially in lying-in females; cutting in the hypogastrium, as if the menses would appear; menses too early; painful sensibility of the vulva after coition; loss of voice; short, dry cough; short, difficult breathing; dyspnœa, as if laced too tightly; sensation in the chest, as if fasting.

Numb feeling in the os coccygis, as from a blow; pain in the small of the back after a walk, as if broken; sharp stitches in the shoulder, causing the arm to start; relaxed feeling in both arms, as if they had lifted and carried a heavy weight; crampy, tensive pain in the thigh, close above the joint, as after a blow; jactitation of the muscles of the lower limbs; feeling of great weakness in and around the knee joints.

Violent yawning; goes to sleep while talking; incoherent dreams; violent itching of the whole body; chilly creeping over the back; chilliness through the whole body; chilliness and shuddering, mixed with flushes of heat, accompanied with ill humor and taciturnity; itching, stinging of the whole body.

Platina is particularly suited to females of a sensitive and impressible organization, and who suffer from too frequent and too profuse catamenia. It is useful in uterine epilepsy, melancholia, hysteria, puerperal mania, loss of appetite, menorrhagia, disposition to miscarriage in females of an excitable temperament; puerperal fever, nymphomania, prolapsus uteri, dry coryza, languor of the extremities.

The physiological actions of this remedy will serve as a guide to its proper therapeutic uses.

Dose.—One-thirtieth of a grain every three hours; useful in struma, syphilis, cancer, and where an alterative effect is desired.

PODOPHILLIN.—This remedy is the active principle of the *podophyllum peltatum*, or mandrake.

The properties and employment of this truly invaluable remedy are so numerous and satisfactory as justly to be entitled the *ne plus ultra* of our pharmacopœia.

Properties.—Emetic, cathartic, cholagogue, resolvent, alterative, diuretic, diaphoretic, emmenagogue, vermifuge, &c.

Uses.—Fever and inflammations; nearly all disorders of the liver, spleen and other viscera; rheumatism, both acute and chronic; croup, pneumonia, scrofula, indigestion, jaundice, piles, constipation, venereal diseases, dropsy, gravel, inflammation of the bladder, suppression and retention of the urine, eruptions of the skin, amenorrhœa, leucorrhœa, ophthalmia and otorrhœa; it is indicated wherever an alterative is required.

The therapeutic properties of this remedy reside in three distinct proximate principles—resinoid, alkaloid and neutral.

The resinoid principle is composed of at least five different resins, and possesses emetic, cathartic and cholagogue properties.

Combined with sulphate of zinc and hydrastin, it forms a valuable application to cancerous growths.

Dissolved in alcohol, it is a most efficient counter-irritant; produces rapid pustulation, appearing first in the form of minute vesicles, containing a serous fluid, which speedily changes to a whitish or yellowish pus; valuable in chronic and persistent cases of local neuralgic pains, spinal irritation, chronic hepatitis, pleuritis, synovitis, morbus coxarius, &c.

The other two principles contain diuretic, diaphoretic, alterative and laxative properties of no mean order. The excuse of some practitioners for abiding by the use of mercury is, that the vegetable kingdom furnishes no substitute of equal efficacy, especially in disorders of the liver; but if such gentlemen were to put podophillin to the test, they would soon change their opinion, and if unbiased, would banish all mercurial preparations from their list of remedies.

Podophillin has ever been called the "vegetable calomel," and

well it may, unless, indeed, in the sense that it is completely devoid of the mischievous results which accompany the use of that metal.

It never produces ptyalism; but from its powerful resolvent action will occasionally dislodge deposits of latent mercurial atoms, and thus induce temporary mercurialization. But this condition is, of course, owing to the mercury which the patient had taken at some previous time.

It is of great value in hepatitis and other liver complaints; its primary impressions are expended upon the gastro-enteric and hepatic apparatus, and produce copious bilious discharges.

Common salt enhances the activity of podophillin, and should be freely used, especially in those cases where great coldness and torpidity exists; but in all cases of a sthenic character it should be used in moderation, while the system is under the influence of podophillin.

As the actions of this remedy upon the digestive organs are indirect and subsequent to its specific constitutional influences, it should never be taken during active digestion, for it would impede that function. The best time to take it is about two hours before a meal.

In typhoid fever, dysentery and other diseases accompanied by intestinal irritation, leptandrin forms an important auxiliary. Two parts of leptandrin to one of podophillin.

One grain of podophillin, triturated with one hundred grains sugar of milk, and given in three to five-grain doses every three hours, is a true specific for mucous diarrhoea. Combined with jalapin, podophillin is indicated in dropsy, in congestion of the portal circulation, and in all cases where a speedy evacuation of the bowels is desirable. I can recommend it highly in the treatment of amenorrhoea, hysteria, chorea, and all nervous affections; it is still more effective in such cases when combined with caulophyllin.

As a derivative it is, perhaps, without an equal for the cure of local inflammations and congestions, and for the radical cure of chronic inflammation of the bladder when exhibited in full cathartic doses at bed-time, and repeated every second night until the more violent symptoms disappear. There is no remedy more certain and reliable in the treatment of syphilitic infections, whether of a primary, secondary or tertiary form. It exerts a favorable influence on the cutaneous functions, producing a constant moisture of the skin.

As a cholagogue, when combined with leptandrin, it is not to be surpassed.

This most valuable remedy produces a powerful and lasting impression on the glandular system and secretory organs, unequalled by any other agent. Podophillin is also an unrivaled alterative, unsurpassed by any other agent in the *Materia Medica*. Usually employed in the form of a syrup. Take of the crude podophyllum, ℥j; ginger, ℥iv; water, Ovss. Then steep and strain, and add refined sugar, ℥vj.

Dose.—A tablespoonful three times a day.

The average cathartic dose of podophillin is one grain; emeto-cathartic dose, from three to five grains.

As an alterative, from one-fourth to half a grain.

If taken by mistake, or in over-doses, counteract by free use of buttermilk.

POPULIN.—*The physiological action* of this remedy is a pure decided tonic.

Under its use digestion is more rapid and effectual; nutriment is taken up more copiously and rapidly; the appetite is quickened, sharpened, and the whole muscular tissue toned and braced.

As a tonic in diabetes it stands unrivaled. The resinoid principle, *propolis*, is also very valuable. The efficacy, in diarrhœa, of propolis—a reddish-brown, odoriferous, glutinous substance, obtained from the buds of the poplar, birch and various other resinous trees—is important. It has been found to be the best remedy in mucous diarrhœa, in chronic camp diarrhœa, and in the diarrhœa of children; but it has failed in chronic malarial dysentery.

It appears to possess an anodyne property, but does not constipate. It is used in an alkaline solution, made by dissolving two ounces of propolis in one drachm of liquor potassa, and then adding water and simple syrup, of each two ounces.

The *dose* is half a teaspoonful after each stool.

POTASH, PERMANGANATE OF—Is about the best disinfectant that has yet been discovered.

Disinfectants act in three ways, namely: by preventing the formation of fetid gases, by absorbing them, or by decomposing them.

It acts in the last named manner, holding the first rank, and it is the more valuable as it is itself insipid and inodorous.

It not only destroys fetid odors from organic sources but poisonous emanations, and so proves useful in preventing the spread of infectious diseases. Very successful in the treatment of fetid and gangrenous ulcers, abscesses, and wounds of all kinds, of fetid discharges from mucous membrane in ozæna, otorrhœa, leucorrhœa and diphtheritic affections, &c.

It has proved very beneficial in acute rheumatism, and as an injection in gonorrhœa.

It is also of use as an agent in organic poisoning when used externally; one part to nine parts of water is the strength that ought to be employed.

In diabetes, it is of great utility; in leucorrhœa, it has no equal.

Its physiological properties, its action on animal tissue and on the blood, is due entirely to the large amount of oxygen present in the remedy, which imparts its vitalizing influence to the blood or muscular fibres.

POTASSA, CHLORATE.—The action of this is chiefly upon the mucous membrane as a direct stimulant; it increases the activity of the mucous surface; hence, its great utility in nursing sore mouth, aphthæ, leucorrhœa, &c.

We have derived very satisfactory results from it as an injection in gonorrhœa.

PROPYLAMIN.—The virtues of this remedy have been entirely over-estimated. It has been a great deal used in acute and chronic rheumatism by our old school brethren, but with no curative effects. It is difficult to say whether it has any physiological action on the human frame aside from ordinary salt. It is prepared from fish brine.

PRUNIN—is the active principle of *prunus virginiana*.

Properties.—Stimulant, tonic, expectorant and, in large doses, sedative.

Employment.—Coughs, colds, incipient phthisis, dyspepsia, hectic fever, debility, scrofula.

In diseases arising from disturbances of the heart it is almost specific; also, in chronic bronchitis, depending upon valvular disease of the chambers of the heart.

This is a valuable stimulant, tonic and expectorant in small repeated doses, and an arterial sedative in large doses; valuable in cases of enfeebled digestion, especially in the convalescing stages of pneumonia, fevers and other acute diseases; incipient phthisis and æsthenic forms of dyspepsia. Appropriate in hectic fever, giving tone to the cutaneous capillary structure, and restraining the tendency to colliquative sweats. It is also useful in whooping-cough, irritability of the nervous system, and in scrofula, amenorrhœa, dysmenorrhœa, leucorrhœa, &c. Its sedative properties are said to be due to the hydrocyanic acid which it yields.

As a lotion, it is frequently of good service in the treatment of ill-conditioned ulcers.

Dose.—From two to five grains, thrice daily.

PTELEIN.—The active principle of *ptelea trifoliata*, or water ash. It is insoluble in water and acids; soluble in alcohol or ether.

Useful in intermittent and remittent fevers, and in nearly all cases of debility where tonics are indicated.

It promotes digestion, enables the stomach to endure suitable nourishment, and is thus valuable in cases of dyspepsia, but of greater value when combined with frazerin; one grain of the latter to half a grain of the former, triturated with sugar, and repeated three or four times a day.

It possesses a tonic and stimulating influence upon the kidneys,

bladder, skin and mucous membranes; hence, it is indicated in scrofulous diseases, in early phthisis, chronic degeneration of the liver, spleen, pancreas, kidneys, glands of the bowels, &c.

I have found it highly serviceable in chronic diarrhœa.

Dose.—From one to three grains every four hours.

QUININE.—Sulphate quinine, one of the most important constituents of the cinchona; its true physiological action is most instructive.

The malarial and other poisons have a special affinity to impair the nervous system; to create a waste, disintegration of that important part.

Quinine has a powerful affinity for the nervous system. No function in the human system can be performed without waste or loss, and still greater is that loss if the part is irritated by disease.

Muscular action implies the loss of fibrin; any activity of the brain involves a corresponding metamorphosis of that tissue.

Quinine causes increased determination of the blood to the brain and spinal cord, which, if moderately kept and not too long continued, is salutary. It has the power to prevent destruction of new tissue, and aids greatly the reparative process. It is a great conservator of the nervous system; it imparts tonicity to the system, controls cryptogamic development till nature, aided by remedial means for exciting the secretions, is able to eliminate the poison. This action on the nerve centres produces a marked action on the capillaries, unloading them; it thus becomes an equalizer of the circulation; it approximates the circulation to a healthy standard; it enters the bloodvessels, and goes the round of the circulation; it diminishes uric acid in the blood; it also defibrinates that fluid.

Malaria acts on the cerebral centres as a depressant. If we can come in with a powerful stimulant, like quinine, we render the part insensible to the morbid influence—the paroxysm is set aside.

This remedy acts energetically on the nervous centres—the same tissue affected by disease. Its bad effects consist in administering it for a long period, and in excessive quantities.

RHEIN.—This is the active principle of *rheum palmatum*.

This remedy possesses cathartic, alterative, laxative, tonic, resolvent, cholagogue and antiseptic properties.

It is of great value in chronic diarrhœa, and in irritation of the mucous membrane of the stomach and bowels, and in some cases of dysentery; it relieves heartburn, flatulence, constipation and other symptoms dependent upon indigestion, and for the correction of the excessive mucous discharges which sometimes follow an attack of gastric or bilious fever.

Rhein is likewise of much utility in the treatment of chlorosis, leucorrhœa, dropsy, scrofula, rickets and atonic hemorrhoids; also, for the cure of jaundice, and for the removal of biliary concretions and impacted fœces.

It is a most valuable remedy in the digestive disorders of children, such as vomiting of the food, colic, diarrhœa, convulsions, produced by the retention of acrid ingesta, and in the disorders of dentition.

It is used with benefit as an injection to check excessive hemorrhoidal and leucorrhœal discharges.

It is contra-indicated in active inflammations, congestions and hemorrhages.

The dose of rhein is from two to five grains.

Its physiological action is a tonic to mucous membrane.

RHUSIN.—The active principle of *rhus glabrum*, or sumach.

This remedy is one of the most valuable of the astringent tonics; it exerts a healing influence over mucous membranes.

As an antiseptic, it is indicated in all cases manifesting a tendency to putrescency.

In diarrhœa and dysentery, after the removal of the morbid accumulations by appropriate remedies, follow up the treatment with rhusin to control and tone up the action of the bowels.

Administer in doses of two grains every three hours.

In such cases it is well to combine it with geranin.

In combination with lycopin I have found it very useful in cases of hemorrhage of the lungs, stomach and bowels; also, in diabetes.

In leucorrhœa, accompanied by constipation, the rhusin may be given in two-grain doses three times during the day, and leptandrin in three-grain doses at bed-time.

Rhusin often proves valuable in gonorrhœa, especially when combined with some other appropriate alterative.

In aphthous condition of mouth, ulceration of throat, succeeding scarlatina and diphtheria; in chancres and syphilitic ulcers, and mercurial affections of the mucous surfaces, it should not be omitted.

We know of no more useful agent in the treatment of the distressing sequela that often follow the use of mercurials.

It will be found a reliable remedy in the diarrhœa of typhoid fever, and in similar cases where putrescent tendency exists. It also possesses antiseptic properties, and should be administered along with baptisin when there is a tendency to gangrene and mortification.

Average *dose*, three grains.

RHUS RADICANS.—This remedy acts especially upon the brain, the muscles, tendons, skin and mucous membranes; pains often when semi-lateral, or in various remote parts in succession; pains where tendons are connected with the muscles or bones, especially during the actions of the muscles.

Stiffness of the joints, pains in the muscles during the commencement of any exertion, but disappearing after long-continued action.

Pain and soreness worse in the morning when beginning to move; sometimes mitigated by movement and walking, sometimes by rest and when lying down.

Languor on rising in the morning, and pains occur during afternoon and early in the evening.

Sufferings aggravated by change of weather; drowsiness, pains and other symptoms on the approach of a storm, and pains during rainy weather.

This remedy, in large doses, produces symptoms analogous to rheumatic pains; wandering pains, sometimes on one side, and sometimes on the other.

Bodily torpor; dread of bodily and mental exertion; physical apathy, day sleepiness, restless nights, and numbness of the limbs. The pathogenesis of rhus radicans is somewhat considerable, and its therapeutic actions are correspondingly important.

It merits our confidence in the treatment of the following diseases: hypochondriasis, cerebral congestion, obscuration of sight, ptyalism, dyspepsia, flatulent colic, lead colic, cases of diarrhoea with heaviness of the legs, intestinal hemorrhages, emuresis, dysuria, diabetes, urethritis, gonorrhoea, impotence, leucorrhoea, profuse catamenia, rheumatic pains in left side of chest, rheumatism of the heart, injuries of fibrous tissues, particularly of tendons or ligaments; burns and scalds, neuralgic affections, rheumatic pains in the neck, arms or loins; erratic pains, rheumatic paralysis of the shoulders, chest and muscles; of respiration, with faintness and dyspnoea, &c.

When an over-dose has been taken an infusion of coffee, taken as a drink, acts as an antidote. Bryonia, camphor, pulsatilla and sulphur are also antidotes.

Dose of the tincture, from ten to twenty drops.

RHUS TOXICODENDRON—(*The Poison Oak*.)—From the mere act of preparing the tincture the following symptoms of its poisoning effects were produced: Small vesicular tubercles, like insect bites, appear in the joints of the hands and feet, particularly around the ankles, followed by excessive itching, with a kind of voluptuous feeling of the skin. Scratching induces burning and aggravates itching.

From the second to the fifth day.—Swelling and redness of the right eyelids, so severe as nearly to deprive the sufferer of sight. A smaller swelling around the left eye, less itching in the eyes

than in other parts of the body; itching worse in the evening; vesicles and tubercles on the knees, hip, shoulder-joints. This action on the joints is quite a characteristic symptom.

Itching began to diminish on the fifth day, and the skin to peel off. The most remarkable effect of *rhus toxicodendron* was the evident propagation of the poisoning from one person to another, manifested by having brought out the eruption on the skin. *Rhus toxicodendron* has been successfully employed in the following affections: catarrhal affections, from exposure to wet; rheumatism and arthritic affections, with and without swelling; straining of tendons, secondary syphilis, opisthotonus, scarlet rash, with intense fever and great thirst; sopor, restlessness, ineffectual desire to urinate, constipation, erysipelas, bullosum of the face and head, urticaria, herpes on the forearms and dorsum of the hands, chronic pemphigus, double, tertian and quotidian fevers; phlebitis, various forms of typhus fever, chronic petechiæ, nervous vertigo and nervous apoplexy of old people, incipient paralysis of upper and lower limbs, hemicrania, acute hydrocephalus, rheumatic and inflammatory cerebral affections of children, scrofulous ophthalmia, photophobia, adventitious growth of the cornea, parotitis, nocturnal epistaxis, rheumatic toothache, enteritis and peritonitis, nocturnal diarrhœa, mucous and bloody dysentery, incontinence of urine, suppression of the menses from getting wet, violent dry cough, racking the whole body; *bloody* cough, with tightness of the chest; catarrh of the mucous membrane of the pharynx, *œsophagus* and bronchia, with expectoration of mucus; typhoid pneumonia, inflammatory affections of the chest.

Affections of the Heart.—Valvular diseases, with consequent derangement of the functions of the heart, chronic rheumatic pains. Inflammation and ichorous suppuration of the hands after external injury, warts on the hands and fingers. Paralysis of the feet, pain, as if sprained, in the hip, knee and tarsal joints; gangrenous ulcers at the roots of the toes, with burning, itching; vesicular eruption over the whole body, with febrile symptoms.

Rhus may be employed externally with great advantage to ecchymosed parts, to chronic exudation, and to morbid growths occasioned by external violence:

R̄.—Tincture *rhus toxicodendron*, ℥i;
Aqua pura, ℥x.—*Mix.*

For a lotion, and apply as often as may be required.

Internally, use ten to fifteen drops of the tincture; two, three, four or six times a day, when necessary. Antidotes the same as specified under *rhus radicans*.

RUMIN.—The active principle of the *rumex crispus* or yellow dock.

It possesses alterative, resolvent, anti-scorbutic, detergent and

mildly astringent and laxative properties. It proves most efficient in phthisis, scrofula, syphilis and diseases of the skin; it corrects the general phthisical and scrofulous habit of the body; improving the appetite, increasing the quantity of bile secreted, gastric fluid produced, urine formed, and securing healthy eliminations from the surface. It also wards off the tendency to phthisis, inherited from scrofulous or consumptive constitutions of parents.

Large doses are required to secure its laxative effects; so, suitable laxatives are often combined with the rumin.

Combine it with myricin, in scrofula; with macrotin, in rheumatism; with oil erigeron, in scorbutis; with stillingia, in all skin diseases; with corydalin, in syphilis; and with helonin, in leucorrhœa.

The *average dose* of rumin is from three to five grains. A decided alterative.

RUTA GRAVIOLENS.—Rue is an emmenagogue, anthelmintic and antispasmodic.

In large doses it acts as a narcotic and poison. It causes abortion when used by pregnant females, followed by inflammation of the bowels and stomach, with cerebral disturbance. Its influence over the uterus is great, being capable of exciting menorrhagia, inflammation and miscarriage.

It is often successfully used in flatulent colic, hysteria, some nervous complaints, epilepsy, and as a famous vermifuge.

Dose: of the leaves, from 10 to 20 grains.

Dose: of the decoction, 1 to 4 ounces.

Dose: of the oil, from 2 to 6 drops.

SALICIN.—The active principle of the *willow*. This remedy possesses tonic, antiperiodic and febrifuge properties. It is often used as a substitute for quinine, although slightly inferior, being less likely to irritate the stomach and excite the nervous system. It may be administered in cases where cinchonism would follow the exhibition of quinine.

It has frequently cut short intermittent fevers in one day.

It undergoes oxidation in its passage through the system, and is converted into salicylic acid, which may be traced in the urine.

Dose.—From five to ten grains.

SAMBUCUS CANADENSIS.—This remedy possesses alterative, diuretic, diaphoretic and deobstruent properties; useful in hepatic derangement of children, erysipelatous diseases, scrofula, rheumatism, cutaneous diseases, and in syphilis.

In large doses it promotes emesis; in small doses it acts as a

deobstruent, promoting all the fluid secretions; and is used in dropsy, especially when following scarlatina, and other febrile and exanthematous diseases, and in several chronic diseases.

In epilepsy, as well as in laryngismus and bronchitis, I have employed it with considerable benefit.

The flowers are sometimes used in fomentations, and to form a cooling ointment.

Dose.—Of the juice of the berries, ℥i to ℥ij; of the bark, grs. v. to ℥ss; three times a day.

SANGUINARIN.—The active principle of *sanguinaria canadensis*, or blood root.

Properties—Emetic, sedative, febrifuge, stimulant, tonic, alterative, diuretic, resolvent, expectorant, emmenagogue and laxative.

Various preparations have been made, such as the *alkaloid* principle under the name of sanguinarine; but the *alka-resinoid* principle, or sanguinarin, is the one we prefer. The sulphate is also a good form. The actions of this remedy are various, according to the dose administered; in small doses it stimulates the digestive organs, and increases the action of the heart and arteries, acting as a stimulant and tonic; in large doses as a sedative, reducing the pulse, causing nausea and diaphoresis, increased expectoration and gentle diuresis, also stimulating the action of the liver; in larger doses it causes severe vomiting, with distressing gastralgia and narcosis. It is a successful remedy in bronchitis, laryngitis, hooping cough and other affections of the respiratory organs.

Also good in dyspepsia as a stimulant tonic, and as an alterative in jaundice and rheumatism.

It is used very extensively, and with great benefit, in hepatic difficulties, chronic hypertrophy of the liver, and granular degeneration of that structure. In these cases it is advantageous to combine it either with leptandrin or podophillin.

In obstinate gravelly affections, and in functional inactivity of the kidneys, it is peculiarly serviceable. Sanguinarin resolves the plasticity of the venous blood, and stimulates the venous absorbent and lymphatic vessels and glands; hence a valuable remedy in the treatment of dropsy, arousing the system from its torpor, and invigorating the functions of secretion and depuration.

As an emmenagogue, its properties are well marked and decided in chronic amenorrhœa; but in cases of debility it is better to combine it with suitable tonics, as fraserin and cornin.

As an antiseptic, it is beneficially employed in offensive leucorrhœal discharges, ulcerations of the cervix, chancres and buboes.

In combination with stillingia, I have found it useful in secondary and tertiary syphilis; also in eczema, herpes and other diseases of the skin when combined with cerasein.

In scaly eruptions of the skin, dissolved in alcohol or strong

vinegar it generally proves successful. Possessing escharotic as well as antiseptic properties when applied to nasal and uterine polypi, it will frequently disorganize them; and applied to the surface of foul and indolent ulcers, it cleanses and disposes them to heal.

There is nothing better as a gargle in the sore throat of scarlatina.

The *dose* varies from one-fourth of a grain to five grains, the latter acting as an emetic, and sometimes as an emeto-cathartic.

SANTONINE.—This is a crystallizable, volatile substance, separated from the terminal flowers of the *artemesia* or *chenopodium-santonica*.

This peculiar principle produces some impression of a slightly narcotic character on the brain, and frequently other characteristics of its power over the different organs of vision are noticed.

It appears to act as a tonic to mucous membranes, allaying irritation and inflammation, especially of the sub-acute form, changing the morbid secretions of mucous membrane affected with catarrh, and discharging muco-purulent pus. Thus it will be found beneficial in all catarrhal affections of the system. Especially adapted to sub-inflammation of the kidneys and bladder, proving curative after every other agent fails. It operates as a decided diuretic, increasing the volume of urine, and sometimes the solids, to a marked degree; also its specific gravity. Santonine is a very agreeable and efficient diuretic for children, giving relief almost instantly when there is retention of urine. It has proved of much efficacy in intermittent fever, acting as an antiperiodic. But its most peculiar characteristic is its influence on vision. Persons under the influence of santonine behold all objects discolored, generally yellow, but often green and sometimes blue; and so rapidly does the santonine pass, that the change of color in the urine has been observed in sixteen minutes.

These effects are ascribed to a change in the santonine in the system, analogous to that which takes place by its exposure to light; the yellow substance circulating with the blood, and passing out of the circulation with the urine.

It has been found advantageous in amaurosis, and is an excellent remedy for the destruction of worms, being one of the most powerful of vermifuge agents known.

Dose.—Two grains three times daily, or make a syrup thus: santonine, ℥i, dissolved in a little alcohol; with eight ounces of syrup, and give two tablespoonfuls for a dose.

SARRACENIA PURPURA.—This remedy was little known as one of great value until the last epidemic of small-pox that appeared in the United States. The liberal members of the medical profession found this remedy much more than a diaphoretic and diuretic.

They, by its exhibition in several thousand cases, have demonstrated the remedy to be not only a prophylactic, but a true curative agent in small-pox. It seems to have some direct action upon the virus of the disease, altering and destroying its character. It has long been known that the sulphites or hyposulphites have a marked effect in checking the disease; but to the free use of a simple decoction of this drug, thousands of cases have been prevented, and a still larger number cured.

Warmth, stimulation, bathing with stimulating washes, nutritious diet.

Perhaps its chemical properties may have something to do with it, containing a large per centage of phosphates and chlorides, and other agents of an alkaline character.

The thing is certain, that where the pitcher plant is drunk freely, there will be no small-pox; where it is given freely, and heat, bathing and nutritious diet in a bad case, it will either partially abort, or render it an extremely mild attack.

The old school profession of the United States have been guilty of the most atrocious crimes, sacrificing human life in the treatment of small-pox by ice, ice water, ice cream and other depressents. Where such have been used by them, death inevitably takes place; whereas, by diffusible stimulants, as capsicum, attention to hygiene and the administration of the sarracenia, all recover.

SAVINE.—We have in this potent drug the primary and secondary action well brought out. Small doses act as a direct sedative to an engorged uterus, and arrest uterine hemorrhage; large doses produce terrible congestion, and make this drug an abortifacient. This latter property depends upon its power to cause turgidity of the viscera of the pelvis—its exciting action upon the rectum and bladder, causing it to act reflexly on the womb. Engorgement of the pelvic viscera, an apoplectic condition of the foetus, and general nervous congestion, are some of its results.

Its physiological action is as follows:—It enters the blood unchanged. It is thrown off by the skin, lungs and kidneys. It affects powerfully the vaso-motor system of nerves. It causes hyperæmia of the brain and of the spinal cord. It stimulates glandular action. It is cathartic. It is diuretic. It is highly irritant. It is stimulant. It is an intoxicant. It is a narcotic, and it increases the temperature of the body.

The oil is the most toxic in doses of from 15 to 30 drops.

In small doses, rubbed up in sugar, it has a marked action on the reproductive organs of women. In obstinate cases of suppression of the menses, it has probably no equal. Its first attenuation is a prophylactic to habitual abortion, especially when this is dependent upon diminished vitality of the uterine system.

As an emmenagogue we have used it as follows:

R̄.—Ext. sabinæ,
Pulv. sabinæ, āā q. s.—*Mix.*

To make three-grain pills.

Dose.—One to two every three hours. In addition, give twenty grains of borax twice daily, and at the end of six days an antibilious purge.

SCUTELLARIN.—The active principle of *scutellaria lateriflora*, or scull-cap.

Properties.—Nervine, tonic, diuretic and antispasmodic.

Employment.—Convulsions, chorea, delirium, hysteria, dysmenorrhœa, neuralgia, nervous debility, urinary disorders.

We value this remedy highly as a nervine tonic. It allays the irritability of the nervous system, imparting tone and regularity of action, lessening cerebral excitement, febrile excitement, abates delirium, excites diaphoresis and diuresis without any subsequent unpleasant reactions. In fevers and other acute diseases, in which there is a tendency to delirium, it is entitled to confidence.

It is equally useful in the treatment of acute dysmenorrhœa, menorrhagia and other female disorders, in which the head is apt to become affected. Perhaps it is the very best remedy in the treatment of coup-de-soleil, or sun-stroke, particularly in chronic cases.

Its value is enhanced when combined with podophillin.

It generally performs a radical cure in cases of convulsions, chorea and hysteria.

It is superior to opium for the disorders of children, as nervous irritability, wakefulness, slight febrile disturbances, flatulence, colicky pains and dentition.

It answers admirably to be combined with asclepin.

It is our best remedy in hydrophobia. If given in large doses it will suspend the action of the nerve centres until the effects of the poison is warded off. It is often beneficial in cases of threatened trismus, tetanic cramps and other spasmodic disorders.

Average dose is three grains, increased, when required, to five grains.

SENECIN.—The active principle of *senecio gracilis*, or life root.

Properties.—Alterative, tonic, diaphoretic, emmenagogue, febrifuge, expectorant and pectoral.

Employment.—Amenorrhœa, dysmenorrhœa, menorrhagia, hysteria, chlorosis, dropsy, dysentery, gonorrhœa, gravel, strangury, coughs, loss of appetite, debility, &c.

This remedy is so well known in *regulating* menstrual derangements that it has been called the female regulator. It has proved eminently successful in the treatment of amenorrhœa.

If the affection be uncomplicated there is no remedy more generally reliable than senecin.

It operates mildly and without producing any excitement, restoring the catamenial flow in a manner so natural that the patient is scarcely aware of being under the influence of medicine. But should the case prove obstinate combine it with podophillin.

When the affection occurs in patients of a peculiarly nervous constitution combine the senecin with caulophillin.

If the amenorrhœa is complicated with liver disorders, the administration of podophillin is indicated, and should precede that of senecin.

But it is no less serviceable in the treatment of dysmenorrhœa, especially when administered during the intermenstrual period. It acts as a special tonic upon the uterine system, invigorating the menstrual function, and restoring equilibrium of action.

In many cases its curative effects are enhanced when combined with helonin. But if the menstrual secretion be *profuse*, trillin should be substituted for the helonin; when *scanty* the baptisin.

A radical cure may usually be expected from such treatment.

Its employment is equally successful in the treatment of menorrhagia. Here we have an illustration of that morbid condition designated by the term *vis inertia*, or complete passivity of the vital forces, and the senecin acts by restoring and equalizing the functional activity of the organs concerned in this affection.

Its alterative and tonic properties render it an efficient agent in the case of chlorosis, and is peculiarly serviceable when it occurs in a strumous diathesis. Combined with leptandrin and iron by hydrogen it is an excellent remedy for prolapsus uteri, when of an asthenic character. We have found it of decided utility in spermatorrhœa.

It answers well in the treatment of gravelly affections and in dropsy, by reason of its exciting the glandular system to healthful action.

I have found it useful in gonorrhœa and syphilis when combined with stillingia. It is pre-eminently serviceable in coughs, colds, especially in mucous coughs.

If the expectoration is difficult, skin dry and system feverish, it should be combined with prunin.

When expectoration is free and tonics are indicated, combine with hyoscyamin, which combination is also appropriate when there is pain in the chest, and the cough troublesome at night.

Average dose of senecin.—Three to five grains.

SEPIA—(*Inky Juice of the Cuttle Fish.*)—This is one of the most efficacious of remedies in disturbances of the circulation in the female sex.

In large doses it produces flushes of heat, redness, swelling of the face, determination of blood to the head and right temple; swelling of chest, stomach and abdomen; hands and feet cold;

throbbing in the sacral region; palpitation of the heart, with occasional intermittent pulse, scanty urine and costiveness.

It produces the following appearance of the skin: small red pimples on the joints of the arms and legs, especially the knee and elbow joints.

In young girls, before the menses appear, sepia generally brings them on.

This is a most valuable remedy for the following affections of the head, associated with irregular and painful menstruation: herpes, sicca, scabies, warts on the hands and fingers, varicose, excessively painful ulcers around the ankle and on the dorsum of the foot, scrofulous ophthalmia, toothache aggravated by warmth, chronic angina, derangement of the digestive organs in the pregnant female, pyrosis, chronic derangement of the intestinal canal, cramp extending from the spleen to the chest, constipation, discharge of blood from the anus after stool, pain in the abdomen and urging to stool during the menses, amenorrhœa, irregular menses, scanty and too short, with plethora abdominalis; chronic menorrhagia, with plethora abdominalis.

Sepia is a specific preventive of miscarriage in the fifth and seventh months of pregnancy, when symptoms of plethora abdominalis and stagnation of the circulation are present; copious or acrid leucorrhœa; soreness and bleeding of the nipples in nursing females; cough worse at night, with white expectoration and pain in the throat; dry chronic cough, with its accompanying fever and thirst; stitches in the lower part of the sternum, extending to the back, shoulders and small of the back, but diminished by motion; tuberculous phthisis; palpitation of the heart on walking fast; affections of the heart, with violent, unequal, intermittent, palpitating and tremulous motion of the heart, and burning in the region of the pudendum.

Ry.—Of the crude inky juice, grs. x;
Sugar of milk, ʒj.—*Mix.*

Rub well together, and give one-fourth to one grain for a dose

SMILACIN.—Derived from *smilax officinalis*, or sarsaparilla.

Properties.—Alterative, resolvent and detergent.

Employment.—Scrofula, rheumatism, cutaneous diseases, venereal diseases, &c. This remedy is not an evacuant, no great augmentation of the functions of one organ over another being discernible, but it rather imparts a healthful stimulus to the entire glandular system, promoting equally the functions of absorption, assimilation and depuration.

It is eminently serviceable in scrofula, attended with feeble digestion and an anæmic habit.

Generally it should be alternated with a tonic, such as fraserin,

or with macrotin if there be cold and indolent condition of the skin, indicating the use of a stimulant.

I have prescribed it with good results in cases of spinal curvature associated with strumous diathesis; also in rachitis and other diseases of children arising from feeble nutrition.

It is useful in the treatment of skin diseases, necrosis, caries and other diseases of bone, ulcers, and for arresting all morbid cachexias. Combined with irisin, we can highly recommend it in cases of inveterate syphilis, pseudo-syphilis, mercurial syphilis, and struma in all its forms.

Dose.—Three to five grains.

SODIUM.—This metal exists largely in salt water, and is the metallic basis of that highly important alkali, soda. Although possessing some remarkable physical and chemical properties, the *metal* is never used in medicine.

Borate of Soda.—Borax is a natural production, being found in the waters of various lakes in Persia, and in mines, besides being extensively manufactured by the direct combination of boracic acid with soda.

Properties.—Diuretic, refrigerant, antilithic, emmenagogue and aphrodisiac. It is often serviceable in the treatment of amenorrhœa, dysmenorrhœa, and promotes parturition, or expedites the delivery of the placenta. As an aphrodisiac, it excites the venereal appetite, but its effects are more marked when a solution of it is injected into the rectum.

It is extensively used as an external application in aphthous and inflammatory conditions of the mouth and throat, and in scaly diseases of the skin. But its properties are too well known to require being described.

The *dose* of borax is from ten to thirty grains dissolved in water.

Carbonate of Soda.—The sources of this highly valuable agent are various; it is found native; procured from the ashes of marine plants, (kelp,) and on a large scale prepared by decomposing the sulphate of soda, which salt is obtained by converting common salt into the sulphate by means of sulphuric acid, by means of the carbonate of lime.

Properties.—Antacid and diuretic; used in gastric acidity with uric deposits, sick headache, pertussis, goitre and in scrofula.

Useful in some skin diseases, used internally and applied externally; in solution, twenty or thirty grains in solution. The antidotes to an improper dose are the vegetable acids.

Hyposulphite and Sulphites of Soda.—*Properties.*—Resolvent, alterative and sudorific.

Employment.—Exanthematous fevers, rheumatism, gout, chronic diseases of the skin, piles, biliary calculi, secondary syphilis, lochiæ, ulcers, &c. They are of the greatest utility in eruptive fevers;

they mitigate the intensity of the febrile exanthemata, render the confluent and malignant forms benignant, shorten the course of the milder forms, and in all cases accelerate convalescence.

I have witnessed highly satisfactory results from the hyposulphite of soda, both in gastric irritation and in *chronic* gastric irritation, in cases where the usual remedies were tried without avail.

It possesses the influence of inducing sleep where slumber has been lost or disturbed, relieving thirst, cleansing the tongue, increasing the appetite, correcting any intestinal disorder which exists, and all this in a much shorter time than can be procured by any other remedy.

The hyposulphites of soda have proved useful in cases of yellow fever. It is an agent of great value in the cure of tabes mesenterica; rapid improvement does not take place, but it is nevertheless sure, although slow. They appear to have the power of dissolving the tuberculous matter deposited in the abdominal viscera, perhaps by causing disintegration of the fibrin. It is remarkable that, although they effect a cure of the tabes mesenterica, they possess no specific action over the formation of tubercle in other organs.

The hyposulphite of soda is much more purgative than the sulphite, which is more diuretic than cathartic in its action. The sulphite to be preferred when a rapid cure is required, but hyposulphite when a prophylactic is needed.

In gangrene and sloughing, foul ulcers and suppurations of all kinds, a solution of the sulphite of soda is the best.

This salt is soluble in four times its weight of water, but one part to from five to ten of water is sufficiently strong.

The solution may be applied as a wash, or lint wet with it; or it may be injected into sinuses and sloughing cavities.

The immediate effect of the salts is to arrest putrid fermentation. The chief uses of the sulphites are used in solution: (1) to increase the activity of mucous membrane, diminution of the secretion; (2) diminution and removal of bad odors; (3) rendering viscus and preventing the spread of bad secretions; (4) destroying the elementary constitution of pus; (5) hastening repair; (6) diminishing the sensibility of the surface; (7) and hastening cicatrization.

In rheumatism and chronic skin diseases they are, when persevered with, of great utility, and as a disinfectant in the lochiæ can scarcely be surpassed. All acids and acidulous fluids are incompatible with the sulphites, and should, therefore, be forbidden. From a somewhat lengthened and extensive employment of the sulphites of soda in practice, I have formed several practical conclusions, two of which are:

1st. That they do not destroy or decompose the poison in the system, but prevent its deleterious action on the blood and tissues until it is eliminated from the system; and

2d. That these remedies should not be too suddenly withheld in

bad cases, but continued until the poison is carried out of the system by the emunctories.

A specific in glanders; it arrests the process of catalysis in the blood.

Dose of hyposulphite is from ten to sixty grains, in pill or aqueous solution. Sulphite, ten grains daily, but may be gradually increased to one drachm.

Sulphate of Soda.—Glauber's salt is a mild, cooling laxative or purgative, promoting secretion and exhalation from the gastrointestinal membrane. It impedes the coagulation of blood, and causes endosmose of the serum.

Dose.—Six to eight drachms dissolved in half a pint of water.

As a diuretic the dose must be smaller, and well diluted with water.

STANNUM.—Powder of tin is often administered with great benefit to secure the expulsion of tape-worm and the lumbricoides.

The *dose* is half an ounce in syrup or molasses, to be repeated every morning before breakfast, and succeeded by an active purgative. Its action is purely mechanical in such cases.

The chloride of tin is a good antispasmodic in epilepsy, chorea, and in convulsions of children, associated with the cutting of a new tooth; particularly appropriate when the child looks feeble and miserable; useful as a stimulant to paralyzed muscles in paraplegia.

Dose is from one-sixteenth of a grain, three times a day, in the spirits of hydrochloric ether.

Externally.—In skin diseases, and other conditions where astringent, irritant or caustic properties are indicated, a solution is made for external use thus: one-fourth to one grain of the chloride of tin to a fluid ounce of distilled water.

STILLINGIA.—Derived from *stillingia sylvatica*, or queen's root.

Properties.—Alterative, resolvent, stimulant, tonic, diuretic, antisyphilitic, &c.

Employment.—Scrofula, syphilis, leucorrhœa, gonorrhœa, cutaneous diseases, incontinence of urine, impotence, sterility, rheumatism, bronchitis, &c.

As an alterative it has very few equals, exciting a peculiar influence over the secretory functions which is unsurpassed by any other known alterative.

It is extensively used in all the various forms of primary and secondary syphilis, in which it seems to have almost a specific action; and in gonorrhœa; but it is sometimes inadmissible in the treatment of gonorrhœa, from its tendency to provoke urethral irritation and chordee.

This property, however, renders it of great value in the treatment of incontinence of urine, impotence and sterility.

The most obstinate cases of leucorrhœa frequently succumb to the influence of this remedial agent. It exerts a most direct and stimulating influence upon the fauces, trachea and bronchia; hence it has been found very beneficial in laryngitis, tracheitis and bronchitis; it stimulates the bronchial mucous capillaries, relieving the congestion and unloading the vessels.

Combined with xanthoxylin, it is of great utility in the convalescing stages of cholera infantum, dysentery, and other diseases attended with colliquative discharges.

In alternation with leptandrin, it is very valuable in cases of chronic diarrhœa and dysentery; also in chronic diseases of the liver, when alternated with phytolaccin.

It is also esteemed a remedy of great value in chronic rheumatism and in dermoid diseases. In scrofula its use is especially indicated, and in all diseases where there is a vitiated state of the blood with imperfect digestion.

Dose.—Three to five grains.

STRYCHNIA.—Strychnia is an alkaloid obtained from *nux vomica*. Their properties are quite similar, only the alkaloid is much more active, representing the *nux vomica* in its concentrated form.

They act chiefly on the spinal cord and medulla oblongata without affecting the functions of the brain; the division of the cord does not prevent its poisonous influence.

In poisonous doses *nux vomica* produces violent tetanic convulsions with asphyxia and death.

The slightest observable effects from small doses are: twitches of the muscles of the arms and legs, especially occurring during sleep; restlessness, some anxiety, acceleration of the pulse, and slight perspiration.

Increased action of the bowels and increase of urine; it likewise promotes the venereal appetite.

Large doses occasion very violent starting of the muscles, even a tendency to lock-jaw, succeeded by stiffness, wearing pain or rending in the limbs.

It is a cumulative poison like mercury or digitalis; its activity does not diminish under the influence of habit like opium.

Small doses, frequently repeated, may produce heat in the epigastric region; constriction of the throat, headache, dizziness and impairment of vision, with closely contracted pupils.

Nux vomica, or its alkaloid, is highly tonic, and increases the actions of the various excretory organs.

It is chiefly employed in cases where there is want of nervous energy, as in the treatment of paralysis, especially when of long standing, and not occasioned by hemorrhage of the nervous centres or inflammatory conditions of them.

It must not be employed while general reaction prevails, or when

signs exist either of local irritation in the brain or spinal cord, or of determination of blood toward the head.

Congestion and inflammation must always be removed before employing it.

It is of great service in the treatment of general palsy, paralysis, paraplegia, and sometimes in hemiplegia; also, in local palsies, as of the bladder, amaurosis, impotence, spermatorrhœa, tremor of the muscles, produced by habitual intoxication.

It is also successfully employed in neuralgia, chorea, obstinate constipation, prolapsus of the rectum, borboryginii of females, colica pictonum, dysmenorrhœa, dyspepsia, dysentery, rheumatism, hysteria, mania, worms, intermittent fever, enemesis, chronic splenitis.

I have found it a superior remedy in the treatment of gleet, urethral stricture, and recent enlargement of the prostate; also, in dyspepsia arising from masturbation or excessive venery.

Dose.—Of the strychnia, from one-twelfth to one-sixth of a grain; of the tincture of nux vomica, from five to thirty drops.

SYMPHYTUM OFFICINALE, OR COMFREY.—This remedy possesses demulcent and slightly astringent properties.

It is very useful in diarrhœa, dysentery, coughs, hæmoptysis, other pulmonary affections, leucorrhœa and female debility. It may be boiled in water, wine, or made into a syrup, and taken in doses of from one to four fluid ounces of the preparation two or three times daily.

Externally, the fresh root, bruised, forms an excellent application to bruises, wounds, sore breasts, ulcers and white swellings.

TANNIN.—A pure astringent; present in a large class of vegetables, as galls, oak bark, sumach, geranin. It makes some excellent combinations. For tubercular diarrhœa:

℞.—Tannin;
Opii, āā.—*Mix.*

Make two grain pills.

Dose, as indicated.

For dysentery, (after the patient is placed under the influence of gelsemin and digitalis:)

℞.—Tannin;
Opii pulv.;
Ext. hematoxylon, āā grs. xx;
Sulp. quinine, grs. xxx.—*Mix.*

Make 40 pills.

Sig.—One every three hours.

TANSY.—This drug excites intense uterine congestion, indeed, an apoplexy of the organ.

In tansy we are dealing with a drug of remarkable power. Like savine, it may act by causing great engorgement of the venous circulation of the viscera generally, and particularly of the pelvis. It also resembles savine in its action on the urinary organs. Here all resemblance in their action ends. In the cure of amenorrhœa, tansy is justly regarded as highly as savine. They use different means to attain the same end. Savine seems to induce venous congestion, in a great measure, by its irritant properties, while tansy has no irritant action upon the primæ viæ, but seems to induce congestion by its peculiar action over the vaso-motor nerves.

The fact that tansy fails to induce abortion, even when taken in sufficient amount to cause death, is no evidence against its power as an abortifacient, as its fatal effects follow in such a short time that the womb is unable to respond in any manner to the stimulant.

Tansy has three stages of action, first as a stimulant tonic, as an excitant to the venous circulation, and as a violent poison to the brain and spinal cord, selecting the cord as the field of its primary action. It is the second stage of its action which enables it to rank as an abortifacient. Without being able in any manner to cause expulsive efforts on the part of the womb—thus being called indirect—it may render the organ untenable by inducing uterine apoplexy; or a condition approaching it to such an extent that the womb is roused to action.

TARAXACIN.—Leontodon is a valuable remedy in all diseases of the digestive and hepatic systems.

Its action is cholagogue and tonic. I have found it excellent in the following form:

R_x.—Leontodon,
Hydrastin, āā grs. xxx;
Extract nux vomica, grs. viij.—*Mix.*

Make twenty pills, one thrice daily.

Valuable in dyspepsia and constipation.

Dose of the remedy, two to three grains.

THEINE.—The active principle of tea. Tea is a mild stimulant and astringent. That it has a direct influence over the nervous system is evinced by the feelings of comfort, and even exhilaration which it produces, and the unnatural wakefulness to which it gives rise when taken in unusual quantities, or by those not accustomed to it.

It is very agreeable to the invalid when made into a weak infusion, and may be used in fevers and inflammatory diseases when it is desired to check sleep.

In colds, catarrhs and slight attacks of rheumatism warm tea is taken as a diluent, diuretic and diaphoretic.

It often allays the irritation of the stomach produced by intemperance, and relieves headache.

It produces unpleasant nervous symptoms with some persons, causing tremors, anxiety, headache, &c.

Tea is considered to be a sedative to the heart and the blood-vessels.

TRILLIN.—Derived from *trillium pendulum*, or bethroot.

Properties.—Astringent, styptic, alterative tonic, diaphoretic, expectorant, antiseptic and emmenagogue.

Employment.—Hemorrhages, whether external or internal; leucorrhœa prolapsus uteri, menorrhagia, dyspepsia, hooping cough, asthma, excessive flow of the lochia, &c. This remedy exercises a remarkable control over mucous membranes, and so is applicable in the treatment of all diseases involving the mucous surfaces.

Hæmoptysis, hæmatemesis, hæmaturia and uterine hemorrhages have all been relieved and cured by its administration.

It is highly valuable in vaginal and uterine leucorrhœa, especially when of a tonic character. It resolves the viscosity of the mucous secretions, acts as an alterative tonic upon the mucous follicles, deterges and heals the diseased membranes and corrects the acrimony of the discharges.

In dysentery, putrid fevers, cancrum oris, and wherever there is a tendency to gangrene, it is of very great service as an antiseptic.

It is employed as a gargle in solution, as a lotion and in the form of an injection. In the latter form it is often employed for the removal of fetid discharges from the vagina and uterus, combined with myricin or baptisin, one drachm of each to the pint. A small quantity of dry powder snuffed up the nostrils will speedily check epistaxis.

But its curative powers are best illustrated in the treatment of profuse lochial discharges. It regulates but does not suppress the discharges by facilitating the detergent action.

Prolapsus uteri, engorgements of the cervix uteri, chronic vaginitis, &c., are diseases all indicating the use of this valuable remedy.

Used by some in cases of dyspepsia, hooping cough and asthma, and when combined with appropriate auxiliaries is doubtless very useful.

Average *dose* of the trillin is from three to five grains.

VERATRIN—Is the active principle of the American *hellebore*.

Its properties are emetic, cathartic, diaphoretic, expectorant, nervine, antispasmodic, arterial, sedative, resolvent, febrifuge, anodyne, soporific, &c.

It is employed successfully in all fevers and inflammations, and also in derangements of the nervous system, as delirium tremens, mania, hooping cough, asthma, hysteria, cramps, convulsions, epilepsy, functional and organic disease of the heart, whenever a drug is indicated to stimulate the vital forces. Fevers and inflammations of every species or variety, even of the most aggravated form, as pneumonia and puerperal fever, yield to the action of this powerful and invaluable drug. If there is a specific in medicine, it is to be found in the heroic administration of veratrin in all conditions of depression; all states where the respiration and pulse are frequent; where the heat of the body is great. Those physicians who have never used this drug but little, cannot appreciate its virtues, nor form an estimate of its power. With veratrin we can regulate the action of the heart at will; we can hold a morbid condition, and when using it we know that it does not exhaust, but strengthens, regulates and equalizes vascular and nervous energy. It is a drug that does not possess a single acrid property whatever, but is a pure arterial sedative—a regulator of nervous and vascular action. It has no equal in the *Materia Medica* for certainty, safety and efficiency. If given in very large doses, nausea and vomiting may follow, but these are speedily relieved by a dose of morphine or tincture of opium, and when relieved, no disagreeable or unpleasant effects can follow its use.

By giving an adult two drops every hour till the pulse is controlled, and then extending the period to two hours, nausea may be avoided. We usually give it every three hours, beginning with three drops, and increase the dose one drop every portion given, till the pulse is controlled, or nausea and vomiting occur; then reduce the quantity one, two or three drops, continuing the dose every three hours. In severe and acute diseases, when a strong and speedy impression is desired or required, give from five to ten drops every twenty minutes till emesis is produced, then give a full portion of morphine, and continue the veratrum viride every two or three hours in a quantity short of nausea. In mania, tetanus or puerperal convulsions, we would not hesitate to give fifteen, thirty, or even sixty drops, and repeat. Its use is big with results to suffering humanity. Its use embraces that long catalogue of diseases accompanied with fever and inflammation.

As an alterative and nervine it has no equal, hence its great value in consumption, in the following formula:

R_y.—Comp. syr. hypophosphites lime, soda, iron, Oi;
 Fl. ext. veratrum viride, ℥v;
 Cocaine, ℥i.—*Mix.*

Dose.—A teaspoonful every three hours.

All nervous diseases have been benefited by its use.

Locally applied, it is capable of producing irritation, rubefaction, and even vesication of the surface; and snuffed into the nostrils, the powder is a strong errhine and sternutatory. The veratrin is unsurpassed in the treatment of every form of febrile exanthema, but especially of scarlatina, as these diseases are accompanied with great arterial excitement, increased plasticity of the blood, and a strong tendency to the production of effusions and exudations, for the prevention or removal of which veratrin is remarkably well adapted. In rheumatic fever it breaks up the fever, and arrests the copious symptomatic sweats that arise from excessive capillary congestion. In these cases it should, however, be alternated with asclepin and cerasein, or they may be combined; it imparts speedy relief in erysipelas, whether local or general, acute or chronic. The affected part should be pencilled over with the concentrated tincture or fluid extract, at least four times a day. When occurring on the face or head, apply wet clothes, first pencilling with the veratrum viride. It is also very appropriate in cases of typhoid fever, of diarrhoea and dysentery.

It is of equal service in the treatment of meningitis, phrenitis, hydrocephalus and cerebral difficulties generally; but the patient must be kept fully under its influence until all inflammatory action has subsided. It is well to combine it with podophillin, asclepin or scutellarin.

Combined with podophillin it is the most successful treatment in puerperal fever; also in pneumonia, pleuritis, croup, asthma and other disorders of the respiratory system. It relaxes spasm, lessens arterial excitement, equalizes the circulation, resolves the viscosity of the secretions, promotes diaphoresis and expectoration, imparting tone to the venous, absorbent and lymphatic vessels and glands generally.

It has a powerful influence over the heart and arterial system, and is eminently valuable in the treatment of both functional and organic disease of the heart, as palpitation, endocarditis, chronic pericarditis and enlargement.

A valuable agent in the treatment of atonic mucous hemorrhoids, false membranous formations in the intestinal tube, and other forms of phlegmatic disease of the abdominal cavities. Veratrin exerts a specific influence over the uterus, and is highly beneficial in amenorrhœa, atonic chlorosis, uterine leucorrhœa, and other affections arising from vascular debility; also in jaundice, dropsies, herpes and other skin diseases.

It is contra-indicated in paralytic debility, tendency to hemorrhage of the lungs, pregnancy, lingering hectic, internal ulcerations, &c.

The *dose* will vary, according to the impressibility of the patient's system and the requirements of the case. This variation, in general, will be from one-eighth to one-half of one grain.

VIBURNIN.—Derived from *viburnum opulus*, high cranberry.

Properties.—Antispasmodic, antiperiodic, expectorant, alterative and tonic.

Employment.—Cramps, spasms, convulsions, asthma, hysteria, chorea, intermittent fever, pneumonia, dysmenorrhœa, to prevent abortion, and to relieve after-pains.

The viburnin is chiefly valuable as an antispasmodic. It exercises a wonderful control over muscular fibre, and acts with great promptness. Although in small doses it acts as a tonic, yet in full doses, and repeated for several days, it will effectually relax the nervous system, and render physical exertion somewhat of a task. It is a safe and certain treatment for cramping pains in the limbs, whether from irritation produced by gravid uterus in females past the change of life, or from a fracture of the bone—from whatever cause it is the appropriate remedy.

In asthma, and in pneumonia and intermittent fever, it is of considerable service, not only by correcting the plastic condition of the blood, relaxing or preventing muscular spasms and acting as an expectorant, but in manifesting considerable antiperiodic power, thus prolonging the remissions and lessening the tendency to a return.

We have used it with benefit in cases of dysmenorrhœa for the relief of after-pains, for allaying false labor-pains, for relaxing spasm, and for soothing and harmonizing the action of the nervous centres.

Although so powerful in controlling spasm, we have never known it to interfere with true labor-pains.

For dysmenorrhœa and after-pains combine with caulophyllin.

Viburnin is of much service in relieving the pains accompanying diarrhœa, dysentery and cholera morbus, also flatulent and other forms of colic. For these complaints combine it with asclepin, caulophyllin or gelsemin.

To insure permanently good results from the use of viburnin, it is necessary to follow with tonics as soon as a remission of the symptoms for which it was exhibited occurs. Average *dose* of viburnin is from three to five grains, although sometimes it may be increased to ten grains with advantage.

XANTHOXYLIN.—The active principle of *xanthoxylum fraxineum* or prickly ash.

Properties.—Stimulant, tonic, alterative and sialogogue. Employed successfully in rheumatism, phthisis, scrofula, paralysis, indigestion, colic, syphilis, &c. Xanthoxylin is a stimulant of the most permanent kind, having considerable control over the circulation, which it quickens and maintains.

Besides, it gives activity to the muscular fibres of the stomach

and bowels, promotes the flow of the saliva, gastric and other digestive juices, and restores the proper secreting power of the mucous surfaces. It forms an excellent remedy for rheumatism, unaccompanied with inflammation, or where there is an asthenic condition of the system. In exanthematous fevers, especially diphtheria and malignant scarlatina, when combined with macrotin, it produces a reaction and transfers the disease to the cutaneous surface with the best results.

I have found it very valuable in cholera, combined with capsicum. Combined with cod liver oil and viburnin, it is most valuable in phthisis and scrofula; it acts by energizing the digestive apparatus, and thus increasing the nutritive functions of the body.

I have used it successfully in the treatment of the atonic form of indigestion, chronic rheumatism, general debility, cutaneous ulcers, chronic diarrhœa, dysentery, ulcerations of the stomach and bowels, syphilis, gleet, leucorrhœa, and for the rapid correction of all conditions of the system. Whenever a stimulating alterative treatment is required it is *the* remedy.

It is peculiarly successful as a sialogogue in paralysis of the tongue and mouth. Combined with hydrastin, it is unequalled as a stimulating tonic for children after diarrhœa, dysentery or other debilitating causes.

In syphilis, chronic diarrhœa, gleet, &c., it operates well with stillingia, and in chronic rheumatism with macrotin.

The average *dose* of the xanthoxylin is from three to five grains.

XYLOL.—This hydrocarbon is obtained from coal naphtha. It is produced by fractional distillation, until a distillate is obtained of about 140° C., boiling point; this is mixed with sulphuric acid, which dissolves xylol, forming xylol sulphuric acid. This acid is decomposed by dry distillation, and the xylol thus obtained is further purified.

Pure xylol is colorless. It has a faint odor, somewhat like benzole, but different.

The absolute purity of this remedy is important, as other analogous compounds do not possess the same peculiar properties.

Properties and uses not thoroughly understood, but it appears to be taken up by the blood, and acts as a disinfectant.

Used extensively in the treatment of small-pox in all its varieties. Administered in 81 cases, 40 of which had the disease in its worst form; only 4 died.

I therefore conclude that, *first*, xylol produces positively better effects in the treatment of small-pox than any other remedy known at the present time.

Second, Xylol positively mitigates the severity of the disease, accelerates the recovery and prohibits the hitherto great mortality.

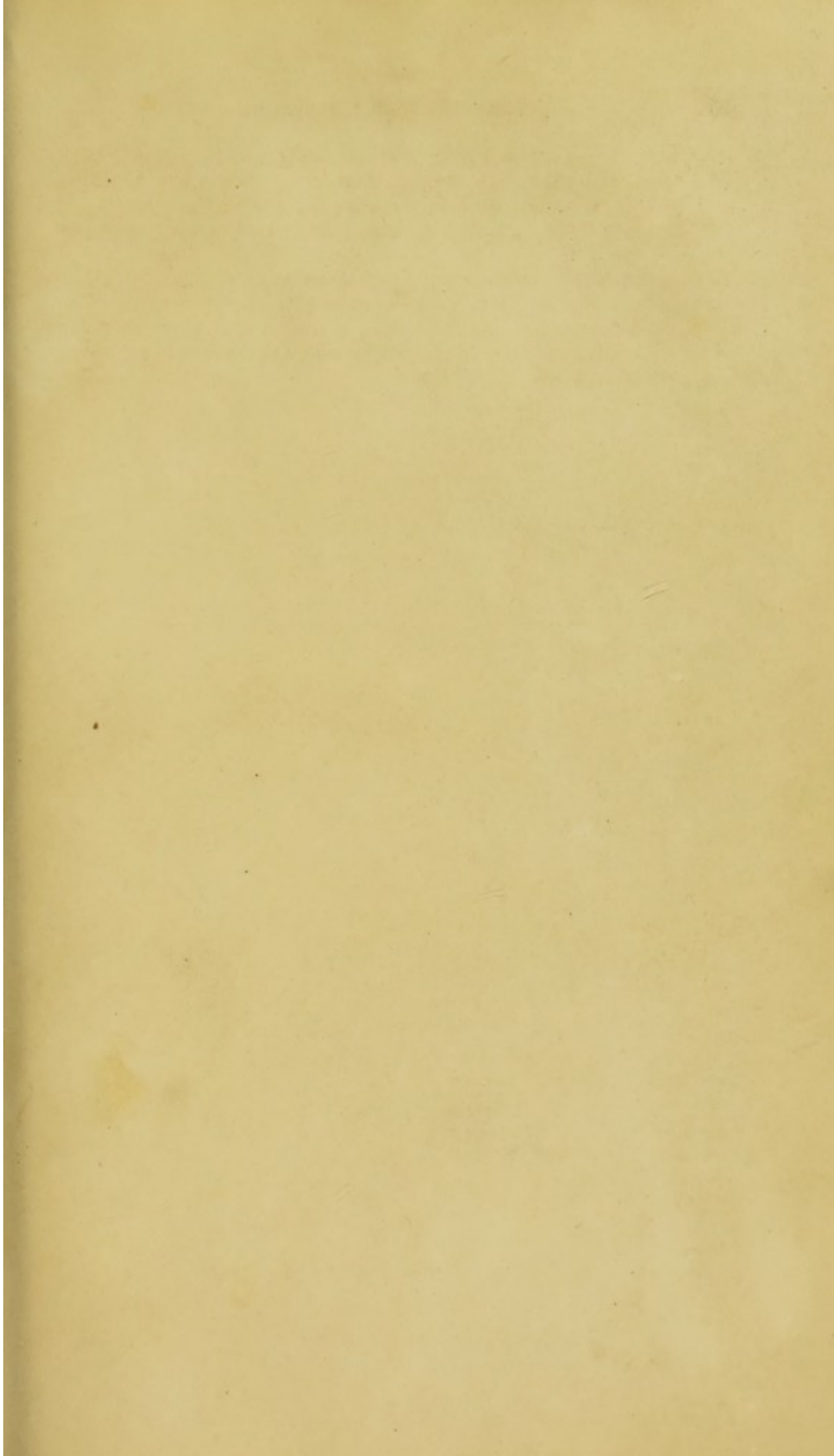
Third, Xylol, administered when a contagion is suspected and before the eruption of the disease, does not prevent the breaking out of small-pox, but facilitates the elimination of the disease.

Therefore it can be relied upon and administered with complete success.

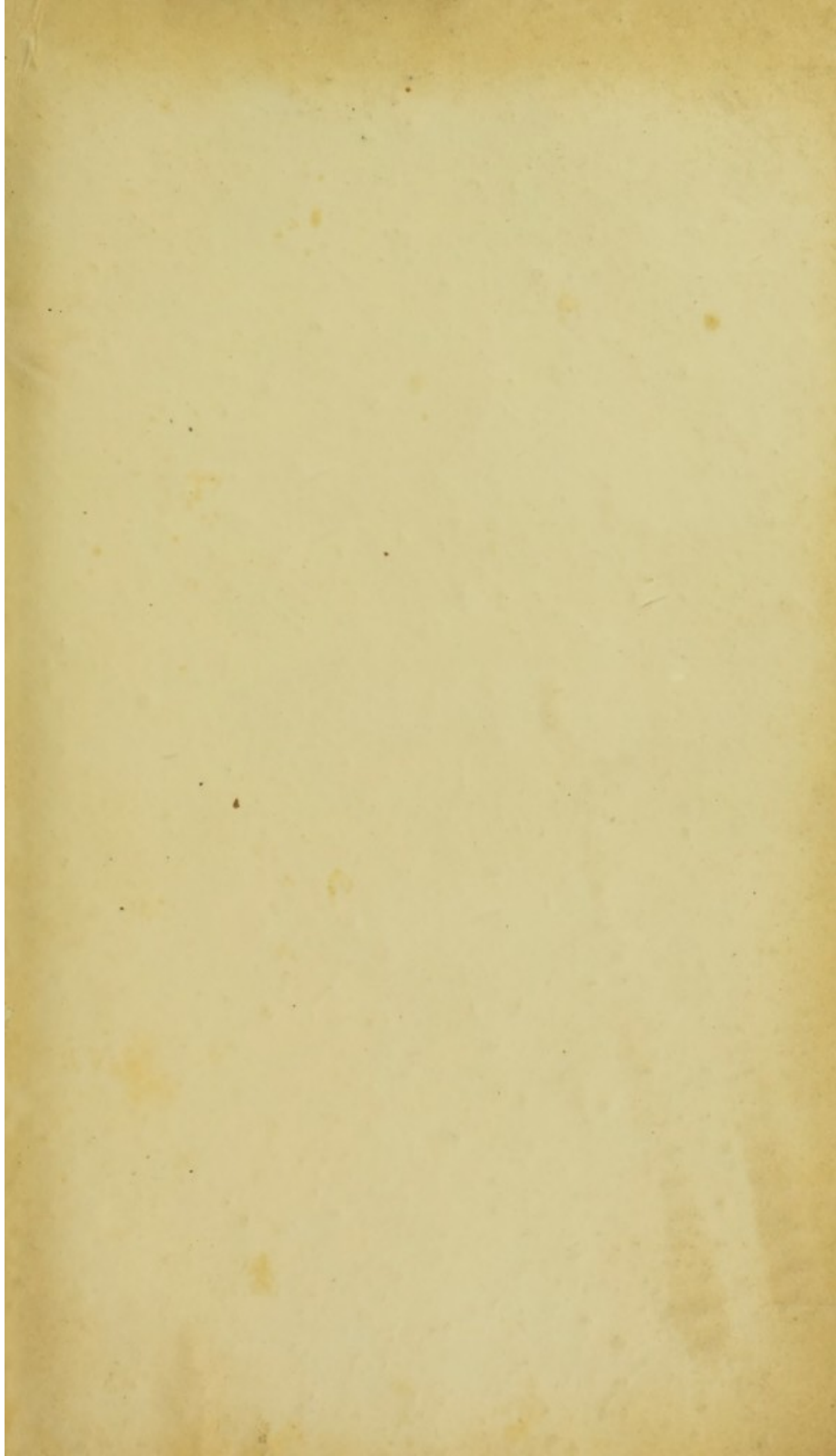
It is given in from three to five-drop doses to children. Ten to fifteen drops for an adult, every hour to three hours.

It is harmless, because as much as a teaspoonful at a time has been taken. The most convenient form of taking it is in capsules, as already supplied by the trade.









NEW MEDICAL AND SURGICAL PUBLICATIONS

BUCHANAN, (JOHN,) M. D.,

Professor of Surgery and Institutes of Medicine.

THE PRINCIPLES OF MEDICINE AND SURGERY. Third edition, carefully revised and much enlarged. Illustrated with 130 wood cuts. In one large and very handsome volume, royal octavo, of 826 pages, strongly bound in leather with raised bands, \$6.00; extra cloth, \$5.00.

BUCHANAN, (JOHN,) M. D.,

Professor of Diseases of Women and Children.

THE PRINCIPLES AND PRACTICE OF AMERICAN OBSTETRICS, AND DISEASES OF WOMEN AND CHILDREN. In one large and handsome imperial octavo volume of 700 pages, strongly bound in cloth, with raised bands, beautifully illustrated with over 300 wood cuts, \$4.50.

BUCHANAN, (JOHN,) M. D.,

Professor of Surgery and Institutes of Medicine.

THE PRINCIPLES AND PRACTICE OF AMERICAN MEDICINE; designed for the use of Students and Practitioners of Medicine. A Practical Treatise on the Causes, Symptoms and Treatment of all Diseases; being a Perfect Manual of the Practice of Medicine. In one neat and closely printed volume of 400 pages. Price \$5.

BUCHANAN, (JOHN,) M. D.,

Clinical Professor of Diseases of Children.

A PRACTICAL TREATISE ON DISEASES OF CHILDREN. A neat octavo volume, giving the most improved treatment of this important class of Diseases. Extra cloth, \$1.00.

BUCHANAN, (JOHN,) M. D.,

Professor of Surgery.

AN ESSAY ON THE CURABILITY OF CANCER. In this Essay we give the formulae for the mode of preparation and manner of applying our Great Cancer Antidote. We give the full receipt—internal and local. All the ingredients are plainly given, their quantity, with the most minute directions as to every particular necessary for the Cure of Cancer. This Essay enables the Eclectic profession to make a rapid stride in the treatment of this hitherto incurable disease. Price \$10.00. Sent in a securely sealed envelope.

BUCHANAN, (JOHN,) M. D.,

Professor of Surgery.

THE PHYSIOLOGICAL AND THERAPEUTIC USES OF OUR NEW REMEDIES. In one neat octavo volume of 152 pages. Price \$1.

BUCHANAN, (JOHN,) M. D.,

Professor of Surgery.

THE PATHOLOGY AND TREATMENT OF VENEREAL DISEASES; including all the recent investigations and improvements in treatment of this important subject. In one beautiful octavo volume. Extra cloth, \$1.50.

A CHART OF THE BRAIN AND NERVOUS SYSTEM. An indispensable work to elucidate the obscure Diseases of the Brain and Disorders of the Mind. In this chart the divisions of the brain, the cranial nerves their arrangement, principal branches and distribution, with the ganglia connected; also, the special function of the nervous tissue with the nervous arc, and a diagram of the afferent and efferent nerves, and a plan of the intellectual operations of the mind. Price 25 cents.

ANATOMICAL CHART. This Chart gives the name, origin, insertion and use of every muscle in the body. Price 25 cents.

The above works will be sent by mail, post paid, on receipt of price.

☞ Money in all cases to be sent by Express or P. O. orders.

JOHN BUCHANAN,

514 Pine Street, Philadelphia, Pa.