

**Pharmacopoeia and materia medica : composed for the use of young physicians, and especially intended to accompany the pathological system of medicine / by John Bell.**

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Bell John, 1763-1820.  
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**Publication/Creation**

Edinburgh : printed by J. Pillans, 1815.

**Persistent URL**

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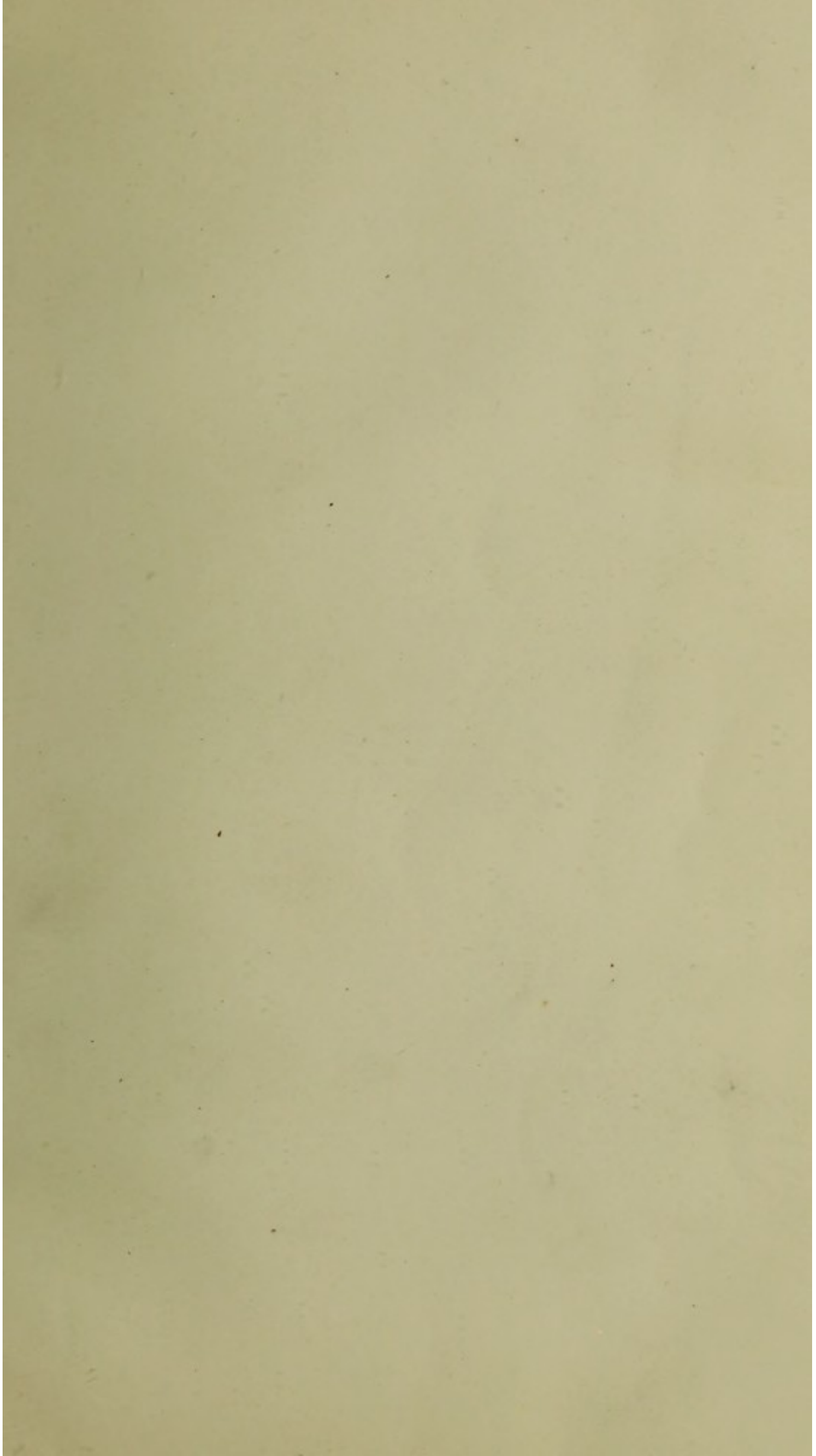
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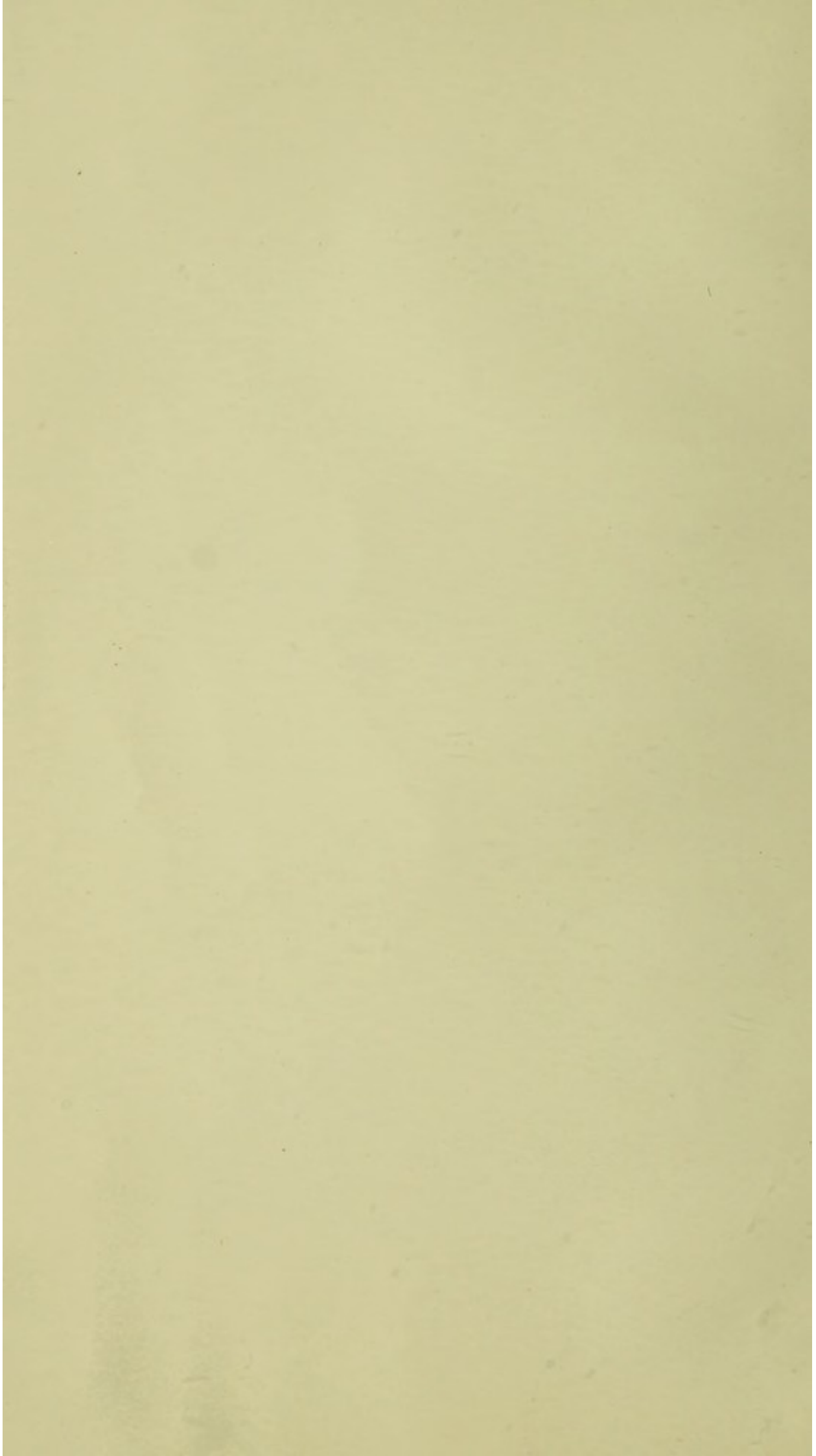


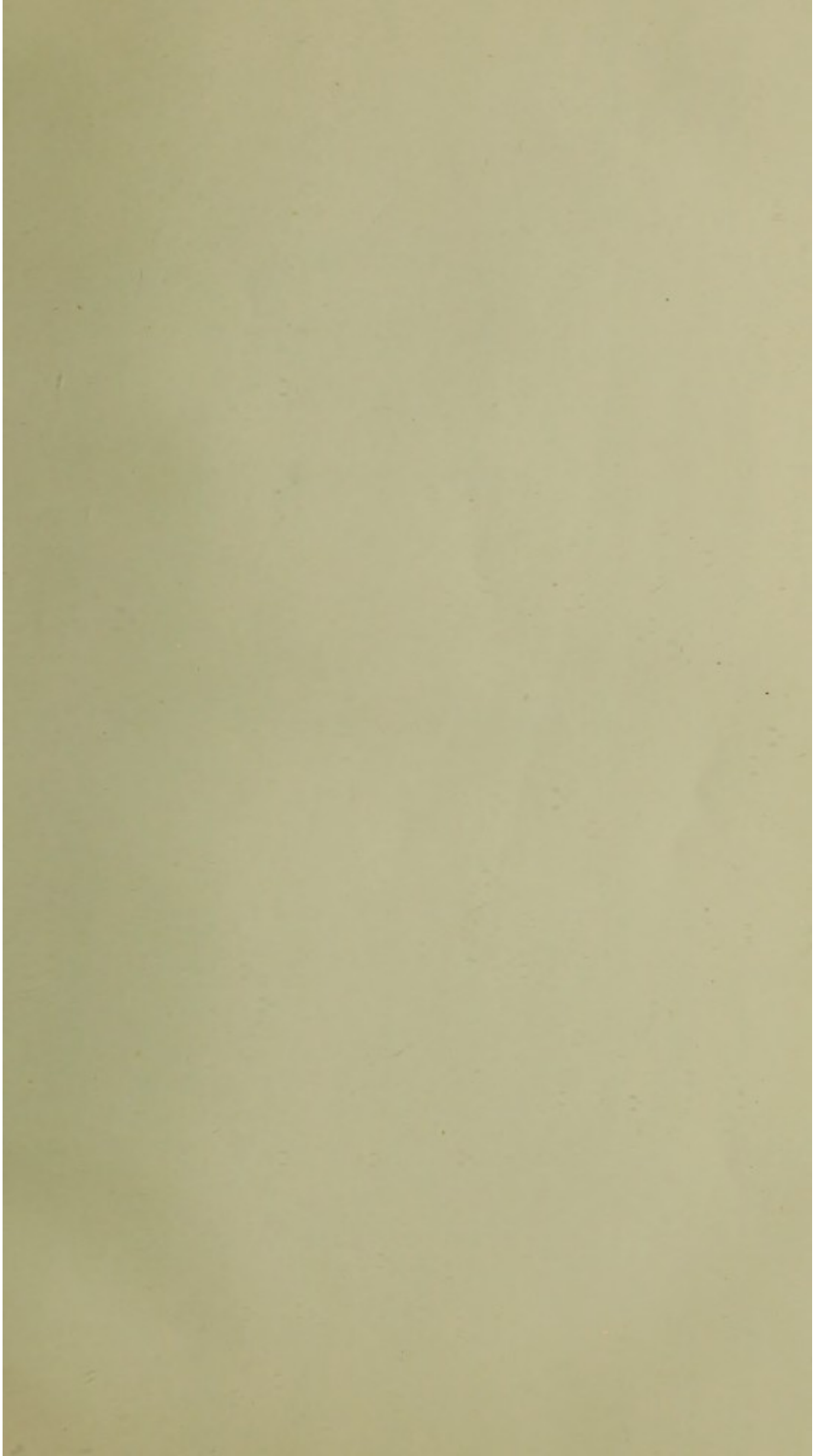
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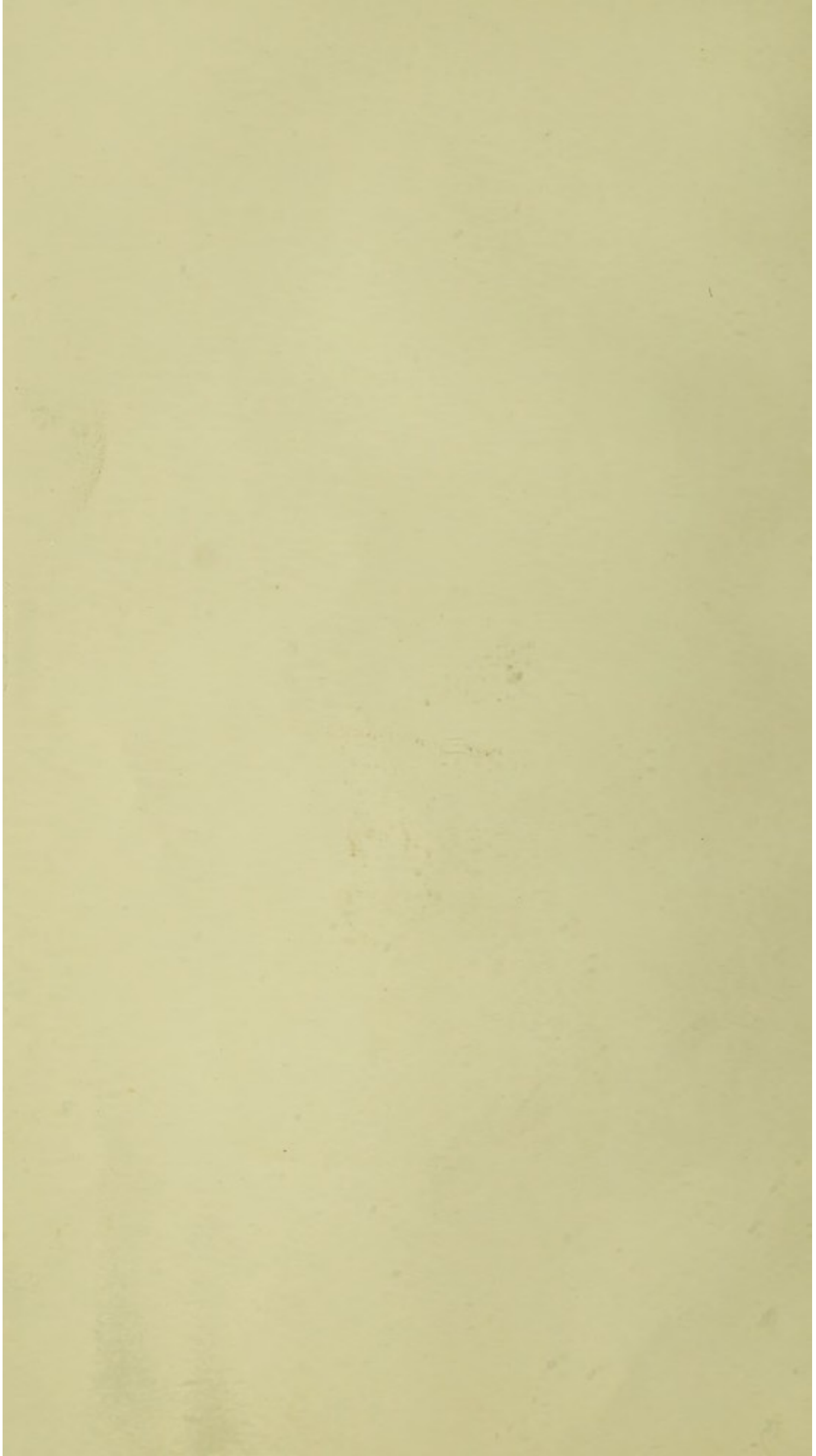


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PHARMACOPŒIA

AND

MATERIA MEDICA.



PHARMACOPŒIA

727

MATERIA MEDICA.



PHARMACOPŒIA  
MATERIA MEDICA.

THE  
**PHARMACOPŒIA**

accompanying the  
**PATHOLOGICAL SYSTEM**  
OF  
**MEDICINE.**

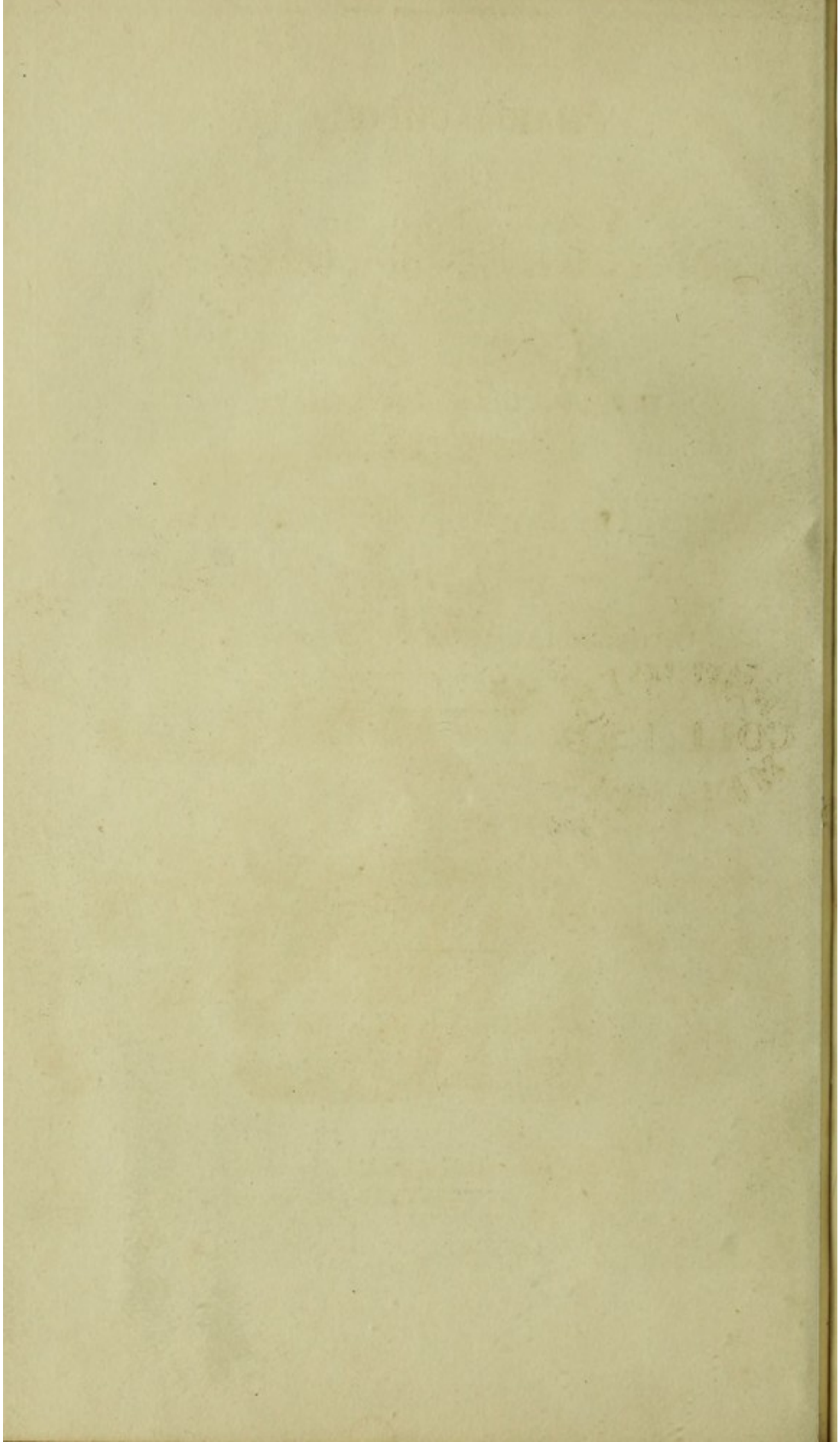
by  
*JOHN BELL.*



"HIC INSANABILIS DOLOR EST, QUOD  
"CREDUNTUR POTUISSE DIU VIVERE."

Sculp. Bell.

1816



PHARMACOPŒIA

AND

MATERIA MEDICA:

COMPOSED FOR THE

USE OF YOUNG PHYSICIANS,

AND

ESPECIALLY INTENDED TO ACCOMPANY

THE

PATHOLOGICAL SYSTEM OF MEDICINE.

BIBLIOTH.  
COLL. REG.  
MED. EDIN.

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BY

JOHN BELL,

SURGEON.

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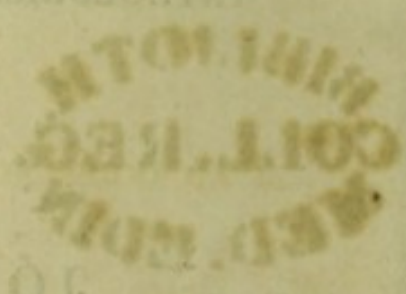
MATERIA MEDICA

COMPILED FOR THE

USE OF YOUNG PHYSICIANS

ESPECIALLY INTENDED TO ACCOMPANY

THEOLOGICAL COURSE OF MEDICINE



JOHN BELL

EDINBURGH

Printed by A. Miller, 1815

1815

TO

**DR JAMES HOME,**

PROFESSOR OF MEDICINE AND MATERIA MEDICA

IN THE

**UNIVERSITY OF EDINBURGH,**

THIS VOLUME IS PRESENTED BY THE

**AUTHOR,**

AS AN INDEPENDENT TESTIMONY OF RESPECT

FOR

HIS HIGH ATTAINMENTS IN GENERAL LEARNING,

AND IN PROFESSIONAL KNOWLEDGE,

AND FOR

HIS MODEST, DILIGENT, AND ABLE CONDUCT IN

HIS HIGH OFFICE OF A TEACHER OF

MEDICAL SCIENCE.

TO

DR JAMES HOMIE

PROFESSOR OF MEDICINE AND MATERIA MEDICA

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AND FOR

HIS SOUND, DIRECT, AND ABLE CONDUCT IN

HIS HIGH OFFICE OF A TEACHER OF

LEGAL MEDICINE

## N O T I C E.

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**T**HIS Volume will, I trust, be found useful to the Student, and not unacceptable to those already engaged in Practice. It is the Third, or Supplementary Volume, of a System of Practice founded on Pathology, now in the Press ;—and it is printed first, that the cyphers, marking the number of each Prescription, may correspond correctly with the System of Practice.

J. B.



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## PRELIMINARY VIEW

OF

### MEDICINES AND MEDICAL PRESCRIPTIONS.

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IT is difficult to represent to the young physician, the simplicity and unity of design which should pervade all his prescriptions. But this unity of design appears only in the practice of those who have learnt by experience, method, and real science, to have a distinct intention in each professional act; who understand the organ diseased, detect its condition, and know when to hope for salutary changes in its structure, and how to promote them, and how to regulate the sensibilities, the secretions, and the actions of the system. Much more difficult must it be, to lay before the young physician an ample catalogue of approved and efficient medicines, and to reconcile the various forms in which they are prescribed, with such unity of design.

Indeed, it seems to me so arduous a task to prepare the mind of the young physician, and enable him at once to form his plan of cure, and to prescribe with seeming variety, and real unity of design, that I have thought it best, to separate the two departments, viz.

thinking, and prescribing! to establish the one as a philosophical and rational, the other as a mechanical art; to resolve the art of curing into as many distinct processes as there are forms of disease; and to fill up these simple intentions with a due variety of prescriptions.

With many, practice is made to consist, rather in curious and delicate prescriptions, than in sound and judicious intentions, arising out of a just conception of the structure of the affected part, of its disordered feelings, or of the incited vascular actions which are to be assuaged and subdued; who repeat, to the hourly vexation of the sick, the same unmeaning draught, and bolus, and pill, without even the charitable intention of sustaining the patient's hope and faith, in the art which teazes him. Many seem actuated by no worthier purpose, than that of repeating trivial prescriptions from hour to hour, which a few spoonfuls of a medicated julep at given periods, could so much more honestly replace.

I would divert the young physician from this, the specious art of prescribing, to the faithful and honourable intention of curing, and that in the easiest and plainest way: I would have him admit no compromise in his dignified office, nor think of any other party than his patient and himself. The patient is seldom wanting in that grateful confidence and implicit faith, which should, on the part of the physician, be faithfully and loyally repaid.

And I would seek to establish this art of prescribing, in which all our acquired knowledge terminates, on a philosophical conviction of the power we have over the nervous sensations, and vascular actions of the body, and its several organs: a power which many seem to doubt, and some flatly deny, and which all those may be said not to acknowledge, who give themselves up to

the modern and refined science, of prescribing in varied forms the same unmeaning things.

The influence of medicines on the human body, is established by Nature's law; for the animal body is a sentient and acting machine, whose nerves are destined to feel every impression; its vessels meanwhile, and the organs of course, which the congregated and contorted vessels form, responding to each new sensation, or exciting power. The whole frame is "subject to every skyey influence," and the impressions and effects of medical powers, depend on the same sensations, and responding actions, by which air, light, heat, passion, emotion, sensation of any kind, preserve the bodily frame in action and in life.

Those sensations, and responding actions, reside in the two orders of parts which constitute the bulk of the animal body, viz. the nerves and the vessels, whose sympathies are mutual and reciprocal. Whatever the nerves feel, begets action in the arteries! whatever action the arteries assume, affects the sensorial power of the brain and nerves! Familiar stimuli, and medical exciting powers, have still but one effect: Whether it is our purpose, to regulate the functions of the animal body, by subduing, or by exciting vascular action, by deadening, or rousing the sensibility of the nerves, the whole system is affected as distinctly by ordinary exciting powers, as by those strictly medical! It is affected by the most simple and transient impressions, by light, heat, noise, or wine, for example, as distinctly as by the most mortal influence of poison or infection.

The human body does not, like that of simple animals, or insects rather, resemble merely a barometer or thermometer, expanded by heat, condensed by pressure, or affected by moisture: it is a complicated machine, of which each organ is an essential part; and while each

organ is constituted of arteries, veins, and nerves, the health, feelings, functions, and secretions of such organ, whether it be the skin, the eye, the stomach, the liver, the kidney, is affected by the state of action of its own vessels: Thence comes disease.

Mere sensation, however violent, unusual, and even painful, heat, (*e. g.*) light, motion, the tumultuous and transient excitements caused by grief, joy, intoxication, opium, or slighter poisons, do not constitute disease. Disease begins when the circulation in parts and organs becomes irregular, when the structure of the part is endangered, or when sensation in the nervous power is affected in its very source in the brain. These excited conditions, then, are not disease, but the causes of disease, *i. e.* of disordered organization. Almost all disease is marked by FEVER, and fever consists in quickened circulation, obstructed secretions, and confused sensorium: sensation, and pain, and additional distress, arise in proportion to the importance and the offices of the parts which principally suffer.

Over those very properties which are thus disordered, over the sensation, vascular action, and various secretions of the animal body, our medicines have a manifest power, even to the extremes of exciting destructive action, or of deadening sensation to the point of entirely extinguishing life: and in the discreet use of those more efficacious stimulant and narcotic powers, which we call medicines, does the perfection of our art consist. By exciting general secretions, we relieve the whole system: by increasing particular secretions, as urine or perspiration, we compensate for others that are suppressed; by facilitating such evacuations as menstruation, we prevent universal disorder; by raising the action of vessels on an external surface, we relieve the throat, the lungs, the liver, the knee-joint, or other internal part.

Nor is it only by exciting more acute sensation, or stimulating to increased action, that we procure salutary changes; it is equally in our power to prevent destructive excitements, ruining the organization of parts essential to life: We have, at the least, an equal proportion of sedative and narcotic powers;—of **NARCOTIC POWERS**, such as are capable of poisoning for a time the whole sentient system, so as to render it no longer susceptible of pain, nor indeed of any feeling but that which we choose to impress!—of **SEDATIVE POWERS**, capable of lowering the action of all the vascular system, or of the vessels of any individual organ, till life almost ceases in the part.

These are the elements of that philosophy, and of those physical applications, by which we are able to alter the feelings, and the state of vascular action in the living body, or in its particular organs; and he who doubts whether we have the power of curing disease, must subscribe to this solecism in nature,—“That though it is manifest, that the animal body is sustained in life and action, by the unceasing operation of various external powers, upon those properties with which the animal body is endowed by nature; though its various diseases are mere aggravations of its natural sensations, or undue excitement of its healthful vascular actions, proceeding from excess, or irregularity in the use of those ordinary exciting powers; though we are acquainted with all the natural, and with many medical agents by which these actions and feelings may be invigorated or restrained; yet have we no power over the sensation or action of the animal frame, nor any means of arresting or removing disease!”

OF

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## OF MEDICINAL POWERS.

THESE general views must serve as the rule of our arrangement, since we define the several orders of medicine, and class them, according to the influence they have over those various properties of the living body, or the actions of individual organs.

### SEDATIVES.

By SEDATIVES, we allay excessive vascular action, and abate inflammatory disease. Sedative powers, are chiefly the abstraction of the usual exciting powers. They are Cold, Bleeding, Darkness, Silence, Diluent drinks, Nitre, Camphor, Super-tartrate of Potash, Vinegar, and other vegetable acids, and acid fruits; and in an especial manner, we value the sedative effect of Nauseating doses of Emetics, whose momentary power, in lowering all the actions of the system, surpasses that of all the others.

### NARCOTICS.

By NARCOTICS, or ANODYNES, we act more directly on the sentient power; we poison in a degree the nervous system, lessen the sensibilities of the body, slacken the pulse, allay excessive action, and save the lungs or other viscera from the ruinous effects of overpowering vascular orgasm. The chief of this class are OPIUM, HYOSCIAMUS, DIGITALIS, BELLADONA, CICUTA, and other narcotic drugs; drugs which bear such enmity to life, as to poison the nervous energy in its very source,

to affect the whole nervous system through the stomach, or even when outwardly applied; and which, though so powerful, as to need to be administered only in the smallest doses, are yet the medicines in most familiar use.

#### EMETICS AND PURGES.

By evacuating the primæ viæ by EMETICS and PURGES, besides the benefit of unloading the system, we have another less direct, but very powerful means of lowering the tone of action throughout the whole system, and of maintaining, by continued evacuations, the dominion we have once obtained over the prime functions of circulation in general, and of secretion in the particular organs. Emetics and purges, in this simple sense, are to be regarded merely as means of unloading the bowels, of undoing any mechanical obstruction, and of keeping the system low, by augmenting that effusion from their exhalent surfaces, which is the secretion the most readily and quickly excited.

#### DIAPHORETICS, DIURETICS, EXPECTORANTS, AND EMMENAGOGUES.

By DIAPHORETICS, DIURETICS, EXPECTORANTS, and EMMENAGOGUES, we provoke the secretions of sweat, of urine, of the mucus of the trachea, and of menstruation: And such medicines are useful, not merely as means of emptying and relieving the vascular system, or of evacuating matters, whether innoxious or morbid, which interrupt the natural functions, but of balancing the actions of the system, as well as its secretions: of remedying, for example, excessive flow of urine, by increasing the perspiration; of opposing vomiting, or inverted vermicular motion, to diarrhoea; of affecting the uterine system, by irri-



tating the lower intestines; of exciting and enforcing at one time the secretion of the skin, at another time that of the bowels, at another time that of the uterine system of vessels. And it is worth observing, that very complex actions arise from every efficient remedy which the physician prescribes: That not the slightest prescription is indifferent, or without its consequences: That there is no one animal function but has its dependent and sympathising functions, nor any medicine which has not various operations: That the excited or quiescent state of the circulating system of the liver, the kidney, the skin, the bowels, affects the secretion of these: And that the condition of each secretory organ influences some other, and changes in a degree the temperament and sensations of the whole body.

#### RUBEFACIENTS.

By RUBEFACIENTS, or applications which excite vascular action on the surfaces of the body, we have it in our power to substitute one action for another; to solicit the blood from the internal and important organs towards the superficial and less important parts; and to change for a trivial external inflammation a dangerous internal disease. Inflammation of the trachea is thus relieved by synapisms to the throat; the torturing pain of rheumatism is relieved, or the danger of white swelling averted, by the application of tartrite of antimony, turpentine, or camphorated oil, to the surface of the joint; the condition of the bowels, the lungs, or the brain itself, is affected by the application of blisters.

#### ALTERATIVES.

Many important changes may be wrought on the system, by the long-continued, slow, and powerful ope-

ration of certain remedies, as Mercury, Conium Maculatum, mineral waters, peculiar food, or the liberal imbibing of fluids. It is by maintaining a more moderate, perhaps a peculiar action throughout the whole system, by subduing sensibility for a length of time, or by maintaining a lowered and moderate tone of action in the vessels of a secreting organ, that we work these salutary changes in its structure: But it is by empiricism, or, in other terms, by experience only, that we learn how to accomplish changes, which neither chemical science nor pathological inquiries can enable us to comprehend. We find that we have it in our power, by the slow, imperceptible operation of Alteratives, to extinguish some diseases, and modify or ameliorate others. As the medicines, viz. Mercury, Cicuta, Barytes, Arsenic, &c. are administered gradually, and must be allowed to operate slowly, thence they are named ALTERATIVES; and as an avowal of our ignorance of their mode of operation, or, to signify that they are the appropriate remedies of certain diseases, they are often named SPECIFICS.

#### STIMULANTS.

We have hitherto enumerated chiefly the powers which subdue or antagonize vascular action; but there are many and powerful ones, which operating through the stomach and its great system of nerves, invigorate and stimulate the whole body. The prime of these which directly excite, and seem, in moderate doses, to have no operation but that of excitement, are ALCOHOL, ÆTHER, AMMONIA, and OPIUM,—for opium may be so given, in small and frequent doses, and so combined with other drugs, that its narcotic power, by which chiefly it is known, never appears. while we experience only its STIMULANT power.

## TONICS.

When medicines affect more the stomach than the whole system, and, by a gentle and continued excitement of the stomach, contribute to maintain all the other functions in vigour, they are named TONICS: And the medicines which best deserve this title, are the tribe of bitter barks, and roots; ginger and other spices; the various preparations of the *Tormentilla Erecta*, Chalybeate Waters, and the oxides of Iron, Copper, and Zinc. With some such medicines for exciting the function of the stomach, and improving the strength, we usually conclude the cure, after any of those wasting diseases which impair the habit.

## ASTRINGENTS.

Of the medicines operating solely on the internal surfaces, not on the nerves, of the stomach and intestines, the chief are those denominated ASTRINGENTS. Astringents stimulate so little, that we are not conscious, after taking them, of any degree of that excitement which stimulants produce; and we use them safely to almost every extent. Their influence seems to be chiefly in the vascular coats of the stomach and bowels; their effects are the most conspicuous and most immediate of any. *SULPHURIC Acid*, or the *Nitric Acid*, when used in hæmorrhagic fluxes from the external surfaces of the stomach and bowels, (which are indeed very frequent diseases), may perhaps be regarded rather as styptic; but the various astringent vegetables, the *RED ROSE*, the *OAK-BARK*, the *CATECHU* and *KINO*, so invaluable in protracted diarrhœa, in chronic dysentery, and in habitual relaxation of the bowels,

are true astringents, a property distinguished in various individuals of the vegetable tribe, by their containing Tannin, and the Gallic Acid, so as to strike a black colour with solutions of iron, and to cause a precipitation from gelatinous fluids.

#### ANTACIDS, ANTHELMINTICS, &c.

When we seek, by chemical agents, to correct the chemical processes going on in the stomach or bowels; when we give Absorbents, as they are named, viz. Magnesia and Lime, to neutralize acid; or when we give Anthelmintics, viz. mercurial preparations, tin, semina santonica, or other medicines, to kill and expel worms, suspected to lie nestling in the bowels, our prescriptions are either chemical, or empyrical merely, having no other relation to the living powers or sensations of the animal body, than not to offend or injure the parts.

These are the classes of medicinal powers, which I shall endeavour to teach the young physician how to use with discretion and good sense. But it is not to be disguised, that no medicine has those simple effects, and those only from which it takes its order and precedence, in a general enumeration or index of drugs. Each medicine is complicated in its effects, yet not so as to defeat the best purposes of arrangement. It is indeed my settled opinion, that whatever confusion has been perceived in the methodical arrangements of drugs, has arisen from not referring invariably the chief influence of each to corresponding properties of the living, and I should add, healthy system. Narcotic powers, for example, which poison the nervous system, lower the sensibility, depress and almost arrest the pulse, disorder

the brain, incapacitate the muscles, and stop, or at least affect in a singular degree, all the secretions, are yet not purely narcotic. They cannot be so. They must have various influences, according to the condition of the body. A NARCOTIC, when it lowers the frequency of the pulse, may be called a SEDATIVE; when it moderates or quiets convulsive affections of the muscles, it may be called an ANTISPASMODIC; when it restrains profuse secretions, it may be called an ASTRINGENT; yet all this it does merely by its primary action in the healthy system, viz. allaying sensibility, and is Narcotic still.

These are individual effects, then, resulting from one general influence; and it is the purpose of extemporaneous prescription, so to temper each medicine, as to modify its general power, and to produce, by combining stimulants with tonics! narcotics with astringents! emetics with narcotics, and anodynes with purges! various effects, which yet should not change the character, nor alter the class of that medicine, on which the chief influence depends.

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## CLASSES AND CHARACTERS OF MEDICINES.

### FIRST, OF SEDATIVES.

THE class of sedatives may be defined—"That selection of medicines, and of external applications, which have the most remarkable influence in abating the vascular actions, either of the animal frame in general, or of particular organs and parts."—This class is of prime importance in saving the brain, the lungs, and other vis-

cera, from the destructive effects of excited action. The violence of arterial action throughout the whole system, the alarming form of the individual disease, the atrocity of the symptoms, all signify nothing, if only the structure of the organ chiefly affected, and its internal vascular apparatus, can be preserved entire and unhurt: However horrid the delirium, however intense the pain or difficult breathing, if only the brain, the lungs, or other diseased organ, be kept safe from the effects of such impetuous circulation, the patient's life is safe. Hence we look to sedative medicines, and powers repressing arterial action, though they be familiar and in common use, with more interest than to all the other tribes of medicine.

*First*, BLEEDING, is the first, and most important of sedative powers. The peculiar uses of bleeding, the degrees in which we may venture to drain the system of its most vital fluid, or the rapidity with which the blood may be allowed to flow, are marked in each individual PROCESS of CURE: But at present, it is more natural to intimate, in general rules, our opinion of its importance. Bleeding is immediately required in all sudden diseases, especially of young men, previously in health and vigour, high in action, and full of blood; in all diseases of the head, with few exceptions; in all hæmorrhages, especially hæmoptysis, or hæmorrhage from the lungs; and in all sudden diseases of the abdomen and abdominal viscera: In all injuries from falls, blows, and bruises, especially those in which the viscera are so injured by the shock, that extravasation is to be apprehended; in all active hæmorrhages, uterine hæmorrhages not excepted; in all disorders where we have reason to believe that rapid circulation is endangering any vital structure, whether announced,

as in disorders of the brain, by a rapid throbbing pulse, or accompanied, as in disorders of the abdomen, by an oppressed and feeble one.

As for the physical marks of that peculiar condition of the system which most requires bleeding, they may be thus described. When, after the sudden invasion of any acute disease, the shivering has ceased, and the throbbing of the pulse begun; when the skin is reddened, the eyes suffused and swollen, the face bloated, the tongue and mouth parched, the head confused, and the limbs aching and trembling; bleeding is required straightway, and is of little use, unless the blood be drawn off so suddenly and so profusely, as to abate at once the rapid pulse and confused feelings, to restore free breathing, and clear the head; and the only rule for its repetition is this, that the blood must be permitted to flow while the oppressed pulse rises! that it must be repeated while the pulse throbs, and the head is affected! (for the brain first feels the force of hurried circulation); that it must be repeated at intervals till the pulse softens, becomes calm, and subsides into its natural state, and below its usual standard! General bleeding alone is useful: topical bleeding, as from the temples, over inflamed joints, in ophthalmia, inflammations of the throat, testicle, &c. &c. has little influence, and what little influence topical bleeding has, most probably arises from the influence of such local bleeding, especially of cupping, in changing the course of the circulation, just as the circulation of a part is affected by the stimulating powers of rubefacients or blisters.

*Second*, Next in power, the highest indeed in general influence, is COLD, or we should rather, in regard to febrile diseases, say COOLNESS: for though cold,—intense cold,—is very useful in abating the local and intense

action of arteries in delirium, mania, and other acute diseases of the brain; though clay-caps, saline solutions, vinegar, alcohol, æther, &c. are with great propriety applied to the head in inflammations of the brain, to the bowels in hernia, to the scrotum in violent inflammation of the testicles, and to the skin in certain acute diseases; yet in fever, in exanthematous diseases, and in Synocha, or common inflammatory fever, accompanied with local affections, we allow only a cool atmosphere, a stream of cool air passing across the chamber, and ablutions with salt and vinegar, or vinegar and water moderately cold, and modestly used.

But in local diseases, where there is danger of the organ, the intestine, the testicle, &c. being essentially injured; we not only use the coolest applications, but betake ourselves to various means of producing artificial cold, especially by the evaporation of spirituous fluids, as æther, camphorated spirits, and various forms of embrocation: or we more directly abstract heat by the application of ice or snow.

*Third*, FEAR is to be enumerated among the subduing powers which the physician sometimes avails himself of, especially in cases of Mania, when its influence, physical as well as moral, combined with long exposure to cold, depresses very effectually the most tumultuous emotions of mind, and the highest physical excitement of the arterial system.

*Fourth*, Among the powers depressing the system, none is more effectual, not the most powerful even of those already enumerated, than NAUSEA, excited and continued by smaller doses of emetics. In the most tumultuous paroxysms of mania, these are found the most subduing of all: The swinging machine has the same general effect directly on the sensorium, that emetics have by their influence on the sensible and nervous surface of the



stomach; and the sickening effect of irregular and yet unremitting motion in a sea-voyage, depresses the pulse of consumptive patients, as sensibly, as the sedative power of Hyoscyamus.

IN MANIA, DELIRIUM, and FEVER; in hurried actions of the INTESTINAL CANAL; in hectic proceeding from suppuration; in inflammations of the liver and lungs; in *hæmorrhagic diseases* from the surface of the lungs, the uterus, the intestinal canal, or the stomach itself, nauseating doses of emetics prove the most powerful sedatives. To operate as a sedative in such diseases, Emetics should surely be given not in such full doses, as, by exciting vomiting, to drive the blood for a time more rapidly through the brain, lungs, or other diseased organs! but, in doses so tempered and combined with opiates and other medicines, as to produce, merely nausea. The signs of their successful operation are sickness, yawning, and depression of strength; the pulse becomes slow and soft, the face pale, and the skin moist; saliva flows from the mouth, which was before parched and dry; the aching of the head ceases, and the flushing of the face subsides; the patient falls asleep, perspires freely, and awakens composedly with clearer senses and a softer pulse. Such are the effects of smaller doses of Antimony, of Pulvis Ipecacuanhæ cum opio, and other compound emetics presently to be mentioned.

*Fifth*, PURGES are very powerful in subduing the actions of the system by their various influences on the internal surface of the alimentary canal, which is exquisitely sensible, of great extent, and connected by sympathy, or, in other terms, by the sensibility of its nerves, with the whole sentient system. *1st*, Purges have the positive power of exciting a profuse secretion from all the glandular apparatus and exhalent surfaces of the intestines, which, as a means of draining the system of fluids,

is very instant in its effect: *2d*, They have a proportioned indirect power of preventing the access of absorbed fluids, or the replenishing of the system: *3d*, Purges given even in the most moderate doses, but more especially drastic purges, have a sickening, depressing, poisonous effect; the pain of the bowels is accompanied with depression of the pulse, paleness of countenance, and coldness of the extremities; and very languid feelings, invariably accompany their operation; in short, we find, during their operation in all febrile or inflammatory diseases, the pulse more temperate, the skin cooler, and the head clear. *4th*, These are effects common to all purging medicines; but *saline purges* have that peculiar operation which we so truly ascribe to all saline medicines; they are, in addition to their purgative virtue, direct sedatives: Operating merely as salts, they would sicken, and depress the pulse, though they did not purge; just as nitre, which has no effect as a cathartic, is the most powerful sedative.

We therefore select saline purges for inflammatory diseases, or diseases of accelerated arterial action, and distinguish them by the titles of ANTIPHLOGISTIC, SEDATIVE, or COOLING purges: they are the least unpleasant and the least irritating; and they are given, not in the form of tinctures, pills, &c. but dissolved in large quantities of cold water. The chief of the class are, Supertartrate of potass, Phosphate of soda, Sulphas sodæ, Soda Tartarisata, Tartras potassæ. Other purges are administered, more for their mechanical influence in emptying the intestinal tube, these for their influence on the general system: Other purges are used for stimulating and sustaining the action of torpid bowels; for relieving congestions of fæces; for forcing obstruction, as in Ileus and Hernia; for poisoning and expelling

worms, and for various other local influences, which shall be explained in the Section appropriated to Cathartics.

*Sixth*, SEDATIVES, or medicines so distinguished because of their direct influence in repressing vascular action throughout the whole system.

The first and most effectual of these is Nitre, NITRAS POTASSÆ, whose sedative powers are particularly manifested, when, by mischance, it is taken instead of some unoffending purge, to the amount of an ounce or more; the person dies in a few hours, not from the intense vomiting and purging, as after other poisons, so much as from the universal coldness, sinking of the pulse, fainting, and griping pain in the stomach. This medicine we could as little want as any, except opium; it is best given in the form of cooling powder, draught, solution, or emulsion, to the amount of 8 or 10 grains for a dose, repeated every three hours. In Phrenitis or brain fever, in Synocha or inflammatory fever, in sore throat, rheumatism, and hæmorrhages, it is of most sensible use in lowering the pulse.

CREAM OF TARTAR, SUPERTARTRAS POTASSÆ, is an invaluable medicine, from its pleasant acidity, and various virtues, sedative, diuretic, and cathartic. As a Sedative, it is useful throughout the whole course of fevers, and of inflammatory and hæmorrhagic diseases; it is given unsparingly, sometimes in the formal way of powders, from hour to hour, to the amount of half an ounce in the day; but it is best given in the form of acidulated drink, with additions of sugar, lemon juice, &c.

ALUMN. SUPERSULPHAS ARGILLÆ ET POTASSÆ, is less used in simple fever, though really and most conspicuously useful; but chiefly in hæmorrhagic actions of the vessels, as in *Hæmatemesis*, *Mænorrhagia*, and *Abortion*. It is given in separate doses from 5 to 15 grains, with the addition of some aromatic to prevent entire sickness; It is

best given in the form of Alum-whey, Serum aluminosum: Two drachms of powdered alum being thrown in a pint-basin of hot milk, makes the whey, which is drunk cool by glassfulls, that is, in draughts of from 3 to 4 ounces.

BORAX, SUB-BORAS SODÆ, resembles nitre in its slight bitterness, and in that cool taste, or feeling rather, which its solution on the mouth and tongue leaves behind it, and especially in its sedative powers. Like nitre, it has hardly any of the cathartic property common to the other neutral salts; it is too little used in inflammatory disease; it should be given in frequent draughts, conveying each a scruple or more of the salt, and repeated every two or three hours. These three salts, Nitre, Alum, and Borax, are also more used as cooling solutions for gargling the throat, and washing the mouth and fauces, than any other; and especially the latter, in a strong solution, or in powder mixed with sugar, is used in the apthous sores of children or adults.

ACETAS AMMONIÆ LIQUIDUS, the Aqua Acetatis Ammoniacæ, or Spirit of Mindererus, usually esteemed only as a gentle sudorific, and as appropriate to rheumatic disorders, corryza or common cold, is a mild sedative, which, while it produces a gentle diaphoresis, abates the heat, thirst, and frequency of pulse, and is useful in all diseases of excited action, when not superseded by medicines of higher power. It is given in draughts and juleps, combined occasionally with nitre, camphire, and other medicines, and in doses of half an ounce repeated from hour to hour.

Liquor Citratis Potassæ, or the Haustus Acidum Carbonicum Evolvens, the effervescent draught, is, in many inflammatory diseases, and in all fevers or diseases accompanied with irritability of stomach and puking, an admirable sedative, in which is combined a portion of carbonic

acid, which, being evolved in the stomach, gently stimulates it, and composes its irritability with that cooling neutral salt which is produced by the union of the citric acid with the carbonate of potass.

The AQUA ACIDI CARBONICI, the simple aerated water, or carbonic acid combined with water, is given in full draughts, with lemon-juice and sugar, sometimes with a slight tincture of wine.—ACETOUS ACID, or VINEGAR, with sugar and water; the CITRIC ACID, or lemon juice, or that of Tamarinds, are the more familiar sedatives, used less formally than those salts which are ordered in the way of extemporaneous prescription. These domestic or cooling medicines make up the entire list of those sedatives which are *indisputably* proper in the several varieties of acute inflammation and high fever.

WE advance now to certain medicines of the narcotic tribe, which are prescribed with fear and doubt in inflammatory diseases, but which I hold to be infinitely more useful, more powerful, more efficacious, in all cases of danger, than those appropriate saline medicines. We trust to the familiar remedies of nitre, tartrate of potass, effervescent draughts, cooling drinks, and saline purges, while the disease bears no character of danger. But it is to the powerful narcotics that we have recourse, when intense arterial action endangers some important organ! when in Mania, or Phrenitis, or Hydrocæphalus, the vascular action, as it rises or subsides, produces the most dreadful paroxysms of delirium, succeeded by temporary remissions; when in Phthisis, a rapid pulse, beating at the rate of an hundred and twenty in the minute, demonstrates the violence with which the blood is driven through the lungs; when in Epilepsy one dangerous struggle succeeds another with little intermission, day and night,

as often happens ; when in inflammatory gout, or in rheumatic fever, the paroxysms of pain return from time to time, with intense throbbing of the arteries ; or finally, when the Testicle is swelled with intense and sickening pain, we have recourse to *Digitalis*, which moderates the vascular action, arrests the thundering pulse, assuages pain, and allays delirium. No remedy is so powerful as this, excepting perhaps nauseating doses of emetics ; but the influence of emetics is too little permanent, whereas by narcotics, we sicken and subdue, or, in plain terms, poison the system, and keep down for a length of time all vascular action. Vegetable narcotics are in these circumstances remedies quite invaluable, and too sparingly used, for reasons which fall next to be noticed.

Of the class of narcotics there are individual medicines, which have very various and mixed powers. In wine and alcohol, in opium, *hyoscyamus*, and *cicuta*, there are combined two distinct qualities, viz. a stimulant and a sedative power. There is not a doubt, that wine invariably, and opium very generally, exhilarates first, and then intoxicates ; first excites, and then poisons or subdues, all the actions of the system. But there are others in which the two qualities are differently combined ; as *Cicuta*, which first sickens, and then produces wild and maniacal delirium ; or *Digitalis*, whose anodyne power immediately usurps the place of its stimulant power, (if it have any stimulant power), whose first effects are to sicken and subdue the system, and depress the pulse from a hundred and twenty to sixty-five ; while this, on the contrary, is the ultimate effect only of opium, which, in the first stage of its operation, stimulates.

From this variety of operation, arise the irresolution and fear, with which the most prudent and wisest of the profession give narcotics ; and thence is derived a natural rule for the right administration of both. When we

are to use opium, as often we do by way of cordial, we give it alone, in small and frequent doses; or we combine it with sulphuric æther: it then excites the senses and the brain; occasions heat, and restlessness, and begets dreaming, or rather a waking state of excitement, approaching to delirium, and sometimes delirium; and it reddens the surface, and makes it intolerably itchy.

These are the effects of what is called an under-dose of opium: Like wine, its stimulating property precedes its narcotic power, but at last, and in large doses, it proves more immediately narcotic; sleep follows; the senses are steeped in sleep; the patient awakens difficultly and slowly, and the pulse continues extremely slow and languid; the senses continue obtuse; the secretions are suspended and lessened; the tongue and mouth are parched, and the head aches and is confused. When we desire, without giving a full dose of opium, to profit by its sedative power, we combine it with an equal proportion of hyoscyamus, or of digitalis.

The uses of these various Sedatives, saline and narcotic, are detailed in the FIRST CLASS of Extemporaneous Prescriptions; and it will be found, in the several PROCESSES for the cure of disease, that they have a peculiar relation to affections of the brain,

SECOND, OF NARCOTICS.

SUBDUING incited action, or regulating it, is the chief duty of the physician; and the selection and right use of narcotic drugs, an object of the very highest importance in practice; for these medicines command at once the feelings and actions of the living system, whether vascular or muscular; and have, at the same time, the happy property of assuaging pain.

If assuaging pain were, as is but too commonly ima-

gined, the chief property of such drugs, we should think chiefly of opium, and reject all others as superfluous; for it is a medicine the most familiar by long and frequent use, and it produces a pleasing, and tranquil, and quiet sleep.—But it is not so. Narcotics are not anodynes merely; this is not even the character of the class. The property common to all the tribe of narcotics, and very conspicuously powerful in some, is that of repressing incited action; a property peculiarly precious! for narcotics, by abating pain, only alleviate symptoms, but by arresting excited actions, whether vascular or muscular, they contribute to the cure of diseases.

The properties of narcotics in the cure of disease, and the right selection of them according to the nature of the disorder, is best inferred from the manner in which, when taken as poisons, they extinguish life, exciting, in one stage, the wildest delirium, and occasioning, in another, deep torpor, convulsions, slow breathing, and oppression of all the vital functions, till the person expires. And it is a fact most curious, that the effects produced directly, and in a few hours, by narcotic poisons, are the same with those which are produced very gradually, (though in the case of blows and wounds very suddenly), by mechanical and organic disorders of the brain, viz. delirium, convulsions, torpor, apoplexy, stopping of the pulse, stertorous breathing, and death.

Narcotics may be defined, “Such vegetable drugs (for none of the chemical class have the same powers) as affect directly the sensorium and whole nervous system, even to the extinction of life, when taken by accident, or with evil intention, as poisons; but which, prescribed in moderate doses, abate the sensibilities of the body, produce a degree of torpor, accompanied with sickness, or even with convulsive motions, and retard the actions of the heart and arteries.”



Narcotics, as they abate sensibility, are anodynes ; as they allay excited pulsation, they are Sedatives ; as they quiet muscular contractions, they are Antispasmodics. In so much as they at once quiet muscular irritation, and allay vascular action, they have great power over various secretions, and thence they are useful as astringents ; and by moderating vascular action through all parts of the body, and that during a great length of time, they prove alterative, gradually extinguishing diseases of the constitution, and assisting in the cure of sores, swellings, and eruptions.

Of this class, Opium is the most familiar, Digitalis perhaps the most powerful. When we reflect on the uses our profession have made of these medicines, it must excite a degree of surprise, that medicines possessing such manifest power over all the sensibilities and actions of the body, should have been used only of late years with confidence, discrimination, or skill. It is within my own memory, that opium itself has been freely used ; and it is only now, and in the present day, that Hyoscyamus, Cicutia, and Digitalis, have been familiarly prescribed. There was, for a time, no small danger of those precious medicines being left for ever in the rank of poisons.

But, to enumerate somewhat more curiously the several properties just ascribed to narcotics, will perhaps aid the young physician in combining them one with another, or in selecting such as are peculiarly suited to the several kinds of disease.

#### OF THE PROPERTIES, AND SELECTION OF NARCOTICS.

It is to be observed and remembered above all things, that the narcotic property, however powerful in any vegetable substance, is never pure, nor is it natural that

it should be so; for, composed as this exalted part of the vegetable is of various principles, the narcotic virtue is combined, and sometimes contrasted, with various other powers;—in some, with a stimulating property, which proves cordial when the medicine is given in smaller doses;—in others, with such peculiar acrimony, as prevents the stupor, and excites a high, wild, and savage delirium;—in others, with principles which excite various secretions, especially those of urine and sweat. It was the confounding of these properties, as arising from one sole principle, that made it be believed, that the stimulant property was the sole virtue of such medicines, and the subsequent stupor a mere consequence of the high excitement produced by the stimulant power. Such reasoning gave a rational and philosophical aspect to the Brunonian doctrine, while in truth, many narcotics, as *Cicuta*, produce savage and furious delirium, not in the first, but in the second stage of their operation; many, as *Digitalis*, exert an immediate narcotic power, without any previous or intermediate state of excitement; and all narcotics may be given in such a deadly dose, as instantly almost to arrest the vital motions.

Some narcotics, and opium in an especial manner, have this separate and distinct stimulant power, but subordinate still to the narcotic power; so that the stimulant power is hardly perceived before the narcotic quality begins to operate on the senses and the circulation. And we are able to profit by this distinct power:—Opium heats the external parts to which it is applied, comforts the stomach, acts as a cordial, excites the brain, and exhilarates even to intoxication or delirium: But in a moment this delirium ends, the narcotic property has time to affect the sensorium, and then comes torpor, sleep, snoring, stupor, and slow oppressed pulse, apoplexy, and

finally death, when the drug is taken in such quantity as to prove a poison : or, if the person survives the slighter degree of apoplexy, or after a strong soporific dose of opium, he feels confusion of the senses, an aching head, disordered stomach, and paralytic trembling of the hands and limbs.

In the operation of other narcotics, no such stimulant power can be perceived throughout the whole scale of operation, from the safest and smallest dose, to the most poisonous quantity.—Belladonna, the deadly night-shade, whose tempting berries often induce children to pluck them, proves very immediately fatal. The child lies insensible, breathing slow with a dilated pupil; the joints are flexible, the limbs quite paralysed, the pulse slow, and the extremities cold; the stomach is paralysed, so that it can no way be excited to any but very imperfect action, and ineffectual strainings to vomit; and when the child dies, the face is turgid and purple, the tongue and lips swollen, and the body stained with black and purple spots.

Cicuta Hemlock occasions, as the first signs of disorder, not delirium, but vertigo! heaviness of the senses, sickness, dimness of sight, dilatation of the pupil, faltering of the tongue, paralytic trailing of the limbs, and anxieties of the præcordia. If delirium follows, it is invariably after these first deep tokens of its narcotic powers; and often the secondary operation of this drug gives the lie to all the fancied processes of excessive action and exhausted excitability. The person, after having lain in a state of stupor during the first influence of the poison, (taken perhaps by mistake for parsley leaves, or the root of parsnip), after rising unconsciously from bed, after wandering in the dark through the house, in a confused condition, after striking furiously at every obstacle, and beating his head in a delirious madness against the

walls, is found by neighbours or friends in the morning, livid from innumerable blows, bleeding at the nose and mouth, and still raving and convulsed; and this insanity, produced by hemlock or other acrid narcotics, sometimes continues for months, sometimes for life.

Stramonium, Thorn-apple, the most powerful and fatal of the narcotic poisons, one too deadly for internal use, occasions very directly and instantaneously, vertigo, torpor, and death. A smaller dose has other effects: at first, it throws the person immediately into a deep sleep or stupor; in a few hours he awakens from it, raving with the most furious and fantastic imaginations; he has no power of utterance, and shews his passion chiefly by the most wild and furious gestures; neither sickness nor pain attend its operation; for several days the patient raves, and gradually returns to reason, but exceedingly enfeebled, and unable to walk. When used with wicked intentions, the seeds of stramonium are usually steeped in wine, and given to the unwary: Sharpers and robbers have been condemned for having given this poison, committing their depredations during the state of intoxication which it produces; and procuresses, for exposing innocent girls while under the influence of this temporary insanity, have been convicted and condemned to death. The berries of the nightshade, which are often swallowed by shepherds and country people for a frolic, six or eight at a time, produce the same kind of intoxication and extravagant delirium.

We thus perceive, that of narcotic vegetables, some have their narcotic influence preceded by a stimulant power; others occasion first stupor, and then delirium; others are merely and purely narcotic, causing unmingled symptoms of stupor, blindness, and paralytic trailing of the limbs. There is nothing uniform or steady in the operation of narcotics, on which to found the de-

lusive theory of their narcotic power being but the close and consequence of high excitement; they are visibly and directly narcotic.

There is another description of narcotics, still more interesting for medical purposes. Some narcotics, as Belladonna, affect directly and peculiarly the sensorium, and system of the nerves; others, and most especially Digitalis, while it has comparatively slight influence on the brain, affects more peculiarly the irritability of the heart and arteries: By the use of this medicine, we have it in our power, without the sensorium being in any way affected, to lower the pulsations of the heart and arteries, in almost a fatal degree.

The qualities of narcotics are never simple, else they would differ only in degree! But the difference of more or less, of being slightly or powerfully narcotic, is not all: the difference is essential and specific. Some narcotics produce a deep stupor, others a wild delirium; one causes one kind of delirium, another a different species of phrenzy; one produces stupid drunkenness, blindness, staring with dilated pupil, slavering from the want of the power to swallow, while the person under the temporary influence of the poison, feels as if moving through clouds, or hanging suspended in the air; as if his head were ten times too big for his body; or as if his eyes were so enlarged, that no one could look upon him without terror: And this last and singular sensation, this fear of alarming his friends by the monstrous bigness of his eyes, the patient distinctly remembers when his senses return. Others cause, after a short period of stupor, a raging madness, anxiety of the præcordia, gnashing of the teeth, the poisoned person biting and lacerating his own arms and hands, in a raving and terrible insanity. Other narcotics have still a different operation; instead of the sensorium being thus excited,

certain secreting organs are irritated; Opium invariably procures perspiration; Digitalis invariably increases the secretion of urine.

It is not surprising that narcotics, having such power over the senses and the circulation, should also suspend muscular actions, or, in other words, should prove antispasmodic. As it is often our business, so to manage the narcotic power, as to quiet local constrictions or spasms without affecting the system at large, we naturally set apart certain medicines as a class, under the title of ANTISPASMODICS. NARCOTICS are, ipso facto, or in virtue of their universal influence over the nervous system, Antispasmodics, or quieters of muscular contractions; they are the chief or only antispasmodics to which we dare trust; and those medicines which have the appropriate name of antispasmodics, only because they have no other conspicuous properties, are little better than *placebos*: such are your musk, valerian, and amber draughts,—the fashion of a day,—the unoffending trifles which you prescribe for the languors and sickly feelings of the nervous and hysterical. The true antispasmodics to which we trust for appeasing Asthma, or spasm of the glottis,—Hydrophobia, or spasm of the pharynx,—Gastrodynia, or spasmodic pains and cramps of the stomach,—Colic, or spasm of the bowels,—Tenesmus, or spasms of the anus,—or Tetanus, and other universal convulsions, are not musk and valerian, but opium, stramonium, and cicuta, mercury, ammonia, and blisters.

Such various and peculiar qualities have been enumerated, as might leave on the mind a perplexed and indistinct impression of the effects and uses of narcotics. But, upon revising those various properties, we can reduce them to distinct classes, avail ourselves of the seve-

ral powers, and appropriate certain narcotics to specific purposes, and almost to particular diseases.

*First*, The stimulant power accidentally connected with that narcotic which we most frequently use, viz. Opium, is of very universal use; though it prevents our having recourse to this medicine in diseases of incited action.

We know by experience, that we can derive no soothing nor anodyne influence from opium, nor procure sleep by its use, when the pulse is full and strong! for opium increases its fulness and strength, and aggravates the suffering. In diseases of the head, it aggravates the delirium; in diseases of the skin, it increases the heat and eruption; in diseases of the joints, especially in acute rheumatism, it aggravates the pain; in peripneumony, it increases the dyspnoea almost to suffocation! If, in any of these diseases, it may be safely administered, it is either by combining it with hyoscyamus or digitalis, or accompanying it with a nauseating dose of an emetic.

This stimulant influence is the first operation of opium, which, given in small and frequent doses, warms, excites, and exhilarates, at least when it agrees with the constitution; and thence, opium is useful in the muttering delirium of low fevers, in nervous and convulsive disorders, and in diarrhoea, dysentery, and other abdominal diseases. But we find by experience, that we can reap little benefit from the narcotic powers of opium, after great and vital injuries by blows or falls! after accidents affecting the brain! or after surgical operations! The patient, being at such time in full health and vigour, and little accustomed with the use of opium, is usually kept broad awake by it, restless, tossing, and feverish. We usually find him in

the morning, sickened, with a quickened pulse, inflamed eyes, and parched mouth.

*Second,* The most precious quality of narcotics, is that of allaying intense arterial action in acute diseases. Where an accelerated circulation plays upon the structure of the brain, or of the lungs, or tortures the joints with pain, increased by every throb of the arteries, and by its force tries the strength of every smaller vessel; when it threatens such internal effusions as produce death when they take place in the brain, suffocation when in the lungs, and extravasation of serum and gelatinous matter when they take place round the joints, so as to stiffen, swell, and distort them, so as to affect the form of the very bones, and cause a knotting of the greater joints, and curving and twisting the fingers and toes: In such diseases, we dare not use opium, but have recourse to *Digitalis*, which lowers the pulse as securely, as quickly too, as if we had put the finger on some main-spring of the machine; or to *Hyoscyamus*, or to *Conium Maculatum*, which are in some cases the best and most harmless anodynes for alleviating pain.

*Third,* Another happy combination enables us, by a right management of narcotics, to excite certain secretions, among the principal of which are, those of urine and perspiration. *Digitalis* has itself the power, while it lowers the pulse, of exciting a profuse flow of urine; and thence, the circulating system and all its secretions is thrown into disorder: Or when diseases of the abdominal viscera are accompanied with a dropsical effusion, its combined influence is more availing than all the other articles of the materia medica. Opium has, in like manner, the peculiar property of causing perspiration, a property which is much improved by combining it with emetics.

*Fourth,* The property of narcotics next in import-



ance, is that of relaxing spasm; and for this, certain narcotics are selected to accomplish specific purposes. For abating general sensibility, and preventing the spasms and intense paroxysms of hooping-cough, Cicuta is found most useful; for relaxing the spasmodic constriction of the glottis, which is the cause of asthma, Stramonium, inhaled in the form of fumes or vapour, is infallible; for relaxing spasms of the stomach, or other abdominal viscera, in cramps, colic, and ileus, Opium is preferred; in those diseases, its cordial influence is manifestly useful, and forms a happy combination with the narcotic virtue of the drug.

*Fifth,* The power of narcotics in restraining excessive discharges, is very conspicuous, and very consistent with their other virtues; for these increased discharges, are compounded of muscular irritability, by which the tube, whether it be the urethra, trachea, or the alimentary canal, is excited to increasing actions; and of incited arterial action, proceeding from this irritation, and pouring into the cavity or canal an increased secretion. Thence, we find, that in Catarrh, or common cold and cough, in Mucous Asthma, in Gonorrhœa, in Diarrhœa, Dysentery, and Cholera morbus, narcotics, and especially opium, are of great efficacy, both in appeasing the irritation, and in repressing the secretion, or rather exudation of their fluids; and by the same virtues, opium is a sovereign remedy in Menorrhagia, Abortion, and Child-bed Flooding.

*Sixth,* Another, and most useful property of narcotics, is, so to retard and moderate the general actions of the system, that by continuing their use, and combining them with other medicines, as mercury and antimony, we resist or exhaust other peculiar actions, as those of Syphilis, or Cancer, and cure incipient schir-

rous diseases in the liver, testicle, salivary and lymphatic glands.

*Seventh,* Lastly, having enumerated the various properties, of allaying incited action, regulating secretions, relieving spasm, and other influences by which narcotics assist in the cure of disease, we come last of all to mention their anodyne qualities, by which they soothe irritation, allay pain, and procure sleep. To this we resort as our last refuge in all incurable diseases; as in desperate gout; in that kind of rheumatism by which the joints are stiffened, crooked, and swollen; in cancer, in malignant sores, in tumors which do not admit of extirpation; in diseases of the rectum and bladder.—But anodynes should ever be our last resort; they should be given habitually, only after we have ceased to prescribe, when we merely give the patient leave to assuage his pains, by using narcotics, especially opium, in such doses as his feelings or suffering require. When this period has arrived, we have indeed abandoned all hopes of cure, for narcotics used as anodynes, and increased gradually as health declines, so deaden the sensibilities and powers of the system, that recovery is no longer possible; for it is as slow poisons, that narcotics suspend the sensibility and feeling of pain.

These are the various properties of narcotics; and we perceive,—that opiates will be often used as cordials, notwithstanding the narcotic power with which their stimulant quality is combined:—That opium combined with digitalis, will be often used in acute and painful diseases, as rheumatism and gout:—That opium combined with emetics, will be often used in the beginning of fevers, in agues, and wherever perspiration is required:—That opium combined with mucilaginous medicines, and with camphor and ammonia, will be often used in ca-

tarrh :—That opium will be peculiarly useful, when combined with astringents, and alternated with purges, in diseases of the alimentary canal :—That digitalis will be prescribed chiefly in phthisis, delirium, madness, and acute rheumatism, where we fear to prescribe opium, lest it should raise arterial action, and increase the pain :—That digitalis, in combination with squills, nitric æther, and other diuretics, will be used in dropsy :—That hemlock, hyoseyamus, stramonium, will be used for relaxing the spasms of asthma and hooping-cough :—That cicuta, in combination with mercury, will be used as an alterative :—and that we shall very generally, after all hopes of cure are gone, return to the use of opium as the safest and gentlest anodyne.

Here, under this order, are comprehended all the more powerful articles of the materia medica ; and it is according to these general characters, that the extemporaneous prescriptions must be arranged. But, before suggesting to the young physician the various forms in which these medicines may be best administered, it is natural to give a short account of each individual of the class of narcotics and antispasmodics.

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### OF THE HISTORY AND VIRTUES OF THE VARIOUS NARCOTICS.

Opium.	Conium Maculatum.
Hyoseyamus.	Belladonna.
Digitalis.	Stramonium.

The individual characters of each of these may, after this general description of their properties, be very briefly recited.

———OPIUM, PAPAVER SOMNIFERUM, is the inspissated juice exuding from the capsule of the Poppy, as it grows in Asia, Egypt, or other warmer climates. Its taste and overcoming odour announce its powerful influence; it heats the parts to which it is externally applied; and in moderate doses, and with those especially who are habituated to its use, it warms the stomach, excites the pulse, enlivens the senses, sharpens the wit, inspires a drunken and furious courage, produces a slight and temporary intoxication, in which all things look cheerful and happy; and, given in an under dose, or frequently repeated, it keeps the patient broad awake.

Opium, then, is to be used with caution and reserve in all excited states of the vascular system, but especially in diseases of the brain, in delirium ferox never, nor in phrenitis. There is no want of evidence of its cordial and stimulant powers; this is even a prime quality in the medicine, which is accordingly used, as a stimulant and cordial, in nervous affections, and in low fevers; as a stimulant operating in the end as an astringent, in alvine fluxes, or in those from the uterus; and as a sudorific, when given in minute doses conjoined with any emetic.

It is in the second stage of its operation, and when given in larger doses, that we profit by the narcotic power of opium. Opium is our principal medicine in all disorders of the alimentary canal, whether as an anodyne, or as an astringent; or in other terms, for allaying the irritated actions of the intestinal canal, and for abating and moderating the vascular action from which the profuse secretion arises. In the approaching paroxysm of intermitting fevers, and even in active inflammatory disease, as Pneumonia, Angina, and even in Phrenitis, some have adventured to give opium, qualifying its operation, and

repressing its stimulant power, by combining it with *Submuriæ Hydrargyri*, or with deeper narcotics, as *Hyoscyamus*. Its truest narcotic effect is in its power of appeasing spasms, as in tetanus, in locked jaw, in hydrophobia, and in convulsions, whether of the hysterical or of the epileptic kind.

But the most comprehensive way of enumerating the several virtues of this universal medicine is, to give a succinct catalogue of its various combinations and uses, as they appear in the table of extemporaneous prescriptions; always recollecting, that opium is stimulant and cordial in its first operation, especially when given in smaller doses, and frequently repeated, and in those patients who have not been familiar with the medicine:—In larger doses, and in those accustomed to its use, it is a pleasing anodyne:—In its largest doses, it proves a deep and deadly narcotic, producing, in the first moments, a heavy sickness and vain efforts to vomit; the senses are buried in lethargic stupor, the whole body paralysed, and the patient dies apoplectic.

The dose of opium is from half a grain to three grains: Four grains, or a little more, are sufficient to produce a dangerous and lethargic stupor, in those unaccustomed to its use, while a drachm often is taken safely by those who, from extreme suffering, have been induced gradually to increase the dose. Practitioners choose to boast of the enormous doses they have ventured to give of this medicine; but it is a poor matter to boast of; it is only habituating one individual to bear a useless dose of a narcotic, which ultimately ruins the nervous system, while another, who has been less coarsely dealt with, reaps equal benefit from a very moderate dose. There is little merit in augmenting the dose, without improving the effect.

It is impossible to display the various forms in which this invaluable medicine is given, without anticipating many prescriptions arranged under the heads of Cordials, Astringents, &c. But where is the harm of anticipating, if anticipation be the best form of teaching, what the young physician requires to know? Anticipations are as unavoidable in a work like this, as pleonasm and repetitions.

*1st*, Opium is successfully used as a cordial, in pains and crampish disorders of the stomach, combined with alkaline medicines, as Ammonia, Magnesia, &c.

*2d*, It is happily used as a cordial in fevers, combined with Camphor, with Spiritus Ætheris Nitrosi, &c.

*3d*, It is happily used as a gentle sudorific in continued fever, combined with Spices, or with Antimonial, Saline, or Effervescent Draughts. Or as a very powerful sudorific in the approach of intermittent fever; for if given at the approach of the hot stage, it produces a soft, refreshing, and quiet sleep, followed by a profuse perspiration; and it brings the paroxysm to a regular and speedy close.

*4th*, It is thus used as a powerful sudorific, not in intermittent fever only, but also in rheumatism, coryza, or common cold, &c. combined with Ipecacuan, as is fully explained under the head of Sudorifics.

*5th*, It is used to alleviate pain, to abate vascular action, and, by allaying action, to cure disease; it is used even in acute inflammatory disorders, as in Hepatitis, Pneumonia, &c.; but always conjoined with Submuriate of Mercury.

*6th*, It is used as astringent, in all abdominal fluxes; in diarrhoea, cholera, dysentery, &c. combined with Catechu, Rhubarb, Cinnamon, Alum; as will be more fully explained under the head of Astringents.

*7th*, It is used in all hæmorrhagic actions, as in hæmoptysis, hæmatemesis, profuse menstruation, abortion, or child-bed floodings, combined with Sulphuric Acid.

8th, It is used as an antispasmodic in cramp of the stomach, in asthma, pertussis, &c. combined with Sulphuric Æther; and in ileus, volvulus, intus-susceptio, &c. combined with Oils, Purgative Medicines, and Hot Fomentations.

9th, Opium is used as a powerful antispasmodic, in combination with Camphor, Mercury, &c. in all the more afflicting and fatal convulsions, as in tetanus, trismus from wounds, catalepsy, hydrophobia, &c.; but the singular condition of the system then demands the largest doses; from ten grains to a scruple or two scruples of Opium are sometimes given.

10th, Opium, which is useful by its stimulant power in opening the secretory vessels, and promoting perspiration, is useful in repressing the profuse flux of mucus in catarrh, gonorrhœa, cystirrhœa, &c. by lessening that sensibility and irritation, which continually excites the mucous glands, and the exhalent vessels of the trachea, to pour out their secretions.

11th, Opium is very frequently used as an anodyne. To alleviate pain and relieve symptoms; to quiet slighter irritations, to prevent slight delirium; and to procure sleep, are among the most frequent occasions in which we use Opium; and the form in which it is administered for such purposes, is always the most simple and pleasing, viz. a small pill, containing a grain or a grain and a half of opium: or twenty, thirty, or forty drops of the tincture, in a pleasing draught. In the excruciating pains of acute disease, as rheumatism, gout, syphilis, &c. we conjoin with it an equal proportion of the tincture of hyoscyamus, reinforcing one narcotic with another, as we do one purge or emetic with another purge or emetic.

In almost all those diseases for which Opium is prescribed, especially in disorders of the bowels, when sickness and vomiting prevent its remaining on the stomach;

and always when we hope to allay general convulsions by its narcotic power, we give large doses in the form of glyster.

In many cases of acute pain, and in almost all accidents, as bruises, sprains, and fractures, we prevent the extravasation continuing, and allay the excited vascular action, by embrocations of opium in the form of solution, or tincture, or by applying soft opium to the part.

———HYOSCYAMUS NIGER, Henbane, is the second narcotic in our order, though among the highest in power. It produces, even in its first operation, a stupid drunken-like torpor, with vertigo, dilatation of the pupil, and paralysis of the features, delirium, vomiting, and a slow oppressed pulse. It augments the secretions of urine and sweat, and causes at once vomiting and purging, whence it is suspected to be a prime ingredient in the Eau Medicinale. The preference given by some to this narcotic, is ascribed to its influence in relaxing the bowels, while its real superiority consists in the total absence, as far as we can perceive, of any stimulant power; in its being a pure and powerful narcotic; in its having that virtue which opium certainly has not, in the first instance, viz. of allaying vascular action while it assuages pain.

Hyoscyamus affects the nervous, without exciting the vascular system:—it is extremely useful in allaying pain, in acting gently and propitiously on those irritable constitutions, which cannot bear opium; and forms a valuable addition to opium in qualifying its operation.--It is particularly useful in phrenitis, in paroxysms of madness, in rheumatism, gout, and other painful disorders. Internally it is best given in form of draughts, conveying from fifteen to thirty or forty drops of the tincture; or in the form of pills, conveying for a dose, from half a grain to two or three grains, which dose may be given in gout, rheuma-



tism, phrenzy, &c. up to a scruple or even a drachm! Doses of this magnitude have been given to counteract the excitement in intense and furious paroxysms of madness, and sometimes they do prevent the febrile delirium from rising to a fatal pitch.

This is a medicine used as yet too timidly, and too little: It represses vascular action, assuages pain, procures a profound and tranquil sleep, and a serene and placid condition of the senses: Yet its use is sometimes followed by stupor, vertigo, and dimness of sight, scabby pustules often arise upon the cheek or chin, and round the mouth, and sometimes it produces a profuse flow of urine, often diarrhoea, with occasional tormina of the bowels.—In violent diseases, the dose of Hyoscyamus must be increased to five or six grains, before it has any very conspicuous effects: as an anodyne, we begin with doses of three, and advance in successive nights to six or eight grains; it occasions less heat, thirst, or low sickness, on the following day, than opium, and it relaxes the bowels.

Cataplasms of the leaves of Hyoscyamus are applied successfully, to abate the intolerable pains of Open Cancer; and I can vouch for the powerful effects of the extract plastered upon foul cutaneous sores, scabby eruptions, and venereal ulcers of the secondary kind, in suppressing the excited vascular action, and in healing the ulcerated surface; for the same purpose the powdered herb is occasionally scattered over the surface of intractable sores, and its effects infinitely exceed those of the *CONIUM MACULATUM*.

———*DIGITALIS PURPUREA*, FOX-GLOVE.

The leaves of *Digitalis* have a bitter, acrid, poisonous taste. This poison causes dimness of sight, vertigo, tottering delirium, hickup, vomiting, and violent purging; paralysis of the features first, and finally of the whole

body. Of our narcotic medicines, no one is so precious as this, for none has such direct, immediate influence on the vascular system; none so instantaneously moderates the action of the heart and arteries, without dangerously affecting the nervous system; it needs but to be slowly and cautiously increased in its dose, to depress the pulse to any standard, and keep it so.

This power, viz. of moderating vascular action, constitutes its most important and peculiar property; but another contingent and also invaluable effect is, its power of increasing the secretion of urine. From this happy combination of a narcotic property, capable of quelling vascular action in a few hours, with a peculiar power of augmenting the secretion of urine, and relaxing the bowels, Digitalis ranks first in our catalogue of medicines, as being active not merely in relieving symptoms, but in curing disease.—There is no inflammatory disease, in which it may not be safely and advantageously used, and there are some to which it seems peculiarly adapted.—It is in a peculiar manner adapted to all those diseases, in which an excited and vehement circulation is pressing dangerously against the organization of some important organ:—In Phrenitis, in furious paroxysms of Mania, and in Hydrocephalus, digitalis, combined with sub-muriate of mercury, is an invaluable remedy:—In acute Rheumatism and Gout, in Hooping-Cough, Croop, and Spasmodic Asthma, it is a very valuable remedy: It is above all celebrated as having the power, like pregnancy, of suspending Phthisis, but I know few who will have the boldness to say, it can cure the disease proceeding from vomica, or suppuration of the lungs.—It is useful also in Hæmorrhagies, by suspending the action of the heart and arteries:—It is very useful in Exanthemata, especially in Scarlatina, when followed by dropsical effusion, as often happens fatally in boys:—It is the specific for dropsy, whatever its species is; and when

given in the form of tincture or infusion, slowly increased, its diuretic effects supported meanwhile by drinking continually of imperial, (viz. solution of supertartrite of potass, made pleasant with sugar and a little wine), it is so very efficacious, that I have in one week seen three patients of various ages effectually cured, the urine beginning to flow, copious and colourless, from the first day in which the medicine was given.

As an injection in Gonorrhœa, in irritable Bladder, or in diseased Rectum, it is still a precious remedy: I have found it particularly useful in cutaneous sores, leprous eruptions, and scabby blotches.—The infusion for injection, or for internal use, is made by infusing a drachm of the powdered leaves, in eight ounces of boiling water, for three quarters of an hour: For internal use, an ounce of any aromatic water should be added to this infusion, and from half an ounce to an ounce of the mixture should be given twice or three times a-day. Of the spiritous tincture, from fifteen to fifty drops; of the powder, from half a grain to two grains three times a-day, may be safely given.—A stronger infusion is made for external application, in itch, leprosy, scurvy, and cutaneous ulcers. As an ointment, the extract is used, rubbed down with a little oil, or mucilage, or the recent juice.

While Digitalis is operating powerfully in dropsy, there often ensues such irritation of the bladder, and incontinence of urine, that the patient rises fifty times of a night, straining ineffectually: hot fomentations, and opiate glysters, appease this irritation. When sickness and confusion of head, vomiting, and purging ensue, we must not merely moderate the dose, but actually withdraw the medicine altogether, and give an opiate, stimulants, as warm port wine negus, and diluents.—Often, after Digitalis has lowered the pulse in a dangerous degree, in diseases of the lungs or of the heart,

the imprudently continuing the medicine, helps on the disease to its fatal termination; it should in such circumstances be withdrawn for a time, till the pulse rise, or the pains or cough return. In Mania, Phrenzy, Rheumatism, Gout, &c. it can hardly be continued too long; in Phthisis, much more in mucous cough, or asthma, it often should be interrupted, and sulphuric acid, æther draughts, and cordial doses, viz. small and frequent doses of opium, given in its stead.

——CONIUM MACULATUM, Hemlock, is a powerful and pure narcotic, with a peculiarly oppressive and poisonous odour, which certainly has in its combination, some more active and stimulant properties than either Digitalis or Hyoscyamus; for though its first operation as a poison, is to induce vertigo, dimness of vision, with dilatation of the pupil, faltering of the tongue, paleness of the visage, trailing of the limbs, and general paralytic relaxation of the whole body, and of the sphincters, together with great anxiety and oppression of præcordia, and at last a deep apoplectic stupor; yet, from that apoplectic condition the patient often awakens, into a state of furious, or at least of wild delirium, terminating sometimes in madness.

Hemlock is a powerful anodyne, but by the caprice of fashion, has been used as such, only of late years: hemlock pills are now prescribed in every exigency.—Hemlock has little influence in exciting any secretion, but it has much effect on the pulse, which becomes slow and heavy under its use.—It is found universally useful in painful diseases of the bladder and rectum, in rheumatism and gout.—It has most happy effects in arresting the growth of indurated scrophulous glands, of the indurated prostate, and especially of swellings of the testicle, threatening schirrus.—It is a perfect Antipsoradic, and assists in the healing of scrophulous, syphilitic, and carcinomatous

sores ; and in hooping-cough it is found very efficacious, especially in children.

Formerly *CICUTA* was used, not as an anodyne, but as an alterative only. Pills of the powdered leaves, containing each three grains, are useful anodynes, one or two being given at first in a dose, according to the exigence of the case, and gradually increased : The same pills repeated three or four times a-day, moderate the hooping-cough, or cure it : The same pills, combined with two grains of sub-muriate of mercury, given two or three times a-day, and gradually increased, prove useful in glandular tumors, in schirrous testicle, in chronic complaints, and in preventing the increase of schirrous mamma : The same dose gradually increased, is powerful in scrophulous, syphilitic, and carious sores.

For each grain of recent powder which a patient is in the habit of using, a grain of fresh extract, or inspissated juice, may be used ; and in any or all of the above-mentioned diseases, the dose may be gradually increased to a scruple, or even to two scruples.—The medicine should be made to affect the sensorium slightly, and there is no limits to its use, but the excess of that vertigo, sickness, and dimness of sight, which it peculiarly produces : An inspissated juice drawn from the seeds, has effects much more powerful than that from the leaves.

Externally, the extract or inspissated juice of the *Conium maculatum* is used as a plaster to scabby eruptions, or cutaneous ulcerations ; the recent powder to sores ; a fomentation of the boiled powder, or fresh leaves, is applied hot to indurated glands, or to open cancer ; and the powder mixed with axunge, is used as an antip-soradic ointment, which in a few days, and without danger, quite extinguishes the disease.

———*ATROPA BELLADONA*, Deadly Night-shade. The berries of the deadly night-shade are very

tempting to children, and are a subtle poison.—It is at once a powerful narcotic, and yet by its acrimony it excites the secretions of urine, and perspiration. When taken in poisonous quantity, the child dies with the mouth and fauces excoriated, and the lips and tongue black, and swollen.—It is chiefly an infusion of the leaves, or an inspissated juice, that is given, though rarely in medicine; and the chief impediment to our unconstrained use of it is, the inflammation and swelling, sometimes accompanied with Ptyalism, which it brings upon the tongue and fauces. It is useful chiefly in gout, rheumatism, phrenitis, and maniacal paroxysms, and in cancerous and syphilitic sores.

If given in substance, *i. e.* in powder of the dried leaves, (the whole plant as well as the berry being narcotic), it is best triturated with a little sugar, and tartrite of potass, so that it may be divided into very small doses; to a child, a quarter of a grain may be given, and increased to two or three grains in the day; to an adult, from one to six grains.

The infusion is a still more manageable form; it is made by infusing half a drachm of the dried leaves in a pint of boiling water, of which, when cooled and strained, the dose may be an ounce daily; and it may be increased gradually, till the physician is either satisfied with its effects, or alarmed by the irritation and swelling of the tongue and throat.

The leaves of this, as of all the powerful narcotics, is applied to cancerous and ill-conditioned sores, either in form of dried powder, or of the leaves simply moistened, and mashed down.

———**DATURA STRAMONIUM**, Thorn-Apple, is the most powerful and suddenly fatal of the narcotic poisons: it occasions directly vertigo, torpor, and death: it is used in rather a more minute dose than Belladonna, *viz.* a quarter of a grain, or half a grain, of the powdered leaves

or seeds:—it is reported to be exceedingly powerful in curing melancholy and madness:—its best effect is not in mania, or delirium, in which diseases other narcotics are preferred; but in another form, and in a different disease, viz. in the form of smoke from the dried leaves, inhaled during severe paroxysms of the spasmodic, or even of mucous asthma. While inhaling this fume, the patient feels his eyes grow dim; every object seems to turn round; his eyes seem to himself to dilate to a fearful size, as indeed the pupil does dilate; he sickens, and falls down in his chair, and sometimes vomits: he lies thus with his chin upon his breast, insensible, and staring wide, and the rima glottidis seems, in the same proportion, to gape: he feels as if his throat were quite open, as if breathing through a direct hole or wide opening, rather than through a tube! and is for the moment relieved. But it is a painful resource, useful only in the most dangerous cases, and which all that I have seen try it have soon abandoned. Stramonium and Tobacco, are more properly to be ranked with Antispasmodics, than with Narcotics. These are all the powerful narcotics yet in common use.

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#### HISTORY AND VIRTUES OF ANTISPAS- MODICS.

Æther Sulphuricus.

Musk.

Camphor.

Valerian.

Ammonia.

Assafoetida.

Ipecacuanha.

Antispasmodics we can no otherwise define, than as  
“Narcotics given to oppose spasm;” as anodynes are

defined, "Narcotics given to assuage pain." The name originates from the intention in which they are given, not from the nature of the drugs, which are still the same, still narcotics.

Antispasmodics then, are narcotic drugs, given to abate inordinate action, not in the vascular system, but in the muscular fibre, and chiefly in the muscular fibres of the hollow viscera! in the muscular fibres of the glottis, of the stomach and bowels, of the neck of the bladder! but rarely in the muscles of voluntary motion; for the disorders of tetanus, trismus, epilepsy, and other general spasms, are comparatively rare.

Of this class of medicines there are two divisions, Antispasmodics and Placebos.

*First*, The true and efficient antispasmodics, which being possessed of high narcotic properties, rank with the class last described. We should not trust the relieving of cramp in the stomach, of dangerous spasm of the colon, of spasmodic contraction of the pharynx, hydrophobia, asthma, nor locked jaw, suppression of urine from spasm, nor of any other urgent disease, to those medicines peculiarly named Antispasmodics: but to opium only, or hyoscyamus, or camphor, or cæther. And it is to be remarked, that as an antispasmodic, the stimulant and cordial powers which we distinctly perceive in camphor, as in opium, are no hindrance to their use; for the purpose in the diseases just recited is, by lowering the sensibility and irritability of the system, to interrupt a muscular action which is altogether local, and no way connected with vascular action nor with a febrile pulse.

The *second* order comprehends such medicines, as have only in a very inferior degree the same properties, and which, not venturing to rank as narcotics, we name Antispasmodics, or rather they are such medicines as



we familiarly prescribe in the harmless faintings of delicate women, in hysterical paroxysms, in transient headaches, stomach disorders, and other nervous diseases, as they are named.

Valerian powders, nervous pills, and draughts of musk and amber, are so inert as to be little better than a mockery. Such medicines are assumed into our materia medica, not for any serious purposes, but to swell out the catalogue of our drugs, and amuse the distempered, rather than cure the diseased! to afford *placebos*, which cherish the hope of being relieved by strong-smelling draughts.—Valerian, musk, assafœtida, and camphor, are the chief in this division: Their high sensible qualities, and overpowering influence over the senses and the nervous system, would lead us to expect important effects; but we know by impartial experience, that they are of little value, of none in the opinion of those who, engaged in the navy or army, or in curing the diseases of warm climates, have to do with disorders which admit no trifling and no delay.—Let us at least speak sincerely and plainly to one another, if not to the world of patients; and cleave fast to the powerful narcotics, especially to opium, whose stimulant properties can, in this intention at least, do no harm, but rather be of use.

———ÆTHER SULPHURICUS.—If a practitioner were desired to name a medicine, specific as it were against spasm, or intense muscular contraction, he would name æther. Its operation is one example of the highest stimulant power being no impediment to the use of a medicine, which is yet effectually narcotic. Æther is effectually narcotic, since we find Æther draughts, like Camphor draughts, compose a patient under the delirium of fever, and procure sleep; and yet both operate as cordials in cases of lowness, and as exciting powers when

given in small and frequent doses. Æther is the best and purest antispasmodic in diseases merely local, especially in pains of the stomach, and in the paroxysm of spasmodic asthma. Given in the moderate dose of thirty or sixty drops, viz. a drachm only, it is merely cordial, and exhilarating; but given as it has been by empirics, in accumulated doses of two drachms, half an ounce, or an ounce, it produces the happiest effects, in relieving, and sometimes in actually curing asthma. It must, as in the several examples marked in the following Section of Extemporaneous Prescriptions, be always much diluted. Often it is most happily combined with anodyne or cordial draughts, to prevent vomiting; and often with camphor. There is no medicine preferable to this in paroxysms of hysteria.

———LAURUS CAMPHORA.—Camphor is now regarded not so much as a peculiar substance, but rather as a peculiar vegetable principle, diffused in many plants, separable from all essential oils, but found most abundant and pure chiefly in the leaves, and in the interstices of the woody fibres of the Camphor Laurel, a shrub which grows in great abundance in the islands of the Indian Archipelago.

Camphor is a concrete, oily, resinous substance, shining, brittle, very friable, and volatile; having a penetrating fragrance, resembling that of rosemary, and a warm penetrating taste, like that of peppermint. Its stimulant, cordial, and antispasmodic effects, are chiefly conspicuous; its anodyne chiefly in composing to sleep in febrile diseases, where opium proves unsuccessful; and in maniacal paroxysms, where to be useful it must be given in large doses: In allaying the pains of rheumatism and of sprains, and in preventing the extension of ecchymosis, it is our most frequent embrocation.

Camphor, like opium, warms and excites the body,

when given in small and frequent doses; proves a cordial to the stomach, allays sickness, and supports the *vis vitæ*; and it happily, at the same time, assuages pain, whether external or internal, abates the delirium of fever, and moderates the pulse, prepares the skin for perspiration, and procures a cool, refreshing, and gentle sleep. It appears to me to affect the sensorium, and the vascular system, distinctly and differently; for while it exerts a pleasing and cordial power, in supporting the nervous system, it plainly moderates the actions of the vascular system. It seems better adapted to diseases of high inflammatory action than opium, and is useful in conjunction with opium, to temper its ill effects.

But the qualities of every drug are best described, in enumerating the various disorders in which experience teaches us to use it. Camphor, in pains and cramp of the stomach, in syncope, debility, and irregular hysteric symptoms, is found to be, in moderate doses, a most efficacious cordial.—In fever, it is also a precious remedy, softening the pulse, abating delirium, and procuring gentle sleep.—In inflammatory fever, attended with local affections, as in pleurisy, peripneumony, angina, scarlatina, measles, and other eruptive diseases, accompanied with a hard and frequent pulse, it is also exceedingly useful:—It softens the pulse in low fever, with muttering delirium, and supports the vital powers by its kindly influence on the nervous system. In intense headaches, cephalæa, and mania, it is found to be a powerful sedative; but, to make it so, it must be given in the largest dose, viz. from two scruples to a drachm, in the course of the day, administered in doses of ten or fifteen grains; and to make this proceeding safe, we must watch the patient to stop the course of the experiment, as soon as we perceive that the medicine produces sickness, gid-

diness, and coldness, anxieties, and fainting, for if imprudently continued, wild delirium and convulsions ensue. Such signs of danger as the first of these, are to be regarded as the signal for washing out the stomach with diluents, and strong emetics, and giving opium, which best counteracts the ill effects of camphor. In paralysis, camphor is found useful by its cordial influence on the nervous system, moderating, and at the same time regulating the pulse.

In epileptic and in child-bed convulsions, we find strong doses of camphor, viz. from eight to ten grains, repeated every four hours, have a happy effect: and its antispasmodic virtues are more familiarly useful in the strangulation, and suffocating struggles of hysteria, when the paroxysms are violent and protracted: camphor has likewise been used, though with very equivocal success, in hydrophobia, and in animal poisons, as the bites of snakes and serpents.

Its anodyne powers are very useful in various disorders of the urinary passages, private parts, and rectum, given in the form of emulsion, along with nitre or spiritus ætheris nitrosus. It allays irritation of the bladder, and the frequent desire to pass urine in dysuria; it takes off the ill effects of blisters, or of the tinctura lyttæ, given in too great a dose; it subdues painful erections in virulent gonorrhœa, especially if to the camphor draught, or emulsion, be added a poultice or embrocation of it externally; it lessens also the intolerable irritation produced by piles, and tumors of the rectum; and it is useful in inflammations of the kidney, whether idiopathic, or from falls or blows.

The power that camphor possesses, of soothing and abating irritation, surpasses that of opium; and thence, in inflammatory diseases accompanied with spasm, as in suffocating catarrh, and asthma, camphor draughts, and

juleps, are found extremely useful; and in abating salivation, opposing the power of mercury, and on various occasions of irritation, it is extremely profitable.

Camphor is thus, by its cordial and sedative qualities, by lowering the pulse, and at the same time, (to use the phraseology of our forefathers), comforting the brain, a very universal medicine.

Camphor externally in form of embrocation, dissolved in alcohol or in wine, whether alone or combined with opium, is a very useful application. By moderating vascular action, it prevents the extension of ecchymosis in bruised parts; it assuages pain in sprains, and other injuries of the joints; it is useful in rheumatism, not merely (like ammonia) as a rubefacient, but as an anodyne: as an anodyne it is also useful in cynanche; in ophthalmia, it is a valuable ingredient in the best collyria and ointments; and in partial gangrene, it is of eminent service, by correcting the foetor, and moderating the vascular action, so as to favour separation of the diseased parts from the sound; and finally, in the itch of children, it is the best and most cleanly antipruritic, to which it may be advisable occasionally to add a moderate proportion of the murias hydrargyri; or the child may be anointed with camphorated oil, mixing two drachms of extractum hyoscyami with the ounce of oil.

The dose of camphor is of course proportioned to the occasion. As a gentle cordial and sedative in fever, from two to five grains, repeated three or four times a day; in mania, convulsion, hydrophobia, or tetanus, from ten grains to fifteen, or a scruple, repeated every three or four hours.

———AMMONIA.—The volatile alkali, whether in its caustic or in its carbonized state, whether diluted in the form of aqua ammoniæ, or in the solid form of crystallized carbonate, is a useful antispasmodic and ano-

dyne. The AQUA AMMONIÆ PURÆ, or caustic solution, may be given in doses from ten to twenty drops: the AQUA CARBONATIS AMMONIÆ, in doses of sixty drops, a tea-spoonful or more: both require to be very largely diluted, their properties are entirely the same: A spoonful of hartshorn given at going to bed, in a cup of water, often procures sleep, when opium fails: the same draught taken at the approach of an asthmatic paroxysm, proves a powerful antispasmodic: a linctus or oily draught with ammonia, taken from hour to hour in suffocating catarrh, or in the inflamed and spasmodic state of the glottis, is a very useful medicine: a pill of carbonate of ammonia, from three to five grains, with conserve of roses, occasionally repeated, is an excellent prescription in pain and acidity of stomach, or in syncope, or as a stimulant in palsy, and hemiplægia: and the embrocation of aqua ammoniæ and oil to surfaces, where the deeper parts are inflamed, as in cynanche, rheumatism, sprained joints, or inflammations of the glands or viscera, is a universal prescription.—Ammonia has, in the East Indies, been found to be the best resource against the fainting, sickness, and other mortal symptoms caused by the bite of the Cobra di Capella, Cobra manil, and other deadly serpents.

——IPECACUANHA.—Cephaelis ipecacuanha is an emetic used for various purposes, but in no property is it more valuable than when used as an antispasmodic; and it is successful chiefly in that which, of all muscular contractions, is the most difficult to resolve or prevent, viz. in that spasm of the glottis, which causes the asthmatic paroxysm. Given as an emetic over night, in a full dose, to those subject to asthma, and dreading a paroxysm, it has many happy effects: by sickening, it appeases at once every animal action, and paralyses for the moment every muscle: by exciting vomiting, it

empties completely the bronchiæ, and all the mucous follicles: by exhausting, it induces a gentle untroubled sleep, and thus anticipates and prevents the approaching paroxysm: and by causing a profuse perspiration, it often removes that catarrhal affection, which had revived the habitual asthmatic difficulty of breathing.—As an antispasmodic, its operation is greatly aided, especially after a full dose, by giving presently a draught of laudanum, or of hartshorn, or of camphor and opium combined. Given in a lesser dose, viz. of three grains at bed-time, though it produces but a slight sickness, or perhaps no obvious effect, it yet operates as an antispasmodic, and prevents the asthmatic paroxysm. It is, from this property, of singular efficacy in moderating the whooping-cough, for which purpose it is given to children in small doses, merely sickening, or slightly emetic.

————MUSK, CASTOREUM.—The highly odorous secretion contained in the mucous follicles near the anus of the beaver, is a substance, which makes such singular and strong impression on the sense of smell, that we are disposed to expect properties equally singular, and a power over the nervous system proportioned to this impression.—But whether it really is an inert medicine, or that its odour is so diffusible, that a small proportion of it impregnates very powerfully whatever vile substance the dealer chooses to cheat the public with, so it is, that our high-raised expectations have been all along disappointed, and this drug is now little better respected than mummy, or album græcum, or any other rejected or obscene article of the older pharmacopœists. It is now ridiculous to analyse, or praise, or any way to rely upon it, and yet we must continue to rank it among our antispasmodics. The frauds are notorious, so much we must say for the possible virtues of this drug: Gums and

resins highly scented, and a little mixed with musk, are crammed into the scrotum of a goat, and sold as musk-pods, and the frauds have become more daring, in proportion as the animal becomes rare. No one now prescribes musk with any interest or expectation: when prescribed, it is in the form of powder, or bolus, in doses of eight or ten grains. It is usually prescribed in hysterical disorders, with camphor, or a little opium, to give some value to this strong-smelling drug.

———*VALERIANA OFFICINALIS*.—The fibrous root of valerian dried, and reduced to powder, is another drug formerly in high repute, and remarkable for its obvious qualities of a strong camphor-like smell, and an aromatic bitter taste. Like musk, it seems powerful, is innocent, has formerly been much praised, and is a good ostensible medicine in Hysteria, and other disorders, in which we know not what else to give. It is most familiarly prescribed in hysterical cases, and in Chorea Sancti Viti, where it is affirmed to have very often effected a cure, only perhaps because the disease is one which, at a particular period of life, spontaneously ceases. It is much valued and prescribed by some as good in Epilepsy, a disease so desperate, that we are safe in affirming, that this trivial drug never even contributed to a cure; it is more likely to be serviceable as an anthelmintic.

Valerian is given in draughts or powders; the least dose should be from fifteen grains, or a scruple, to a drachm or more; but it is so innocent, I should say rather so inefficacious a medicine, that patients very credulous, and very desirous of benefiting by it, have taken it to the amount not only of many drachms, but of several ounces in the day.

———*ASSAFÆTIDA*.—The gum-resinous juice, exuding from the roots of the plant; its smell is prover-



bially powerful, and offensive; its taste acrimonious and bitter; it is used in the form of pills, and chiefly as an antispasmodic in asthma, in doses of a scruple or more. In Dyspeptic complaints it is found warm, and cordial to the stomach, and slightly affects the bowels. In hysterical paroxysms, and suffocations, it is best used in the form of glyster, two drachms or more being dissolved, or rather mixed with four ounces water, so as to form a milky infusion, which is administered warm. Such are the occasions in which Assafetida is used; but in my mind, this is one of the most palpable of all the occasions in which we are cheated by the specious semblance of strong and obvious qualities, into the belief of a medicine having some extraordinary powers, while it is merely foetid and disgusting.

### THE HISTORY OF EMETICS AND PURGES.

IT is not merely as medicines, procuring various degrees of evacuation, that we class these together; but as medicines irritating and exciting the several portions of the alimentary canal; and hence, by sympathy, affecting the whole system.

#### OF EMETICS,

Ipecacuanha, Zincum,

Anthemis Nobilis, Scilla Maritima,

Antimonium, Sinapis,

Are the chief; and, according to the dose, the manner, or the combination in which these are used, various important purposes are effected. We use emetics, *first*, in ordinary doses, and purely for the purpose of emp-

tying the stomach:—*2d*, in enormous doses, when either we are in haste to procure the evacuation of a mineral poison, as Arsenic, or when the sensibility of the stomach is so depressed by some dangerous narcotic poison, as Opium, Cicuta, &c. that the largest dose of an emetic hardly suffices:—*3d*, We use various emetics in lesser doses, such doses as sicken and depress the patient, and keep down all the vital actions: It is thus we subdue the pulse in continued fever, and stop the hæmorrhagic action in discharges of blood from the surfaces of the stomach, and lungs, and uterus:—*4th*, This is the true theory of that remarkable effect so justly ascribed to emetics in diarrhœa, and dysentery; it is not by inverting the peristaltic motion, for the antiperistaltic motion, as it is called, of vomiting, never is excited; but the emetic, as a poison in nauseating doses, lessens the irritability of the whole body, checks the action of the arteries as much as it paralyses the muscles, and, by lessening the irritability of the system, stops the disorderly and irritated action of the bowels:—*5th*, By combining emetics with opiates, we procure a suspension of that febrile action in the extreme arteries, which is so unpropitious to secretion, or exudation; and then, by the exciting power of the opium, administered in a small dose, we procure a gentle diaphoresis, and stop the paroxysm of intermittent, or accelerate the crisis of continued fever. *6th*, Among the uses of emetics given in full doses, it must not be omitted, that besides compressing the hepatic system, and accelerating its circulation; besides squeezing the gall-bladder, and emptying its ducts, and assisting occasionally in disengaging biliary calculi, powerful emetics have another very singular and important effect, viz. the promoting absorption; for I have often been called into consultation, when digitalis, and all other powerful diuretics, had been

unsparingly, but ineffectually used; yet, a powerful shock and excitement being given, by the administration of a very strong emetic, or a drastic purge, that moment, along with the watery stools, the urine has begun to flow profusely.

Emetics formerly so familiarly, and by some periodically taken, for sick headach, or the female headachs of menstruation, is now never used for such a purpose; indeed, hardly any thing could be imagined in the form of a remedy, more truly dangerous and proposterous.

—IPECACUANHA CALLICOCCA, *Ipecacuanha Cephaelis*, IPECACUANHA.—The root is of a nauseous bitter acrid taste, and in whatever dose administered, from three to thirty grains, excites the stomach to copious vomiting, preceded by severe sickness. In a full dose it proves emetic, in small and frequent doses it proves antispasmodic, sedative, and sudorific.—As an emetic, ipecacuanha is preferred, when the purpose is to evacuate the contents of the stomach, and that quickly! as in crapula, sickness produced by particular or unwholesome foods, or in case of poison: Or when the purpose is, to empty the biliary ducts, compress the viscera, promote their circulation, and to favour in dropsy the operation of digitalis or other diuretics:—This also is the emetic given, when the purpose is to empty the bronchiæ of accumulated mucus, to promote difficult expectoration, or to prevent the more violent and dangerous paroxysms of the whooping-cough: Or, when the purpose is, to resolve indurations of the lymphatic glands of the neck, to prevent the suppuration of a buboe, or to discuss a swelling of the testicle:—This is the emetic to be preferred, when it is purposed to stop the excited action of the intestines, and to begin the cure of diarrhœa, as in a child, by an emetic. Ipecaeuanha is also preferred, when our purpose is, to anticipate the paroxysm of an intermittent

fever, by giving a scruple of Ipecacuanha an hour before, or just on the appearance of the paroxysm.

For these various uses Ipecacuanha is prescribed in doses of fifteen grains, which yet sometimes fail; or of a scruple, or twenty-five grains, which is certainly to be reckoned a full dose; but when we would make sure of the effect, a grain or more of tartrite of antimony is added to thirty grains of Ipecacuanha, and the whole being so quickly (in six, eight, or ten minutes) rejected, and being washed out clean with warm water, there is no fear of any excess in its operation.

When the intention is to arrest the peristaltic motion of the bowels in dysentery, to check that irritation of the trachea, and flux of mucus, which continues so long distressing in severe or in chronic catarrh; when we wish to subdue vascular action in hæmorrhages from the womb, or surface of the lungs, or stomach, we combine the ipecacuanha with magnesia, sugar, &c. in form of powders, or lozenges, and give it in minute doses of two grains repeated from hour to hour.

But the most valuable preparation of this medicine, that in which its emetic power is counteracted by opium, is, the Pulvis Doveri, or pulvis ipecacuanhæ compositus, which is a convenient combination for prescribing these two medicines, either in minute doses, from hour to hour, in hæmorrhages, or in fever; or for prescribing a full dose as a sudorific and anodyne, in diarrhœa, dysentery, menorrhagia, or threatened abortion. Six grains of the pulvis doveri, repeated every two hours, is a valuable sedative. In rheumatism, in common cold, in continued, and especially in catarrhal fever, a scruple given at bed-time, in form either of powder or of bolus, proves a powerful sudorific; a scruple, however, is in irritable constitutions, and in

the young and healthy, apt to excite vomiting, especially if the patient drinks after taking his dose.

ANTHEMIS NOBILIS, Chamœmelum, Chamomile, has a coarse, strong, bitter taste, nauseous to almost every one, but to a few very acceptable. It is by some practitioners substituted to the more agreeable bitters as a stomachic; by many it is prescribed in intermittent fever, as a substitute for the Peruvian Bark. It is chiefly employed as a hot stimulant fomentation, but is mentioned now for the only quality that is really admirable, viz. as a gentle emetic in slighter disorders of the stomach, and one especially acceptable to those afflicted with bile and bilious headach, or diarrhoea. A cup of warm chamomile infusion, is a gentle and excellent emetic; such a cup of infusion, is also prepared for those who take ipecacuanha, who, if its operation be delayed, wash it off with this infusion.

—ANTIMONIUM, Antimony, is an emetic infinitely more various in its operation than any other, and many ways useful. It is represented to the imagination of the student in medicine, as an emetic, a purgative, a diaphoretic, an antispasmodic, a febrifuge! without the essential property being once mentioned, on which these several virtues depend.—It is a SEDATIVE;—it has conspicuously the power of subduing all the motions and active powers of the human body; and I can no other way regard antimonials, than as poisons, which in various degrees, and by smaller doses, poison partially, or in other terms subdue, the living powers.

Antimonials moderate the vital actions of the heart and arteries, as conspicuously as they sicken the stomach, or enervate the limbs. By subduing vascular action universally; they are the most precious febrifuges; by subduing the intense action of the arteries of the brain, they clear the head in fever, and moderate

the paroxysms of febrile delirium, or of madness; by subduing that febrile action of the vessels of the skin, which prevents secretion, and thickens and inflames it, they take off the dry hardness, and burning heat, and restore it to its moist and natural condition, and bring on perspiration; and when perspiration is completely restored, by the sedative power of antimony, and the vascularity of the skin slightly excited to action by the cordial power of opium in small doses, the fever is conquered. It is not by procuring perspiration, far less by discharging morbid humours through pores of the skin, that antimony allays fever; it is febrifuge in itself, and by its simple operation as a sedative; for febrifuge doses of antimony are small and frequent, doses which operate insensibly as sedative, while the attendants are looking for some visible effect.

Antimony, then, is rarely given, as Ipecacuanha is, merely as an emetic; for ipecacuanha is local in its operation, it merely stimulates the stomach; antimony is universal, as it affects the whole system: ipecacuanha is reserved almost exclusively for disorders of the stomach or bowels; antimony is used quite otherwise, viz.

*First*, As a SEDATIVE, affecting the whole nervous system, in MANIA, DELIRIUM.

*Second*, As a FEBRIFUGE, or in other terms, a Sedative, fit to subdue excited vascular action, in SYNOCHA, or simple inflammatory fever, unaccompanied with symptoms; in CYNANCHE TONSILLARIS, SCARLATINA, VARIOLÆ, MORBILLI, ERYSIPELAS, &c. viz. Inflammatory Fever, with local inflammation of the Glands, Skin, &c.

*Third*, In PERTUSSIS, PERIPNEUMONIA, HEPATITIS, &c. viz. Inflammatory Fever, accompanied with inflammation of the internal parts.

In all this class of diseases, where high vascular ac-

tion comes on suddenly, in a youthful patient, in perfect health, it is upon the sedative power of the medicine that we are to rely: But evacuations of every kind are at the same time desirable, antimony is therefore given in full and quickly repeated doses, so as to occasion vomiting first, then purging, and finally to bring on a profuse perspiration.

*Fourth,* Antimony is also used in **LOW FEVER**, whether arising from the mortal power of infection, as Typhus, and the Plague; or from direct poison, as from a wounded finger in dissection; or from marsh miasmata, as in the remitting and continued fevers of warm climates. But in all these, Antimony is to be used with other intentions, and never without the utmost precaution. That the evacuation of the bowels by purges, and that the continued use of calomel, is useful in such fever, is no argument in behalf of the subduing sedative power of Antimony. Often when Antimony has been given rashly in such fevers, where wine rather, and opium was required, I have seen a patient directly sicken, sink into a low muttering delirium, and die. When, in such low fever, there is a quick jerking pulse, a flushed face, and vascular action in the head, very moderate doses of Antimony, (never sickening doses), may be given, to subdue the pulse, and soften the skin; but with these opium must be conjoined, and wine.

*Fifth,* Antimony is given as a cure for that irritated condition of the vascular action of the surface, which occasions eruptions and cutaneous sores.

*Sixth,* In Mania, and in Brain Fever, we give the Tartrate of Antimony in large doses of ten or fifteen grains, or even a scruple; such doses hardly sickening the patient, whom they would almost have poisoned while in health.—In Synocha, or pure inflammatory fever, the Anti-

mony in the form of James's Powder, viz. the Pulvis Antimonialis, is given every three hours, in combination with Nitre, and Carbonas Calcis.—In Synochus, or fever verging towards Typhus, with much delirium, we combine the Tartrate of Antimony with Camphor.—In Typhus, or Infectious Fever, the little Antimony we venture to give, is combined with Opium.—In Cutaneous Diseases, it is combined with Mercury or with Narcotics.

From the rude state of science in the last age, an age in which calcining, vitrifying, washing, and distilling again and again without intention, and registering the ill-understood products under the most incongruous and whimsical names, was called Chemistry, we have had entailed upon us preparations, if they may be so called, of Antimony, which Proust or Thenard would think it a merit to be able to analyse and define. The Crocuses, Sulphurs, and Glasses of Antimony; the Precipitates, Kermes, &c. are thrown back again into the crucible of the alchemist, and for these are substituted, four simple and intelligible forms of the medicine, two only of which are useful.

*First, SULPHURETUM ANTIMONII.*—The Sulphuret of Antimony is so named, in contradistinction to its mineralized state, in which it is naturally combined with a large proportion of sulphur, while in this preparation, a very small proportion of sulphur is left. Sulphuret of Antimony may be described, as a condition of the metal almost pure, in which the metal is, by roasting and burning, purified from arsenic, from lead, and almost entirely from sulphur. But this preparation is insecure in its operation; for, as it becomes active only in proportion to the acidity it may accidentally meet with in the stomach and bowels, the same dose which



at one time, for want of natural acidity, proves quite inert, will at another torture like poison.

*Second*, OXYDUM ANTIMONII VITRIFICATUM, is formed by continuing the same process, of roasting and stirring the mineral, till the sulphur is altogether evaporated, the metal oxidated, and the white fumes cease to rise from it. The almost pure oxide being then urged with intense heat in a crucible, runs into a transparent bluish glass, which, being reduced to a fine powder by levigation, may be given in very small doses; but it is found too rough and dangerous a medicine for use, and is indeed such as we have no temptation to use. For,

*Third*, The PULVIS ANTIMONIALIS of the Edinburgh and London Pharmacopœias, is a safer and more manageable preparation. It is the result of burning the sulphurate of antimony with hartshorn shavings; it is an oxide of antimony, combined with phosphate of lime. The process is suggested by Dr Pierson as a true imitation of the celebrated James's Powder, and contains, according to his analysis, forty-three parts of phosphate of lime, with fifty-seven grains of antimonial oxide: It is inferior in strength to Dr James's Powder, six grains of James's Powder being equivalent to eight of our Antimonial Powder. This is the form of the medicine most familiarly used as a febrifuge, in doses of five or six grains, repeated every four or five hours.

*Fourth*, TARTRAS ANTIMONII, Tartrate of Antimony, or rather TARTRATE of ANTIMONY and POTASS, is the Tartar Emetic of the old nomenclature. It is the combination of the metal with the tartaric acid, of which the metal is susceptible only when oxidated; it is therefore formed by boiling the Glass, Crocus, or other oxide of antimony, in a solution of supertartrite of potass, part of which continues mixed with the crystals, but

which can be regarded in no other sense than as diluting the antimonial salt; the tartrate of antimony is invariable in its power, is no way affected by the acidity of the stomach, is easily dissolved in water or in wine, and in one or other of those forms is usually administered in solution.—From one to three grains of tartrate of antimony prove emetic, sudorific, and antifebrile. The watery solution, in the proportion of one grain to the ounce of water, given every ten minutes in half ounce doses, excites vomiting and perspiration; and, followed by an opiate, often puts a period to Ephemera, or to continued fever. The solution of tartrate of antimony in wine, under the title of *Vinum Tartratis Antimonii*, holds twenty-four grains of tartrate of antimony dissolved in the pound of wine. An ounce of it is given for an emetic dose; and as a diaphoretic, from one to two or four drachms, in some opiate, or carminative draught. It must be remembered, that the tartrate of antimony is affected even by vegetable infusions, is decomposed by time, and will not keep.

——*Sulphas Zinci*, the Sulphate of Zinc, White Vitriol, is more used for various other purposes than as an emetic; but wherever, on suspicion of poison having been swallowed, or from any other cause, we would have the stomach quickly emptied, we give a scruple of *sulphas zinci* dissolved in water.

#### OF PURGATIVES.

NEXT to those sedative and narcotic medicines, by which we regulate the sensibilities and internal action of the animal machine, before them perhaps as a means of curing disease, we should arrange this most important class, by which we regulate the motions of

the bowels, and the secretions from their surfaces and glands. The right choice and use of purgative medicines, requires both science and experience. I would not be curious or pedantic in any arrangement of this or of any class of medicines; yet a few obvious and practical distinctions should be marked out, with the view of arranging the individuals of this class, before we proceed to enumerate their peculiar qualities and uses.

Reflecting on the various uses of purgatives, we recollect in general, that our purpose is either, *1st*, to empty the bowels, and at the same time allay excessive vascular action, such as accompanies inflammatory disease; or, *2d*, to procure a profuse secretion from the surface of the bowels, and a continued evacuation; or, *3d*, to force such obstructions of the bowels as threaten life; or, *4th*, to support, by a gentle excitement, a regular course of the aliment through the bowels, and a gentle increase of the secretion, so as to enliven the actions of the alimentary canal, and lighten those of the vascular and absorbent systems.

*1st.*

SUPERTARTRAS POTASSÆ,.....	Cream of Tartar;
TARTRAS POTASSÆ ET SODÆ,....	Rochelle Salt;
TARTRAS POTASSÆ, .....	Soluble Tartar;
PHOSPHAS SODÆ,.....	Phosphate of Soda;
SULPHAS SODÆ, .....	Glauber's Salt;
SULPHAS POTASSÆ, .....	Vitriolated Tartar;
SULPHAS MAGNESIÆ,.....	Epsom Salt, or Bitter Purging Salt;

Are the choicest of the saline or sedative purges, which, though we use them on all occasions where purging is

required, are more appropriate to febrile, inflammatory, and eruptive disease.

## 2d.

SUBMURIAS HYDRARGYRI,.....Calomel ;  
 CONVULVULUS JALAPA RADIX,....Jalap ;  
 ALŒE SOCOTORINA SUCCUS,.....Aloes ;  
 CASSIÆ SENNÆ FOLIA,.....Senna Leaves ;  
 RHÆI PALMATI RADIX,.....Rhubarb ;  
 OLEUM RICINI,.....Castor Oil ;

Are the more irritating purges, chiefly resinous, by which we purge quickly, excite a profuse secretion, and procure watery stools in consequence of such increased secretion from the surfaces of the intestines.

## 3d.

STALAGMITIS CAMBOGIOIDES,.....Gum Gamboge ;  
 CUCUMIS COLOCYNTHIS,.....Bitter-Apple ;  
 CONVULVULUS SCAMMŒNIA,.....Scammony ;  
 MOMORDICA ELATERIUM,.....Wild Cucumber ;  
 HELLEBORUS NIGER,.....Hellebore ;

Are the more violent drastic, or hydragogue purges; those by which we excite profuse secretion and absorption; those, by an admixture of which, we quicken the effect of other less powerful purges; and they are especially those, by which we expect to overcome obstruction from extreme torpor, and by which, though that is not at all times prudent, we endeavour to force any mechanical and fixed obstacle to the course of the aliment.

## 4th.

CASSIA FISTULARIS,.....the Pods of Cassia ;  
 FRAXINUS ORNUS SUCCUS,.....Manna ;  
 MAGNESIA ;  
 SEMINUM RICINI COMMUNIS OLEUM, Castor Oil ;  
 SULPHUR ;  
 SUPER-SULPHAS POTASSÆ,.....Pollychrest Salt ;

Are the milder and more gentle purges, called **Eccopro-**  
**tic** or **Laxative**, which we use in a familiar way, for  
 maintaining the regular course of the aliment, and sup-  
 porting the secretion from the internal surface of the  
 intestines.

The natural and healthful state of the bowels, is that  
 due degree of irritability, that uninterrupted but un-  
 ceasing action, by which, without our consciousness,  
 the remains of our food are separated and discharg-  
 ed daily. When the bowels are irritated, our whole  
 frame is disordered, just as the rising of the pulse pro-  
 duces indisposition in the whole system. We see the  
 food of one day discharged on the following morning ;  
 we know that the natural revolution of the intestines is  
 once in twenty-four hours ; we find spinage, turnip,  
 bark, or any other laxative food or medicine, returned  
 in twelve hours ; we find a laxative aloetic pill operating  
 in twelve hours ; a purging potion or pill, senna, or com-  
 pound powder of jalap, operating in two hours ; but  
 often indigestible or offensive things are hurried through  
 the whole tract of intestines in an hour. I have seen  
 those to whom Peruvian bark was offensive, and whose  
 bowels were empty when a large dose was given, pass  
 the bark with a rapid but not painful action of the  
 bowels, in less than an hour.

The condition of the bowels, both in respect to irritability and capacity, varies in every period of life. In children, the intestines are short and irritable; thence Diarrhœa is the natural indisposition of children, and perhaps the most fatal disease of infancy.—In youth, the intestines are still irritable, diarrhœa a frequent disorder, and Ileus, Intus-susceptio, and other dangerous forms of inflammation and obstruction, are frequent.—In those somewhat advanced in life, from luxury and indulgence in men, in women from frequent pregnancy, the alimentary canal is elongated, the diameter and capacity of the intestines increased, the mesentery and the colon loaded with fat, and languor prevails in the actions of the bowels: In this period of life, and from those causes, intumescence of the abdomen, indigestion, flatulence, and colic, are the prevailing diseases.

This change in the condition of the bowels is one cause of the decline of the whole system. A tumid abdomen, whether in a child or in an adult, is an unfavourable sign of health, or a mark of declining years. The abdominal congestion of rachitic children, indicates a degree of that slight paralysis which arises from compression of the spinal marrow. The flatulent abdomen, and constitutional constipation, of those advanced in life, is a consequence of the lessened irritability of the nervous system, as distinctly as imperfect vision is from obtuseness in the optic nerve: The bowels are always paralysed in hæmiplegia and palsy, and are not to be moved by the most irritating purges, or the sharpest glysters, such as we prescribe when a man, being struck with apoplexy, lies in a state of torpor.

Always when the bowels are torpid, the stomach is flatulent, the colon distended, and the appetite and health ruined; and the progress of this change it is

very interesting to observe. When the fæces first pass down from the small into the great intestine, they are thin and yellow; but being detained some time in the great intestine, the morning-stool is firm and dark-coloured: if a second stool follow, it is yellow and thin, and has the form of diarrhoea: if the morning-stool be postponed, the same fæces passed in the evening are black, hard, and fætid: if still longer delayed, viz. to a second day, the stomach is flatulent, the bowels distended, there is a threatening of diarrhoea, and the appetite is gone. If, instead of habitual costiveness from languor, the bowels are mechanically obstructed, from stricture of the rectum for example, the grosser fæces being prevented from passing, and only the thinner permitted to flow, flatulence is still the most conspicuous part of the disorder, with a languid appetite, a sallow visage, and declining health: These are the inseparable signs of simple constriction of the rectum; for though there is neither pain, ulceration, nor any kind of suffering, the patient is exhausted, and dies.

It is to be recollected, that fæces consist not merely of digested food, bile, and pancreatic and gastric juices, but of a profuse secretion from all the internal surface of the intestines. The abdomen of a new-born infant is very tumid, its intestines greatly distended, and this although the child has never swallowed food; and there is, for several days after birth, while yet it has neither swallowed food nor milk, a profuse evacuation of what is named Mæconium. In those who have suffered abscess and bursting of the intestine, though the fæces passing along the upper parts of the canal are all poured out from the fistula at the groin, the patient has, notwithstanding, large stools, and somewhat solid, generated merely by the secretions from the inner surface of the

intestines; and such stools pass once a fortnight, or once a month, according to circumstances.

This secretion is essential to the natural condition of the intestines: It may be excited: The operation of purges is not merely that of irritating their muscular fibres, so as to hurry along indigested food and fæces thinner a little only in consequence of being speedily discharged; but that of exciting, at the same time, a profuse secretion from the glands, and a serous exudation from exhalent vessels on the surface of the intestines, so as to produce a succession of thin and watery stools, not diluted by drink, and yet much exceeding the quantity of fluids swallowed. Thence it must be inferred, that purges are medicinal, not merely by emptying the intestinal canal, but by exciting an increased secretion: Frequent purging and spare living rather strengthen than weaken the body, and maintain health, by preserving the appetite keen, and the absorption quick; by saving the system from feelings of oppression and languor, and the abdominal viscera from over-distension and undue growth. It is thus that mineral waters, *i. e.* diluted saline purges, long continued, in circumstances favourable (*viz.* at watering-places of public resort) to exercise, and elevation of spirits, have such power in restoring and preserving health.

The right use of purges, and the various forms and combinations of purging medicines, is one of the most important parts of our science; but it is unfortunately a part of the science, so founded in experience and observation, that it cannot well be taught in words. The very FORM in which purges are administered, the degree in which they are diluted, and their various combinations, affect their operation.

*First*,——PURGING POWDERS, as powders of jalap, submuriate of mercury, supertartrite of potass,



rhubarb, senna, solutions of neutral salts: PURGING POTIONS, also, as tinctures of jalap, aloes, senna, or hellebore, affect the upper parts of the alimentary canal, operate quickly, and sweep along all the fœculent contents of the duodenum, and ileum, from the stomach downwards; but with this disadvantage, that in sickness, and in delicate or irritable conditions of the stomach, such potions and powders are hardly received before they are rejected. These are purges used only of course in a healthy condition of the alimentary canal; they are used merely as purges, and with the purpose of exciting a profuse evacuation from the glands and exhalent vessels of the surfaces of the bowels.

*Second*,——PILLS, though formed of the same medicines, viz. calomel, jalap, and aloes, are not so quickly diffused; are not so apt to sicken; continue entire until they reach the lower parts of the alimentary canal; are more easily retained; and are hence more naturally administered in the mechanical obstructions, as incarcerated hernia, volvulus, and intus-susceptio: and it should be added, that pills long kept are often so hardened, as to pass like fruit-stones, with little effect.

*Third*,——GLYSTERS, which are used on the most trivial occasions, to procure a partial evacuation and relief, are also of the utmost importance in colic, ileus, and other desperate disorders; for it is our custom, in circumstances of danger, to operate from above downwards, using all these forms of medicine successively; prescribing purging pills in the morning, as calomel, with aloes or scammony; a purging draught of tincture of jalap, or infusion of senna, in the afternoon; and towards evening, a sharp stimulating glyster, repeating, according to exigency, the pills or the draught.

There are certain circumstances, and those often the most urgent, in which violent purges have none but the

worst effect. When the obstruction is mechanical, as in Hernia, or Intus-susceptio, or in Ileus, inflammation and stricture have narrowed the diameter of the gut, it is extremely dangerous to force the obstruction by purges, much more by mechanical means, as mercury, leaden bullets, and other clumsy inventions of the old school. The thing to be dreaded, the disease which is mortal, is inflammation! The first steps to be taken are, to abate the irritability of the canal, by soothing medicines, by emollient glysters, external fomentations, and warm baths; to soothe the incited action by opiates; and while the patient is awakening from the deep sleep procured by baths and opium, then to urge anew the peristaltic motion of the intestines, by strong purges.

The next great object, after abating irritability and spasm, is to dilute the purges, so as to render their operation easy and effectual: For the purge which, taken without a due proportion of soup, broths, &c. to dilute and diffuse it over the inner surface of the bowels, will occasion much pain, and little purging, will, when aided by copious diluent draughts, operate powerfully, yet gently.

The object next in importance is, to adapt the prescription to the condition of the patient. In the young, vigorous, and healthy, when our object is only to procure loose stools, and a free secretion, we give bulky Saline purges much diluted, as phosphate of soda, or sulphate of magnesia.—Where the stomach is irritable, and there is a mechanical and dangerous obstruction of the bowels, we give Resinous purges, as scammony, aloes, and submurias hydrargyri in small doses, and in the form of pills, that they may pass down without decomposing the stomach.—In the feeble and valetudinary, in those of sickly and irritable constitutions, it is adviseable to give what are called warm purges, *i. e.* not salts in so-

lutions, but gum-resins in form of tinctures! Tinctures of aloes, rhubarb, jalap, melampodium, &c. Or if we prescribe powders, we order some essential oil to be mixed with the sugar, and calomel; or ginger, cinnamon, cayenne pepper, or aromatic powder, to be added to the aloes, or jalap.

In the bilious, or in the dropsical, when the stomach is irritable and sickly, and when our purpose is not merely to procure the usual increase of intestinal secretion, but to irritate the whole abdominal system; to excite and support the secretion and evacuation of bile; to evacuate the water of dropsy, by procuring profuse watery stools; to assist the absorption and the flow of urine, by helping the diuretics with drastic purges; we combine various drastic medicines, and concentrate them in the smallest possible compass; we give aloes and scammony; scammony, colocynth, and calomel; or elaterium and gamboge, in small pills, following such dose, when fortunately it passes downwards, with a cup of purging infusion, or a glass of tincture. In obstructed menstruation, we give chiefly aloes, and that almost invariably in form of pills, that the medicine may reach the rectum, where it should irritate: And we support the operation of the aloetics, by warm baths, and stimulant tinctures.

Thus we perceive, that besides skill in the choice and in the dose of the purging medicine, the result is varied by the very form in which it is given: It were as unskilful to give a large draught of cold and nauseating salts on a sickly stomach, as to give a dose of aloetic pills to one whose stomach is oppressed with bile and crapula, when our design was to sweep along all the contents of over-distended and paralysed bowels.

## FIRST CLASS.

**SUPERTARTRAS POTASSÆ**, cream of tartar, consisting of thirty-three parts of potass, and sixty-seven of tartaric acid, is advanced to the first rank as a pleasant purge; refreshing and cooling, peculiarly useful in phlegmasiæ, and in eruptive diseases. It is the most familiarly used, not merely as a cathartic, but as a sedative and diuretic, and is daily prescribed in conjunction with jalap, elaterium, and other resinous purges.—When given alone and as a purge, it is prescribed in doses of from half an ounce to an ounce, a drachm being given every hour dissolved in water, sweetened with sugar, and sometimes made pleasant by the addition of a little Madeira wine. Dissolved in whey, or mixed with honey, it is extremely pleasant; or given in electuary, made with confection of oranges, viz. marmalade, and diluted with syrup.

——**TARTRAS POTASSÆ ET SODÆ**, Rochelle salt, is far less pleasant than the supertartrate. It is a perfect neutral salt, well crystallized, very soluble, of a bitter taste, and not very nauseous. It is frequently prescribed in solution, along with a small proportion of manna, in exanthematic and inflammatory diseases; the dose is an ounce of the salt, with two drachms of manna, dissolved, or mixed rather, in six or eight of boiling water.

——**TARTRAS POTASSÆ**, the soluble tartar of the old pharmacopœias, differs only in the superfluous acid of the supertartrate being neutralized, by adding carbonate of potass instead of carbonate of soda, so as to produce a homogeneous neutral salt, very apt to be partially decomposed by the addition of vinegar, lemon-juice, or any vegetable acid. It is of a bitter unpleasant

taste. The dose is, half an ounce as a laxative, one ounce as a purge. It is in small doses aperient, and cooling, and often a weak solution is given, after the taking resinous purging pills, to promote and facilitate their operation.

——SULPHAS POTASSÆ, VITRIOLATED TARTAR of the old pharmacy. This is a neutral salt less deliquescent than the others, and more difficultly dissolved: it has the same bitter taste, is more nauseous than that just mentioned, and it is more used in doses of one drachm as a laxative, than in larger doses as a purge, for that requires a dose of four or five drachms. This also, dissolved in cinnamon-water, &c. is often prescribed in angina, erysipelas, scarlatina, and other inflammatory diseases, as a gentle and cooling purgative.

——SULPHAS SODÆ, GLAUBER'S SALT, has an intense, bitter, and very nauseous taste, but was notwithstanding the favourite, and almost the only purgative used in inflammatory diseases, till of late years superseded by the phosphate of soda.

——PHOSPHAS SODÆ, is another medicine for which the profession remain indebted to Dr Pearson. It is prepared by a complicated process, is of higher price than the other neutral salts, but is incomparably better, in being very little nauseous, hardly different in taste, when much diluted, from common salt. It is easily retained, even by those of a delicate stomach; and when diffused in a large basin of beef-tea, or mutton-broth, or even in water, is no way nauseous: given in the quantity of eight or ten drachms, is an excellent purge.

——SULPHAS MAGNESIÆ, or Epsom Salt, is magnesia neutralized with sulphuric acid. Of all the purging neutral salts, it is the last we should choose to prescribe, being intensely bitter; were it not, that it purges in small doses very easily, with little pain, and is even found, as in cholice and bilious disorders, to allay

pain. Two tea-spoonfuls, *i. e.* three or four drachms of the salt, dissolved in a large tumbler of cold water, procure one or two loose stools, while a third more proves an effectual and very easy purge.

#### SECOND CLASS.

WITH the resinous and powerful purges, I choose to join Calomel, as often given in combination with them.

———SUBMURIAS HYDRARGYRI, Calomel, is at once an effectual purge, and a powerful sedative; but its invaluable properties as a sedative, or in combination with narcotics, are not now in question, we speak of it only as a purge.—Calomel takes precedence of all other purges, wherever we wish to subdue inflammation in the bowels, as in the case of Ileus, the small intestines being inflamed, and the patient tossing with pain:—or when spasm is to be resolved, and colic pains allayed, as in disorders of the lower intestines:—when, in mechanical obstructions of the bowels, as in hernia, volvulus, or knotting of the intestines, from inflammatory adhesion, we need to convey the most effectual purgative, in the most compendious form:—when our intention is, to relieve acute inflammatory disease, as in cynanche stridula of children, or affection of the brain, as hydrocephalus, or inflammation of the viscera, as in hepatitis:—When our purpose is, in fever, or in bilious colic, to purge the alimentary canal of bile, this is an invaluable ingredient in any pill or powder: it is heavy, so that many grains of calomel may be conveyed in very small pills; it is tasteless, passes easily down, and in particular habits sits easy on the stomach.

Calomel may be given from doses of five grains, such as we give to a child, to fifteen, or even to a scruple, which we may prescribe for an adult. It is best given

rubbed down with a little sugar and cream of tartar, for a child:—For an adult, and in cases of imminent danger, it is given in larger doses, rubbed down with cream of tartar, sugar, or magnesia, and a few drops of some essential oil are mixed with the powder, to make it sit light on the stomach:—Or it is given, to augment its sedative power, in combination with a few grains of camphor; or, to prevent sickness, is mixed with aromatic powder.

When given alone in form of bolus, calomel is usually mixed with conserve of roses, and given in form of a soft bolus, that it may not pass, as calomel pills often do, with little effect. But calomel, powerful though it be, is usually reinforced by some purging draught, given two or three hours after the bolus, at such distance of time as not to provoke the stomach to reject it: Or it is given in combination with resinous purges, with a scruple of jalap, with four or five grains of gamboge, with eight or ten grains of aloes, or scammony, in soft and soluble pills; and such pills are again followed by a draught of senna infusion, or of tincture of jalap.—These slight notices will serve as the theory of the several forms in which calomel is prescribed; and it is still to be remembered, that as we confide much in the sedative powers of calomel, it will be often found prescribed in the most acute inflammatory diseases, along with opiates, and the warm bath, as antidotes to inflammation and spasm.

————CONVOLVULUS JALAPA, Jalap.—The root of a climbing plant, indigenous in Mexico; of a nauseous smell, and an acrid rather than bitter taste, leaving a painful sensation in the fauces long after it is swallowed.—Though unpleasant, and to some sickening, it is not strong tasted; and from its qualities, it is the purge most familiarly used, and most relied on. Given alone, in a dose of half a drachm, it proves a brisk purgative; combined, as

it usually is, with supertartrate of potass, less suffices. A drachm of the compound powder of jalap, contains two scruples of cream of tartar, and one of jalap; a drachm usually purges, but two may be very safely given.—It is often prescribed in combination with calomel, in the form of purging pills, which should always be made on the occasion, for they should be soft. In order to mitigate the irritating quality of jalap, it is triturated with sugar, cream of tartar, or some neutral salt, by which its particles are divided so as to diffuse the medicine, and make its operation effectual: This precaution should indeed be observed in regard to all the resinous purges.

Jalap is the best occasional purge; it moves the bowels instantly, it produces great secretion from the internal surface of the intestines, and profuse watery stools with but slight irritation, and it is the medicine we can longest continue to use, in order to support a constant discharge.

——ALOE SOCOTORINA, ALOES of the island of Socotra; an inspissated resinous extractive juice, brought from the East Indies, and from the coast of Africa, from the West Indies, and especially from the Cape of Good Hope. It is an intense disagreeable bitter, but not sickening; on the contrary, it is one of those bitters which, taken daily in small doses, is thought to repair the strength of the stomach.—Aloes, unlike jalap, has little power of augmenting the intestinal secretion; it produces no loose stools, it operates merely upon the rectum; it requires of course many hours, from ten to sixteen, for descending to that point, which it chiefly affects.—Given at night, it operates gently in the morning: given in a small dose, it merely opens the bowels, producing a lax stool, but no purging, and thence it is the basis of all the popular antibilious and stomachic pills: Given in a full dose, it powerfully irritates the rectum, and by exciting vascular action it inflames the



part, causes hæmorrhoidal intumescence of the verge of the rectum, and by sympathy affects the uterine system; whence it constitutes the chief medicine in all those pills, or tinctures, which are advertised daily as efficacious in Female Complaints. It is of course a medicine more suited to cold pale phlegmatic constitutions, and those advanced in life, and subject to stomach-complaints, than to the young and sanguine who are subject to inflammations.

This medicine is too unpleasant, too intensely bitter, too druggish in its taste, to be easily taken in powder: It is prescribed chiefly in the form of pills, combined with calomel, scammony, gamboge, colocynth, and other drastic purges, with bitters and aromatics in stomach complaints; or finally, in the form of tincture. For all the purposes of active practice, viz. procuring watery secretion, profuse evacuations, and forcing obstructions, as in hernia, &c. jalap is the preferable medicine. But as a laxative, stomachic, antibilious purge, as a constant stimulus to weak intestines, as a habitual corrector of costiveness, aloes is the best we know of. The dose is from five to fifteen grains, given at once or at intervals.

———SENNÆ, CASSIÆ SENNÆ FOLIA, Senna Leaves, are annuals growing in Nubia, and Upper Egypt, brought to Alexandria, and imported thence, or from the Levant: though not intensely bitter, it yet is bitter, nauseous, and acrid: it occasions griping, if not joined with aromatics, and much diluted: it is a sharp purgative, but is used less for any particular purpose, than to scour off other medicines, and as a purge for children. It is seldom given in powder, a drachm of which proves purgative, unless in the form of electuary. Senna, I may almost say, is only used in form of tincture, or infusion: The infusion is best made, by

pouring ten ounces of boiling water upon two drachms or more of the leaves, allowing the infusion to remain by the fire for an hour. A cupful, four or five ounces, of this is given to a child or adult, after a dose of calomel, jalap, rhubarb, and cream of tartar, &c. to quicken its operation. To such infusion, a few coriander seeds, a little ginger, or cassia, and often two drachms of cream of tartar, with a little syrup, or sugar, are added to the dose.

———**RHUBARB, RHEI PALMATI RADIX**, is of a subacid, bitterish, and somewhat astringent taste; nauseous, yet seldom sickening: It is a safe and gentle purgative: a scruple or half a drachm is required to serve as a cathartic: and as this is a bulky dose of a bitter and unpleasant drug, it is lessened by combining with a scruple of powdered rhubarb, six or eight grains of calomel; or a smaller purging-pill or bolus of rhubarb is given, reinforced by a cup of senna infusion, with the addition of a few grains of calomel, or an equal proportion of cream of tartar. It is found to be an excellent anthelmintic, and no medicine is more commonly used for children, to purge off any bitter anthelmintic powder, as the *semen santonica*; it is a purge so mild and gentle, that it, more than any other, combined with *magnesia*, is prescribed for children.

Rhubarb is almost in as much request as a stomachic. A few grains taken in the morning daily before breakfast, and repeated at mid-day; or a little of the tincture, which, being made with spirits, can only be taken as a stomachic, and not in such quantity as to purge,—are the usual prescriptions.

———**OLEUM RICINI**, Castor Oil, is the oil expressed from the seeds of the *Palma Christi*, a plant not absolutely peculiar to Africa or the East, but cultivated in the West Indies, and growing also in the southern

climates of Europe. The seeds swallowed entire, or a little bruised, prove strongly purgative. The oil has a rancid, bitterish, and somewhat acrid taste, and yet the finest is very little offensive: given in the dose of half an ounce, it operates as a gentle laxative; an ounce proves purgative. It may be given floating on a glass of cold water, when it glides over unperceived; or on a cup of coffee; or mixed with sugar, mucilage, syrup, and distilled waters, in the form of emulsion draught. It is so mild, gentle, and unoffending to the bowels, that this purge alone is unexceptionable in cases of Enteritis, and Inflammations of the stomach or bowels.

#### THIRD CLASS,—DRASTIC PURGES.

——GAMBOGE is the gummy, resinous juice, exuding from incisions in the branches of a tree indigenous in the East Indies, especially in the kingdom of Siam. It is of a strong opaque yellow colour, and is used in washed drawings, as a paint. It is, when dissolved in water, a milky-like juice, almost insipid, of a sweetish and slightly bitter taste, but after a little it is found intolerably acrid in the throat and fauces: it may be ranked among the poisons, from its extreme acrimony. Given in a large dose, it excites vomiting and purging, with tormina in the bowels; the best antidote is alkali and opium. Gamboge is seldom used alone, but chiefly with the intention of quickening the operation of less acrid purges, and as a vermifuge; for it is particularly destructive to worms, especially to the *Tænia* and *Cucurbitini*.

Gamboge, when given as a purge, is to be triturated with cream of tartar, and combined with calomel or jalap; it is particularly esteemed as a hydragogue in dropsies, the dose being from three to five grains, rubbed down with ten grains of sugar, and

fifteen of cream of tartar; or, a grain of gamboge may be added to each purging-pill of calomel and aloes; or, three grains of gamboge may be rubbed down with half a drachm of the compound powder of jalap.

———COLOQUINTIDA, Cucumis Colocynthis, is the medullary juice, extremely bitter and acrimonious, of a kind of gourd growing in Turkey; and its purgative powers are so acrimonious and drastic, that by many it is regarded as little better than a poison. This, given in great doses, with the design of forcing abortion, has often proved fatal to pregnant women, the flooding and miscarriage being attended with fatal tormina of the bowels, bloody stools, and convulsions. It is seldom directly used or alone, but is mixed, like gamboge, in a small proportion in purging-pills of other ingredients.

———SCAMMONY, Convolvulus Scammonia, is the concrete milky juice of a climbing plant, indigenous in Syria, and brought home to us from Aleppo and Smyrna; its smell is nauseous, its taste acrid and bitter. This also is used more frequently to sharpen the qualities of less active drugs: It is not, as once reported, unsafe when given alone, and of course in a full dose. Though it never is a gentle nor trivial, it is a harmless and most effectual purge; it is given after being well triturated with sugar, in a few ounces of almond emulsion; or in powder, triturated with cream of tartar and sugar. The dose, in either of these forms, is six, eight, or ten grains; more can hardly be given safely.

———ELATERIUM, Wild Cucumber. The pulp of the cucumber is a very drastic purge, less frequently used than any, but reputed a very powerful hydragogue, and used accordingly in dropsies, but it is very cautiously and sparingly used. It is a drug, with the virtues of which I am little acquainted.

——HELLEBORUS NIGER, Black Hellebore, the Melampodium of the ancients, is a root of a bitterish taste, and especially nauseous and acrid, in so much as to affect the tongue with a sort of stupor and soreness. The ancients dealt largely in hellebore, especially in diseases of the head; and we also prescribe it chiefly in mania, and still more properly in melancholia. In dropsy it procures a rapid succession of watery stools; in amenorrhæa, I find the tincture of hellebore peculiarly serviceable; and as a stomachic, it is in many cases a very useful medicine, as a warm and stimulant drug.

FOURTH CLASS,—LAXATIVES,

Are appropriated more to the valetudinary state, than to the cure of disease; few of them are used as purges.

——CASSIA, the pods of a tree growing in perfection in the East Indies, and of a coarser kind in Jamaica, affords this sweet, and not unpleasant laxative: It is a black, liquorice-like juice, secreted betwixt thin water-like diaphragms in the cane-like pod of the cassia, whence it is named Cassia Fistularis. The juice, melted in warm water from the pod, and then evaporated to a thickish consistence, constitutes the basis of our Lenitive Electuary, as it is called, in which the gentle purgative powers of the Cassia Fistularis, are sharpened by the more drastic qualities of the Cassia Senna. Cassia itself is too mild to serve as a purgative, unless given in the quantity of several ounces, a bulky morsel, which would more resemble a meal than a dose of medicine.

——MANNA, Fraxini Orni, Succus, is another laxative seldom prescribed alone, except to very infants. It is a clear saccharine juice, exuding from this tree in Italy during the hot season, from which it is scraped

coarsely off, carrying often, with the saccharine exudation, fragments of the bark, and other impurities. An additional quantity of the exudation is gathered from incisions made in the bark: It is said to be counterfeited by sugar and honey, with a little spice of scammony. It is rarely used but as a slight aid to other, and chiefly to saline purges, two drachms being added to an eight-ounce solution of any of the neutral salts. But with children, weak as it is, it proves purgative; and a solution of manna is easily taken by an infant, and is with nurses a favourite medicine for purging off the meconium, or fæces accumulated in the bowels before birth, and in the yellow gum or bile of new-born children.

———MAGNESIA is also a medicine of too little power to move the bowels, unless when, combining with accidental acidity of the stomach or bowels, it forms an earthy salt, and too weak at the best to prove more than laxative. In adults, it serves no other use but to correct acid, as in heartburn; but in children, where acidity of the stomach always prevails, magnesia is never misplaced, and always purges. A little magnesia and rhubarb, therefore, in the proportion of three parts of magnesia to one of rhubarb, is the favourite medicine of mothers and nurses.

———SULPHUR is an admirable laxative, though it requires a large dose to operate as a purge. Two drachms of sulphur, mixed with a little honey, or, after being mixed with honey, diffused in milk, and taken early in the morning, is an excellent, mild, and most efficacious laxative. Sulphur, taken frequently, taints the whole system with its smell; conjoined with cream of tartar, in the proportion of one part of the former to two of the latter, it is particularly enjoined to patients afflicted with piles,—a proof sufficient of its being a gentle and yet effectual laxative.

———**SUPER-SULPHAS POTASSÆ**, Pollychrest Salt, is a salt, the eulogium of which was intimated in its name; a salt, it was named by the older chemists, of **INNUMERABLE VIRTUES**. With the less enthusiastic moderns, it has descended to the humble condition of a neutral salt, with a slight super-saturation of sulphuric acid. It is more used as a laxative, an alterant, or a species of artificial mineral water, than as a purge. The usual dose is a drachm, or two drachms, dissolved in a large glass of water, and taken in the morning. Though unpleasant, and almost nauseous to the taste, it is mild and gentle in its operation, and still with myself and many others, almost as favourite a medicine as in those days when it was named, *par excellence*, Pollychrest Salt.

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To complete this catalogue of purging medicines, and instruct the student in all their most useful forms, it is necessary to enumerate now a few compounds, viz. Pills, Infusions, Electuaries, and Powders, which owe their virtues to judicious combinations of those simple drugs. This is a necessary supplement.

#### OF PURGING PILLS.

———**PILULÆ ALOETICÆ** are formed of aloes beaten up into a mass with soft soap; and sometimes, as in the receipt of the Dublin College, with an equal proportion of gentian, and a few drachms of ginger to the ounce of the mass. Those medicines warm the stomach, and make the aloetic pill a fitter laxative for cold and aged constitutions, affected with hypochondriacal complaints, or with dyspepsia. These pills, given two at night,

and three in the morning, prove sufficiently laxative; sometimes the two of the evening suffice. In a larger dose, aloetic pills are useful in amenorrhæa.

To give aloetic pills effect as purgative, we mix with three parts of this mass, one part of gamboge, and divide the whole into pills,—the *PILULÆ ALOES, et STAGMITIDIS GAMBOGIOIDES*,—a very useful, but sometimes a sickening dose.

———*PILULÆ ALOES cum COLOCYNTHIDE*, are powerful purging pills, little beholden to the aloes for their virtues, being compounded chiefly of much more active drugs, viz. Scammony and Colocynth, which are the chief ingredients: The proportions are equal parts of Socotorine aloes and scammony, with half a part of colocynth, and a small proportion of sulphate of potass, with which the aloes and scammony are diligently triturated before they are formed into a mass; and this is done with a small proportion of oil of cloves, and with mucilage of gum-arabic. The mass being divided into five-grain pills, two serve as an effectual laxative, six as a smart purge, containing ten grains of aloes, ten of scammony, and five of colocynth.

———*PILULÆ RHÆI COMPOSITÆ*, the Compound Rhubarb Pill, is not expected to operate as a purge; it is scarcely laxative; it is chiefly useful as a stomachic. The mass is composed of rhubarb and aloes, in nearly equal parts, with a third part of myrrh, and a small proportion of oil of peppermint. Compound rhubarb pills warm the stomach, improve digestion, prevent flatulence or pain, and gently move the bowels.

———*PURGING PILLS*, such as are formed of Calomel and Jalap, cannot well be preserved moist; and even aloetic pills we are at pains to preserve from a degree of hardness which would make them ineffectual, by forming the mass with soap: but purging compound



powders are easily preserved, and many of those are kept in the shop.

OF PURGING POWDERS.

———**PULVIS JALAPÆ COMPOSITUS**, is the Powder of Jalap, mixed with two-thirds of the super-tartrate of potass; the trituration of the jalap with the cream of tartar, grinds and divides the resinous particles, and makes the operation gentle. We use this powder with children, as with adults, more familiarly than any other purge; from two scruples to a drachm, or a drachm and a half, constitute a purgative dose, mild and gentle in its operation.

A similar purging powder is often used, of rhubarb and cream of tartar, in the same proportions; but a drachm of it is required as a laxative, and more than a drachm and a half for a purge.

———**ALOES IN POWDER** is mixed with Canella Alba, in the proportion of one part of the spice to eight parts of the aloes; from twelve to fifteen grains of the powder suffice for a dose. It is mixed, too, with Guaiac, (the *Pulvis Aloeticus cum Guaiaco*). It is mixed with any thing that may have a chance of subduing the harshness and intense bitter of the medicine: Still it savours of horse-drugs, and is rarely prescribed. Aloes is mixed with gentian, myrrh, and sulphate of iron, in the *Pulvis Aloeticus cum Ferro*, which, though a precious combination of aromatic and stomachic bitters with iron, and though truly a useful emmenagogue, is yet a medicine better adapted to the hospital than to private practice.

All the more powerful resinous purges are often combined in one powder,—jalap, scammony, and aloes.

———**PULVIS SCAMMONIÆ COMPOSITUS**, is scam-

mony and extract of jalap in equal proportions, with a fourth of powdered ginger; and in some Pharmacopœias, a small proportion of neutral salt is interposed, with which the resin is triturated, and divided. Ten or twelve grains of this powder, taken in a tea-spoonful of marmalade or jelly, operates as a drastic purge.

———**PULVIS SCAMMONIÆ cum Aloes**, is a powder of equal or nearly equal parts of aloes, jalap, and scammony, with a small proportion of ginger, to excite and warm the stomach, and save the patient from sickness: Eight or ten grains of this powder operate as a purge; but if ineffectual, lesser additional doses may be continued from hour to hour.

Scammony is often triturated with submurias hydrargyri and sugar, forming the **PULVIS SCAMMONIÆ cum SUBMURIATE HYDRARGYRI**, in the proportion of two grains of calomel to four of scammony: it is a simple and most effectual formula, such as may be given in doses of eight or ten grains with particular propriety, when in dropsy of the abdomen, our purpose is to excite the circulation of the abdominal viscera, and by irritating, to procure a rapid succession of thin stools, and to assist diuretics, as the *Digitalis*.

Scammony is also prescribed in combination with senna, and both mixed and triturated with supertartrate of potass. This makes a valuable purging powder, too little used; the proportions are two parts of cream of tartar, two of powdered senna leaves, and one of scammony, with a little ginger. This is the **PULVIS SENNÆ COMPOSITUS**.

#### OF PURGING INFUSIONS.

———**SENNÆ** is the medicine most commonly used as a purgative infusion: Senna leaves macerated

for an hour in boiling water, the jug or tea-pot placed by the side of the fire, yield their purgative quality; and senna thus infused with a small proportion of ginger, or with a few drachms of cream of tartar, or with tamarinds and coriander seeds, makes indeed an elegant infusion. A small tea-cupful of any of these proves a sufficient dose, is very little offensive, nay, almost pleasant to the taste, and light on the stomach.

——RHUBARB. A strong infusion of rhubarb, in the proportion of twelve drachms of grossly-powdered rhubarb to six ounces of boiling water, with the addition, in order to preserve it, of half an ounce or an ounce of alcohol, or of spirituous cinnamon water, is an excellent purgative. This is indeed the best preparation of rhubarb,—half an ounce of such infusion, which is at the same time a stomachic medicine, proving a very effectual purgative.

#### OF PURGATIVE TINCTURES.

Tinctures are neither the most pleasing, nor the most efficacious forms of medicine. There are few disorders in which we should chuse to give our patient an ounce or two of spirits, whether raw or medicated, at a draught. Tinctures, thence, are never used in inflammatory disease, an exclusion which takes away more than half their value. Tinctures are useful only when we would not regret the stimulant effect of the alcohol, as in stomach complaints, in dyspeptic and hypochondriacal disorders, in amenorrhæa, and in long-continued complaints of the bowels, as in chronic diarrhœa, and dysentery: but rarely or never can they be useful in ileus, volvulus, hernia, or any desperate or sudden disease: and there are very few indeed of the tinctures, hardly

any except those of jalap and of hellebore, which can be prescribed as purges.

———TINCTURA CONVULVULUS JALAPÆ, is a purging tincture, almost tasteless, no way offensive, gentle, yet effectual in its operation, and equally safe for a child in the dose of two or three drachms, as for an adult in the dose of one ounce, or an ounce and a half. It is exceedingly useful in practice, since it may be prescribed as a cathartic, mixed with any distilled water, and with syrup. The addition of a small proportion of this tincture, with any camphorated saline cordial, or opiate julep, preserves the bowels open, without affecting the virtues of the principal medicine, or even its taste.

Akin to this tincture of jalap, is the COMPOUND TINCTURE OF SENNA. When the purgative virtue of senna is to be sharpened by that of the jalap, the proportion of the medicines is, two parts of senna to one of jalap, with a small proportion of coriander-seeds, as in the infusion of senna digested with alcohol. The tincture of senna is useful, like that of jalap, either alone as a purge, or as a qualifying ingredient in any stomachic or cordial jalap; and like it, the full dose is from one to two ounces: it was named for excellence, ELIXIR SALUTIS.

———TINCTURE OF SENNA alone, and unaided by the jalap, is still useful, and when jalap is known to sicken the patient, will be preferred. The senna being tasteless, the addition of carraway and cardamom seeds, and of stoned raisins, makes a tincture very cordial, and not unpleasant, which may be given in doses of one or of two ounces. These purging tinctures are particularly precious, not as purges, but as laxatives in dyspepsia, and chronic complaints of the bowels, especially when mixed in prescription with aromatic and bitter tinctures.

———ALOES, RHUBARB, and HELLEBORE, are cathartics of a very different quality from these ; and while jalap and senna are useful as evacuants, and in inflammatory diseases, these bitter and astringent purgatives are more properly laxative stomachics, and tincture is perhaps the most favourable and efficacious form, in which such medicines can be given ; unless when they are used merely as laxatives or as emmenagogues, when they should certainly be given in form of pills. The simple tincture of aloes has all the combination that can render the medicine warm, cordial, and, so far as its taste will allow, pleasing to the stomach. The TINCTURA ALOES, is merely the powdered aloes digested in spirits, along with a large proportion of Spanish juice, or extract of liquorice, to assist in suspending the drug, and to give it a less unpleasant taste. Of this tincture an ounce serves for a dose, or when used as a stomachic, two or three tea-spoonfuls, in a glass of water, morning and mid-day.

———TINCTURA ALOES CUM MYRRHA, is a compound tincture, formed by pouring tincture of myrrh upon grossly pounded aloes and saffron, so as to impregnate it in the proportion of one part of aloes to eight of the tincture. This is a strong tincture ; half an ounce of this is equivalent to an ounce of the simple tincture : It is the ELIXIR PROPRIETATIS of Paracelsus, and is, by the combination with myrrh, better adapted to the purposes of a bitter stomachic, and gently laxative tincture.

———TINCTURA RHÆI PALMATI ; of this tincture there are four modifications ; *First*, SIMPLE TINCTURE OF RHUBARB, an infusion of rhubarb in diluted alcohol, rendered more cordial and warm by the addition of cardamom seeds and saffron.

*Second*, TINCTURE OF RHUBARB WITH ALOES, the ELIXIR SACRUM of the older pharmacopœias ; a tincture

in which the rhubarb and aloes, with the addition of cardamom seeds, are used in nearly equal proportions.

*Third*, COMPOUND TINCTURE OF RHUBARB, an infusion in proof-spirits, warmed and made more acceptable to both palate and stomach, by a small proportion of ginger and sliced liquorice-root.

*Fourth*, TINCTURE OF RHUBARB WITH GENTIAN, the TINCTURA RHÆI AMARA, an infusion in diluted alcohol, of four parts of rhubarb and one of gentian.— These tinctures are selected according to the occasion; as a laxative, the simple tincture will be preferred; as a purge, the tincture of rhubarb with ALOES; but the bitter tincture, the tincture amara, and the compound tincture, viz. with ginger, are precious chiefly as stomachic medicines, or for restoring the tone of the bowels, in protracted diarrhoea or dysentery; and of each of those tinctures, less than half an ounce, given daily, serves as a stomachic; an ounce, or an ounce and a half, are required as a purge.

To those warm and tonic purges, we add one more, in my opinion, of no slight efficacy, the TINCTURA MELAMPODII vel HELLEBORI NIGRI, tincture of black hellebore, which is slightly cathartic, very powerfully stimulant, and an excellent addition to any of those tinctures, especially when they are prescribed with the design of promoting menstruation.

The same tinctures made with wine, or in other terms, with a lesser portion of diluted spirit, differ little from those except in strength. The VINUM ALOETICUM, or tinctura sacra, as it is named, is an infusion of aloes in wine. The VINUM RHÆI PALMATI, or rhubarb wine, is an infusion of rhubarb seasoned with canella alba, in Spanish wine. These are useful, seeing that they may be given when the spirituous tinctures would be less

proper; but to have even a slight effect, more than one ounce, usually two ounces, are required.

#### PURGING ELECTUARIES.

Electuaries are to many a more acceptable form of medicine, than pills or powders; they are what may, with less impropriety than any other, be termed elegant preparations, if so foolish a term is to be retained, in such a strong-scented profession as that of pharmacy. We had best perhaps leave such pretensions to the confectioner.

———**ELECTUARIUM CASSIÆ FISTULARIS**, is the pulp of cassia, mixed up with a fifth of tamarinds and of manna, diluted to the consistence of an electuary with syrup of roses. A few tea-spoonfuls, half an ounce of this electuary, proves gently laxative; and the addition of a few grains of jalap, gamboge, or scammony, of compound powder of jalap, or of supertartrite of potass, makes it an effectual purge, of which it may be then said to be the vehicle.

———**ELECTUARIUM CASSIÆ SENNÆ**, is a much more complicated, strong tasted, and druggish electuary. It is the lenitive electuary of the shops; it contains, besides the senna which is the active medicine, a variety of luscious sweet pulps, as pulp of tamarinds, prunes, figs, and cassia, sugar, liquorice, and coriander seeds. Clumsy, and coarse, and druggish, as the prescription is, we could better spare a more **ELEGANT** one, for it is extremely useful, and to many not unpleasant. One or two tea-spoonfuls taken over night, or in the morning, proves gently laxative; and when we choose to sharpen the dose, by adding to it a scruple or two scruples of compound powder of jalap, or a drachm or two of cream of tartar, it forms a sure and not unpleasant purge.

We have one more cathartic electuary, and it is a smart and powerful purgative, while these are in themselves merely laxative, Eccoprotic, as they are termed;—the Electuary of Scammony, *ELECTUARIUM SCAMMONII*.—Scammony, to sit on the stomach, or to be pleasant, requires to be supported by a strong compound of spices, and this electuary of scammony is expressly such: It is a composition of cloves, ginger, and oil of carraway, with the addition sometimes of syrup of roses; and this compound of spices being made, to one ounce of it is added an ounce and a half of scammony; a drachm and a half of the electuary conveys fifteen grains of scammony, the half of which dose will usually prove purgative.

#### GLYSTERS AND SUPPOSITORIES,

Are an important part of the apparatus by which we excite and empty the bowels; and besides their use in the more dangerous diseases of ileus and colic, they are peculiarly important in the cure of worms. The injection, I first think it right to notice, is one pertaining more properly to the class of sedatives, calculated rather to appease vascular action than to move the bowels; it is the *ACETOUS GLYSTER*, *CLYSTER ACETATUS*. This Glyster is compounded of the common decoction, *Decoctum Commune*, as it is termed, the decoction of chamomile flowers mixed with vinegar, in the proportion of three ounces of vinegar to half a pound of the decoction. A glyster thus compounded, or of honey, or sugar and water, with fresh vinegar, injected cold into the rectum, is of immediate effect. In ileus; for it at once reduces the inflammation and irritation of the bowels, and soon procures a stool: In the apoplectic paroxysm, such as is frequent in scenes of feasting, tumult, and debauchery, or in scenes of contention, and



in crowded assemblies: In the paroxysms of phrenitis also, and of mania; in hydrocephalus, and in an especial manner in those who have been suffocated by charcoal fumes, in pits or mines, and in those who are found in a state of apoplexy from intoxication; such a glyster should be given without delay, and repeated; it is often a means of saving life, by abating arterial action, and exciting the bowels.

But the glyster most familiarly used, the **GLYSTER COMMUNIS**, is merely designed to excite very slightly, and wash out the rectum. It is a solution of the muriate of soda, or sea salt, or of sulphate of soda, of common soda, or of common soap, dissolved in any fluid; half an ounce of the salt, or of the soap, being dissolved in less than a pound of fluid. The fluids most used are, gruel, decoction of chamomile or of althea, linseed-tea, or water, to which is usually added, two table-spoonfuls, an ounce, of oil. This is the injection commonly used in those who are merely costive, who are bed-rid, valetudinary, feeble, and who use it merely as a laxative; and it is given to promote the operation, when too long delayed, of any cathartic.

But when we are anxious, by exciting the rectum strongly, to co-operate with a drastic purge, given with the hopes of forcing any obstruction, as in volvulus, or hernia, we resort to strong infusions of the drastic purges, as senna, aloes, colocynth, turpentine, &c. The **CATHARTIC GLYSTER** is six ounces of infusion of senna, strengthened by dissolving in it an ounce of sulphate of magnesia, or of soda. The **ALOETIC GLYSTER** is compounded, by dissolving a drachm of socotorine aloes in yolk of egg, mixing it with a pint (a pound) of milk, broth, gruel, or common decoction.

———**GLYSTER OF COLOQUINTIDA**, is simply a solution of one drachm of extract of colocynth, in less

than a pint of tepid water; a glyster, which excites the bowels though in the torpor of palsy, and thence is often preferred as a stimulant, during the apoplectic paroxysm, or in those who, having the spine fractured, are paralytic of the lower extremities, and of course in the bladder and rectum.

——TURPENTINE GLYSTER is one very familiarly used, and very effectual for exciting the rectum in torpor of the bowels, and in palsy. It is best compounded by beating up half an ounce of turpentine with the yolk of an egg, adding an ounce of oil, and diffusing it then in a small basin, less than a pint, of gruel.

The most irritating of all our glysters, and the most to be depended upon, both as an anodyne and narcotic, appeasing spasm in the affected part of the bowels, and irritating all below the constricted part, is the tobacco glyster, which is formed by infusing less than two drachms (more is dangerous) of cut tobacco, in ten or twelve ounces of boiling water, which in a quarter of an hour is sufficiently strong, and which is found a better and safer antispasmodic than tobacco smoke, which is too irregular in its operation, and has thence fallen into disuse.

One form more of laxative medicine remains to be slightly noticed, viz. those cathartic syrups which are given to children, but which are too little efficacious to operate with the adult: Any syrup, even a little sugar and water, given in spoonfuls to a new-born infant, proves cathartic; and a solution of borax, or of sea-salt in water, given in the same way, vomits and purges as effectually as tartrite of antimony in an adult.

——SYRUP OF MANNA, is formed by boiling a pound of sugar and a pound of manna, in an English pint of water, with the addition of half an ounce of senna: Three or four tea-spoonfuls of this syrup suffice for

an infant : the same dose suffices of the *syrupus rhamni cathartici*, the syrup of buck-thorn, a syrup which is prepared, by boiling up the juice of the ripe buck-thorn berries with sugar, sometimes, as in the London receipt, with the addition of a small proportion of pimento and ginger, to oppose the acrimony of the medicine ; this being much less mild than the syrup of manna, and apt to occasion griping and sickness.

#### ANTHELMINTICS,

Or medicines for killing or expelling worms, naturally arrange themselves after cathartics, which are indeed the most effectual vermifuges. There can be little of theory either in the classing or describing these drugs ; it is all mere empiricism, or, in other terms, it is chance and experience only, not doctrine, that has instructed us in the use of vermifuges ; and the assumption of this department of practice by old women and charlatans, is less culpable, and every way more innocent, than when they profess to cure cancer or scrophula, and other incurable diseases.

There are yet obvious distinctions among anthelmintics, since we can distinctly perceive, *1st*, That some, especially the drastic and mercurial purges, hurry the insects through the intestines, the rapid action of the bowels weakening their adhesion : such are purges of gamboge, jalap, scammony, and *submurias hydrargyri*. *2dly*, That there are others which poison the worms, weaken their hold on the villi of the intestines, and force them, in order to escape the bitter or other poison, to coil themselves up ; and when thus intertwined in knots one with another, and imbedded in mucus, they give way to the motion of the intestines, and are carried along :

Such are fern, santonica, cabbage-bark, tanzy, garlic, camphor, &c. *3dly*, Other anthelmintics, again, as Fir, operate actually by their mechanical properties, disturbing and hurting the insects, till they are ready to quit their hold, which happens during the operation of a purge. *4thly*, Finally, those worms which reside in the lower intestine are quickly suffocated by the injection of olive oil simply, or are poisoned by injections of camphorated oil, garlic infusion, assafoetida, or lime-water and oil.

## LIST OF ANTHELMINTICS.

*1st, Bitter Vermifuge Medicines.*

Santonicum,	Murias Sodæ,
Tanacetum,	Allium Scœpa,
Polypodium Filix Mas,	Camphor,
Spigellia Marylandica,	Aqua Calcis.

## MECHANICAL VERMIFUGES.

Stanium,	Oleum Europæ.
Dolchicum, Cow-Itch,	

## ANTHELMINTIC PURGES.

Gambogia,	Veratrum, vel Helle-
Geoffrea,	borum Album.

———ARTEMISIA SANTONICA, I mention first, not as the most powerful, but as the most familiar prescription, called worm-seed, *par excellence*. This powder consists of the seeds and tops of an unknown shrub, brought to us from the Levant, of a whitish-brown colour, a bitter and acrid taste, and hardly any smell. It is chiefly used against lumbrici, and chiefly

in children ; and is given in the morning, on an empty stomach, in doses of ten, fifteen, or twenty grains, according to the age of the child ; to the adult we give one scruple. It is needless to speak of giving infusion of so intolerable a bitter to children, it can be efficaciously used only in powder, and the powder must be carefully involved in treacle, or in marmalade, jelly, honey, &c. or diffused in milk, and washed down with a little milk : And it is to be observed of this medicine, that it is so excellent a stomachic bitter, that where we have mistaken the disease, the medicine is useful ; and where there are worms, while these are poisoned and expelled, the bowels are strengthened.

Neither Santonica, nor any anthelmintic, is to be CONJOINED with purges, but ALTERNATED with them. Of the powder of santonica, a scruple, or half a drachm, is to be given every morning ; and every fifth or sixth morning, a smart purge of calomel, jalap, or gamboge.

It is not to be forgotten, that anthelmintics, like purges, should be combined one with another ; a half dose of santonica is not unfrequently combined with a half dose of pulvis stanni, or of valerian, or with a grain or two of sulphate of iron, or a few grains of muriate of ammonia ; and on the day of giving the purge, a sharp glyster of senna, or salt, is thrown in to aid its operation.

———POLYPODIUM FILIX MAS, MALE-FERN.———

The root of the male fern, a very common plant, runs horizontally with many fibrillæ, striking down from those leaders into the soil. It is the big horizontal root, that is cut short, dried, and preserved for use. It has no smell, little bitterness, a soft and mucilaginous taste ; so that with qualities so little obvious to sense, its efficacy in KILLING the tœnia (it is EXPELLED by the purges which are given along with the fern) is as surprising as it is unquestionable. The use of the male fern, has been in

various, and even remote ages, a secret, and a successful one; and being in the hands of quacks, its use has been resolved into a distinct and circumstantial process. The patient is to take of an electuary of the fern root, combined with pulvis stanni, jalap, and pollychrest salt, a tea-spoonful every two or three hours, for two days; and on the third day, he is to take a table-spoonful of castor oil, or a dose of jalap and scammony; and during his course, and until the worm is expelled, he is to live on spare diet, chiefly bread and soups.

The male fern was the medicine used by Madame Nouffer, one of the proprietors of the secret cure for the *Tœnia*. Two drachms of the powder of the dried root of fern were directed to be given very early in the morning; and two hours after, the patient had a bolus given him of six grains of calomel, with ten of gamboge, drinking after it a basin of green tea, repeating the draught, in order to promote the operation of the bolus: the patient was directed to take soups only during this experiment, and usually voided the worm, or some proportion of it, the first day, and the whole by a repetition of the process.

———The *SPIGELIA MARYLANDICA*, or Carolina Pink, is an anthelmintic of a more dangerous description, chiefly used against the lumbricus, or common worm of the intestines. It is the root of the plant that is used in the form of powder: it may be supposed to affect the worms, it almost poisons the child; its most conspicuous effects are exciting, as some of the other narcotic poisons do, vomiting and purging. The effects of the American pink, resemble those of the more dangerous narcotics; it causes vertigo, confusion, dimness of sight, and dilated pupil, in so much that, during its use, the child must be kept in a dark room, the pupil being strangely dilated, while the eye and brain preserve their sensibility. This is more peculiarly the effect of a species

of the spigelia, which grows in the island of Dominic, and is used in form of syrup, made by infusion in boiling water.

The root of the pink may be given in doses of half a drachm to children; fifteen grains, morning and evening, is a sufficient, and sometimes a dangerous dose: When it proves purgative, the patient parts with lumbrici often in great numbers; if it fail to purge the patient, or if it cause nervous symptoms, such as have been already mentioned, its operation must be hastened by other purges, which bring away the lumbrici, and put a period to the dangerous symptoms. This medicine I regard as a dernier resort, never safe, and not to be familiarly used.

———TANACETUM, TANZY, the flower and leaf next to santonica, or worm seed, is the most familiar vermifuge. It is a bitter so nearly resembling santonica, as to be often substituted for it; it is a medicine merely popular, being superseded by the more intense and powerful bitters.

———MURIAS SODÆ, Common Salt, Culinary Salt, poisons worms; it so sickens them, that, like leeches, to which salt has been applied, they shrink and lie coiled up, ready to be expelled. A drachm of sea-salt disguised, and given dissolved in water early in the morning, has often an incredible effect.

———ALLIUM, GARLIC, is another excessively acrid medicine, especially efficacious in poisoning worms, and leaving them coiled up and exposed to the hurried action of the intestines, by which they are expelled. The best infusion for such purposes, is an infusion in milk; an ounce of garlic is bruised, mixed, and infused with a pound of milk, and given as drink, or used as injection.

———LIME WATER has the same properties, and

is especially useful in destroying ascarides in children. The injection of three or four ounces of lime water, with which is often conjoined a third of oil, is very effectual.

———STANNUM, TIN, is one of those vermifuges, which having neither chemical properties, nor sensible operation, cannot be imagined to act on any other principle than by its mechanical effect, of destroying and annoying the worms so as to displace, or preventing them from retaining their hold; for it is used chiefly when tœnia is suspected. We need say nothing of the mineral condition, nor chemical properties of tin; it is not by those it operates, it is not a medicine to be given in delicate doses; the quantity, we should rather say the load of it, that is required, proves how entirely it operates by its bulk, and mechanical properties; it has been more used in Scotland perhaps than in any country. It is the adult chiefly, that is afflicted with the tœnia; and to the adult one ounce of the pulvis stanni, (of the simple powder of tin, produced by shaking tin while melted in an iron box till cool), one ounce is prescribed mixed up with treacle, or any other viscid saccharine matter: half is given the first day, an ounce the second day, and the same quantity the third day; after which a sharp cathartic is prescribed; (some choose to give a strong cathartic also before beginning to use the tin); after which, the joints and fragments of the tœnia begin to be discharged.

Dr Alston's coarse prescription of an ounce of tin powder, mixed up with treacle, is refined by modern practitioners into an electuary of powder of tin, with conserve of roses and syrup, and it is given in very moderate doses.

———DOLICHOS PRURIENS, Cowhage.—This is the pod, three or four inches long, of a West India creep-



ing plant; the outside of which is thickly beset with stiff brown hair: The ripe pods are dipped in syrup and scraped with a knife, till the syrup, from the hair being doughed and caked into it, becomes a thick pulp; then it is fit for use: Those hairs cause an intolerable itching in the hands of those who handle the pod; and when taken inwardly, it no question acts mechanically on the worms, for it no way affects the bowels. It is given three tea-spoonfuls in the morning fasting to a child, or in a larger dose according to the patient's age; and this (like every other anthelmintic which destroys or weakens the worms) is purged off after the third dose by a brisk cathartic. Some prefer giving the dolichum at night, and following it with the purge in the morning. It is chiefly against lumbrici that this vermifuge is used, yet it is found equally noxious to the tœnia.

——OIL is found to be very universally noxious to worms, insects, &c. whose respiration is stopped by being involved in it. Oil is a sure resource against ascarides, because, being injected into the rectum, the worms are suffocated, and immediately die; and oil, though not so surely effectual when given by the mouth, yet is used so, being usually combined with a very small proportion of the aqua ammoniæ, or with a small proportion of aromatic tincture, of compound tincture of gentian, &c. Oil, when taken internally as a remedy for worms, should be taken in doses of three or four table-spoonfuls, or indeed as much as the stomach will bear: Also, it should be given on an empty stomach in the morning.

——OLEUM CAMPHORATUM, is the last of these poisons we have occasion to mention. Two drachms of camphor dissolved in four ounces of oil, makes a powerful anthelmintic injection: Little more than three ounces of such a glyster is fairly delivered: It may be injected into the rectum every second or third night: it usually

remains all night, alleviates the itching and irksome feeling proceeding from the ascarides, and comes away in the morning, bringing the dead ascarides along with it. Injections of lime-water should be used in the intermediate days.

The remaining anthelmintics are the drastic purges appropriated to this process, of expelling worms already sickened or killed by proper anthelmintics: They indeed are often expelled in numbers quite incredible, (especially from the children of the sickly poor), coiled up and imbedded in thick mucus, as if they were actually baked with it into a clay-coloured mass like a swallow's nest.

Among the principal of these anthelmintic purges, is Gamboge, which, though poisonous, cannot in so small a quantity be supposed to affect the worm; but as the operation of this medicine is in the upper part of the canal, exciting vomiting as readily as purging, it operates most effectually towards the expulsion of the *Tœnia*, whose seat is chiefly in the stomach and upper intestines. Subcarbonate of potass is in some sort an antidote to gamboge, and should always be conjoined with it, triturated and in form of powder: six or eight grains of gamboge should be given every two hours, till the lumbrici, (if that be the worm), or some portions of the *tœnia*, are expelled. Or in the case of the decided existence of *Tœnia*, the medicine may be given early in the morning, in the full dose, what might be supposed an excessive dose, of fifteen grains or a scruple.

———*Geoffrœæ inermis*, Cortex.—The **CABBAGE-TREE BARK**, is a poisonous vermifuge, which, besides operating as a drastic purge, often occasions vomiting, sickness, and delirium, either when given imprudently, or from drinking cold water after it. Those alarming symptoms are appeased by a draught of tepid water to dilute, or a purgative dose of castor oil to ex-

pel the medicine. But such symptoms are frequent, and have prevented the general use of the medicine in this country; we have many preferable, and some stronger and safer anthelmintics. The cabbage-tree is thence used chiefly in the West Indies, where it grows.

This bark is of a grey colour like jalap, has a mucilaginous sweetish taste, and unpleasant smell; is sometimes given in form of powder, but more safely in form of decoction, which is made by boiling an ounce of bark in a quart of water, till it is of a deep yellow or reddish colour. This decoction, sweetened with sugar into a sort of syrup, is given in smaller doses; at first, a table-spoonful only to a child, gradually increasing the dose till nausea forbids the further increase of it: after producing nausea, it purges violently, and the lumbrici are soon expelled.

————The VERATRUM SABADILLA is another poisonous and drastic medicine, much commended as a remedy against the *tœnia*. Dangerous in itself, it is sometimes sophisticated with a drug still more deleterious, viz. the *veratrum album*. The *veratrum sabadilla* provokes vomiting and intense purging; it may be given with honey or syrup, in doses of three grains to a child of four years old, five grains to a boy of ten years old, and in doses of ten or fifteen grains to an adult. This also is of the order of poisonous vermifuges, which we use less willingly. But with so full a catalogue of anthelmintics, and ranking among them all those *specified* in the letters patent of Empyrics, there is surely no apology for resorting to advertised worm-powders or cakes.

## FIFTH CLASS.

OF MEDICINES, OR COMBINATIONS OF MEDICINES, CALCULATED TO PROMOTE THE PRINCIPAL SECRETIONS OF THE ANIMAL SYSTEM; DIAPHORETICS, DIURETICS, EXPECTORANTS, EMMENAGOGUES.

IT were very rash and presumptuous to affect to say, by what specific operation one medicine provoked urine, another sweat, and another expectoration; but we perceive very distinctly, and it is for that reason that we divide sudorifics, for example, into classes, that one diaphoretic medicine is suited to inflammatory, another to febrile, and a third to rheumatic diseases, or to disorders of the intestinal canal; that one soothes, while another excites and heats the body; that one is mild, and DIAPHORETIC only, while another is SUDORIFIC, and bathes the patient in perspiration: Thence it follows, that skill in selecting and appropriating medicines to their respective diseases, is as indispensable in this as in any class of prescriptions.

## SUDORIFICS AND DIAPHORETICS,

Are medicines used chiefly in the adult, and very rarely in children; and they are not, as would at first appear, medicines of very general use; they are, on the contrary, prescribed only in a very few diseases. In Ephemeric, or one-day fever, in Continued fever, and in Intermittents; in Rheumatism, in Lues venerea, and in Paralytic diseases; also as alteratives in eruptive diseases, and in chronic disorders of the bowels, as diarrhoea, or dysentery.

It is not, I am persuaded, by the quantity of fluid

evacuated, nor by any thing peculiar in the secretion, far less (though the older physicians believed it) by carrying off the morbid matter of fever or dysentery, or the arthritic matter of gout, that sudorifics are of use; but by restoring the quiet and moderate action of the vessels of the skin, and by keeping them full and secreting. All that we do know of diaphoretics, vindicates us in this opinion: That morbid matter should be fermented, as it were, to a state of maturity, separated from the mass of fluids, prepared for secretion, and then secreted, is merely a visionary notion of the old physicians, who resorted to such theories, and wrote long and wearisome volumes on the *concoction* of morbid matter, only from not having a simple and philosophical conception of the operations of the animal body.

One thing is manifest, that the secretions of the skin, of the trachea, of the glands in various parts of the body, as the kidney, the testes, &c. never go on happily! that surfaces such as those of the urethra, trachea, and skin, never secrete while in a state of high inflammation. When the skin is burning hot from the intense action of its vessels, the perspiration stops, and the surface is dry and hard:—when the urethra is intensely inflamed, the gonorrhœa stops, and the testicles swell:—when the trachea is inflamed, the patient is hoarse, suffocating, and miserable; but he is relieved as soon as the secretion is relieved. Secretion is a healthy action, inconsistent with the inflamed condition of the part; and it is to be restored and augmented, chiefly by the soothing influence of warmth and moisture, and the gentle operation of anodynes and narcotics. Accordingly we find, that all medicines which appease violent vascular action, bring on perspiration; that ANTIMONY, IPECACUANHA, and OPIUM, are our most powerful sudo-

rifics; and that the operation of every sickening dose of an emetic, of every powerful narcotic, and of all poisons, ends in sweat.

The principal diaphoretics are, Emetics, Narcotics, or Neutral Salts, and Stimulant Gums; and the best assistants are, moderate warmth, diluent drinks, baths, and friction. The catalogue of Diaphoretics, not indeed very numerous, but very important, may stand thus:

- |                    |                    |
|--------------------|--------------------|
| 1. ANTIMONY.       | 7. CITRAS AMMONIÆ. |
| 2. IPECACUANHA.    | 8. CAMPHOR.        |
| 3. OPIUM.          | 9. ACONITUM.       |
| 4. AMMONIA.        | 10. GUAIAACUM.     |
| 5. NITRAS POTASSÆ. | 11. SASSAFRAS.     |
| 6. ACETAS AMMONIÆ. |                    |

It is natural to imagine, that those emetics, and salts, which operate by their sedative powers, are more suitable to fevers and inflammatory diseases; that the more acrid sudorifics, as Guaiac and Sassafras, should be more useful in chronic rheumatism, and syphilitic disorders.

*1st*, In the first attack, in the cold stage and shivering of a slight fever of ephemeris especially, or one day fever, or when, a patient suffering under intermittent, we wish to anticipate the paroxysm, or to bring it to a crisis by profuse perspiration; the process is conducted by giving a heavy dose of our most powerful sudorific, viz. opium, and ipecacuanha, with plentiful drinks of white wine whey, or weak wine and water, or gruel with a small proportion of spirits: Or we give, in the evening, an emetic, and at bed-time a powerful opiate; or we give a draught of antimonial wine with opium: and thus, by a full emetic, which brings on perspiration, or by a powerful narcotic, we prevent fever, or stop the paroxysms of an intermittent.

2*d*, In the circumstances just enumerated, we mean to procure sweat profuse and critical; but in continued fever already formed, we do not proceed thus: we propose to procure diaphoresis, and support a perspirable state of the skin, by gentle means; not by opiates, hot drinks, or warm baths, but by imperceptible operations of antimony, of camphor, of saline draughts; and these must all be delicately administered, especially in fevers attended with inflammation of the skin, the throat, or the joints. In such diseases, we do not urge perspiration by Dover's powder, nor any other preparation of opium; for those but inflame the skin, making it hot and dry, and raise the pulse and disturb the brain, the patient being already inclined to delirium:—Far less do we urge perspiration by hot baths, or by heaping bed-clothes upon the patient:—We find, on the contrary, that a gentle diaphoresis, such as clears the head, and calms the pulse, is best procured by small and frequent doses of nitre, camphor, and antimony, and is most favoured by a cool condition of the skin, and by a free circulation of air. Antimonials, neutral salts, and camphor draughts, or powders; draughts of the acetas ammoniæ, and citras ammoniæ, are the most natural, gentle, and kindly diaphoretics, in continued and inflammatory fevers.

3*d*, It has always appeared to me, that those intense sudorifics, and acrid medicines, which we prescribe, not in febrile, but in chronic cases of rheumatism, syphilis, or dysentery, are a distinct class of drugs, having a very different operation. They are stimulants, of a hot and fiery nature; they require the co-operation of vapour-baths, friction, and other stimulants, such as turpentine internally, and sinapisms and spirituous applications externally; and they are given in diseases, viz. rheumatic and syphilitic pains, which are disorders of the nerves chiefly, first of those nerves which are appro-

priated to the muscles, and next of those which terminate in the joints and periosteum, as may be exemplified in the Tic Doloieux, where there is pain only, and in Toothach, when suppuration follows from an affection of the bone.

The sudorifics useful in paralytic and rheumatic affections, are, PULVIS DOVERI, ACONITE, GUAIIACUM, SASSAFRAS, and AMMONIA.—Of the medicines used as diaphoretics, some of the most powerful have not yet been described; the chief of those are, PULVIS IPECACUANHÆ COMPOSITUS, ACONITUM, GUAIIACUM, SASSAFRAS, CARBONAS AMMONIÆ, LIQUOR ACETIS AMMONIÆ, and CITRAS AMMONIÆ. The aids, serving to promote the operation of those medicines, are, the ordinary diluting fluids, as ACIDULATED GRUELS, given tepid; SERUM LACTIS VINOSUM, White Wine Whey; SERUM LACTIS SINAPIUM, or Mustard Whey; Infusions of stimulant vegetables, as BALM TEA, and SAGE TEA, with PEDILUVIUM, in slight febrile disorders; and Semicupium, or Half Bath, Balneum Calidum, or the Full Bath, and Balneum Vaporis, or Vapour Bath; all which, especially the vapour bath after the manner of the Russians, and the HOT SEA-BATHS, or Baths of Hydrosulphuret, are of singular efficacy in chronic disorders of the joints, from gout or rheumatism, as the waters of Bath or Buxton.

—PULVIS IPECACUANHÆ COMPOSITUS, the combination of a powerful narcotic with a sickening dose of an emetic, and a portion of neutral salt, (Nitræs Potassæ), combines almost all that is effectual in promoting perspiration. I find it right to regard this combination as a distinct medicine: I cannot imagine a more infallible sudorific, or a more powerful one: after a dose of fifteen grains or a scruple of this powder, the patient lies bathed in sweat.—But it is necessary to stop and



remark certain reservations; for this is a medicine certainly not to be used in inflammatory fever, in exanthematous diseases, in disorders of the head, nor in very athletic habits; for wherever there is intense arterial action in an athletic constitution, Dover's powder sickens the patient, often produces intolerable itching, and increased redness and hardness of surface; often confuses the head, and after all this disorder brings no relief, but leaves headach, languor, and thirst.

———PULVIS DOVERI, is a medicine useful on the first attack of fever; particularly useful in preventing the paroxysm of an intermittent fever; in diarrhœa and dysentery, it is useful, not as a sudorific, nor in a full dose, but as a diaphoretic in minute doses; and it is useful in chronic rheumatism, especially to begin the cure. But it is a medicine never to be given without inquiring whether it disorders the patient, for there are many who cannot endure Pulvis Doveri without sickness, vomiting, itching, and extreme disorder of the whole frame: to some it is as a poison.

———ACONITUM NEOMONTANUM, ACONITUM NAPELLI, is at once a deep narcotic, and a very acrid poison: It causes trembling and paralysis of the limbs, and a paralytic relaxation, and convulsive motions, of the countenance. In regard to the stomach and bowels, its operation is very rude, causing vomiting, purging, and a painful swelling of the tongue and fauces. It leaves a strong impression of acrimony on the tongue, and from its nauseous smell, and very peculiar taste, we refer it at once to the class of acrid narcotic poisons. The dried leaves are perhaps the best form; the extract is most commonly used; the tincture (made by infusing one part of the dried leaves in six parts of alcohol) is a very safe form, and, like the infusion of other narcotics, is given in doses of fifteen drops, three or four times a

day: Of the *Extractum Aconiti*, a grain or a grain and a half may be given, rubbed down with fifteen grains of sugar, and an equal quantity of cream of tartar, or of nitre. Its best uses are in gout, rheumatism, and syphilis; in venereal nodes, and in herpetic sores: It is best given in combination with a small portion of antimony, with the aid of warm salt baths, or vapour baths, to determine its operation to the skin.

———*GUAIAACUM* is an indigenous tree in Hispaniola, Jamaica, and the Brazils: The wood, the bark, and the resin, are used: when chewed, it gives a pungent, acrid, bitterish taste, leaving a dryness in the fauces and mouth: It stimulates and warms the whole frame; it excites the pulse, and, favoured by a gentle heat of the bed-clothes, and the use of warm diluents, it brings on perspiration, not very profuse, but very gratifying, for it alleviates the pains of rheumatism and syphilis, and by perseverance cures them: If long continued, it salivates. It is chiefly useful in gout, rheumatism, venereal nodes, and nocturnal pains; in *œzæna*, and ulcerations of the fauces; and in cutaneous diseases.

These, indeed, are the virtues of all this order of acrid sudorifics; the decoction so much used in syphilitic disorders, is far the least valuable preparation, and the least certain in its effect; it is made by boiling an ounce of the wood or root in two pints of water, which quantity of decoction should be taken at successive draughts, in the course of the day.—But the surer and more powerful preparations are, the resin and the tincture. The formulas for these allow of various useful combinations:—The tincture may be mixed in the proportion of half an ounce with three ounces of any distilled water, for a diaphoretic draught;—an emulsion may be ordered with the extract, so proportioned as to convey

thirty or forty grains in the twenty-four hours;—or the same dose, viz. half a drachm of the resin, may be so divided into pills, as to be taken in the course of the day; and this last is the most manageable form of prescription, since it allows of combinations of guaiac with opium, with Dover's powder, and with antimonials.

——SASSAFRAS is a tree of America and the West Indies, having a strong, not unpleasant smell, and an aromatic taste, somewhat acrid. The wood, root, and bark, are all used, but chiefly the wood, in chips. It is best used in infusion, or decoction, and chiefly in combination with other woods of the same stimulant qualities. It is stimulant and heating; excites a gentle perspiration; is peculiarly useful in rheumatism, gout, syphilis, and amenorrhœa: and in herpes and cutaneous sores. It is seldom used alone; the best and most usual combination is that formerly entitled Decoction of the Woods, viz. one part of the root of sassafras, three of chips of guaiac, with a proportion of dried resins and liquorice root, boiled in water.

——AMMONIA. The Carbonate of Ammonia has been mentioned as an antispasmodic, perhaps it should have been arranged as a stimulant: By its stimulant power, it enforces the operations of the more acrid sudorifics, and is most appropriated to that species of rheumatism which is attended with a paralytic debility of the limbs.

These are the acrid sudorifics, used in chronic diseases; but for gentle diaphoretics, such as may, without heating the system, be given in febrile and exanthematous diseases, and in inflammations, we use only saline draughts. The chief of these, celebrated as a gentle diaphoretic and febrifuge, is the ACETAS AMMONIÆ LIQUIDUS, or Spiritus Mindereri.

——ACETAS AMMONIÆ is formed by the di-

rect combination of vinegar with ammonia, or volatile alkali; and the various processes resorted to by chemists, have no other intention than to procure it pure, and of an ascertained strength. As it is usually prepared, one ounce of liquid contains one drachm of subcarbonas ammoniæ.—It is used as a cooling and gently diaphoretic draught, in continued fever, exanthemata, acute rheumatism, and angina. It loosens the bowels, if taken in great quantity, proves diaphoretic if the patient be kept moderately warm, diuretic if kept cool, and it always proves sedative.

———CITRAS AMMONIÆ. The neutral solution, produced by mixing the citric acid with ammonia, is a still more pleasing prescription, not officinal, but compounded for the occasion with any distilled water, and given very usually in the state of effervescence.

This word *pleasing* reminds us, that this, and many similar prescriptions, are regarded almost universally as mere *placebos*. If it were so, and that these were merely *placebos*, the usage of giving such from hour to hour might be vindicated on this ground, that it is right not to allow ourselves to seem wanting in resources, only because we think it wise for a time to do nothing. By giving even a *placebo*, we retain the confidence of our patient, both for ourselves and for our art. But this is far from the truth; these, though not violent medicines, are not mere *placebos*; they have all the qualities of neutral salts, proving cooling, refreshing, diaphoretic, and laxative; they are peculiarly adapted to that state and stage of continued fever, in which there is a slight tendency to delirium, a smart re-action of the pulse, a dry and hot skin, but nothing malignant. At such time, our business is to temporize, to alleviate symptoms! we have nothing to fear but from officiousness! we give cooling draughts, gentle anodynes, and daily laxatives.

This is especially our practice in the fever of growing boys and girls, a fever produced by fatigue, acting on the delicate and irritable system in youth.

To assist the operation of diaphoretics, the *Serum Lactis Vinosum*, White Wine Whey, is rarely omitted; and to promote the operation of the more powerful sudorifics, of Guaiac, Sassafras, and Aconite, in chronic rheumatism, lues, and paralysis, we use a more powerful stimulant, which not only fills the vessels, but excites them,—the *SERUM LACTIS SINAPINUM*, Mustard Whey.

#### OF DIURETICS.

THE secretion of urine is perhaps the most uninterrupted, and the most essential to health: Its varieties afford the most unerring indications of the condition of the system; and the defect of this secretion brings on, or at least accompanies, the most afflicting diseases, which are remedied the moment this secretion is regulated and perfectly restored.

The medicines by which we have it in our power to affect this secretion, are numerous; but it is obvious, that diuretics cannot be so uniform in their effects, nor so easily and simply prescribed, as emetics, purges, or even diaphoretics. Many are often combined in one prescription, and various forms of diuretics, and various drugs, are brought to aid each other; and often, while looking for a happy effect from these, we find it necessary to give a favourable impulse to a sluggish and oppressed system, by the interposition of emetics, and of drastic, and, as they are termed, hydragogue purges, as gamboge, jalap, &c.

The purging the system of superfluous watery effusion, is a more difficult and uncertain process than

any we have hitherto described. There is a caprice in the mobilities of the system, and a sort of chance in our success; the process is empirical altogether; we have nothing but experience to direct us, yet much discretion and good sense is required in the conducting of it. One thing is happy, that this uncertainty relates only to our success, for diuretic medicines are in themselves harmless; we can hardly do harm, except in giving cantharides, turpentine, or some very irritating medicine, in excess; and even then the ill consequences come on gradually, and cease very soon.

There is hardly any form of disease, in which it may not be necessary to give an opiate to alleviate symptoms, or to procure sleep; but I cannot refrain from advising the young physician against the notorious imprudence and inconsistency, of subduing the living powers of the system by opium, in circumstances where active operations are required, when it is his purpose both to excite the general system, and the particular gland. Opiates and diuretics seldom harmonize.

DIURETICS may justly be divided into two great classes, according with certain circumstances of disease.

*First*, In all disorders relating chiefly to the secreting organ, when the kidney is inflamed from cold, hard riding, or drinking; when it has been injured by blows, or falls on the loins; when acrid and irritating medicines, as turpentines, cantharides, &c. have been imprudently given, mild and gentle diuretics only are required.—Diluent mucilaginous fluids, and gentle diuretics, saline draughts, and diluting drinks, are also required when calculi, having formed in the kidney, afflict the patient with acute pain, or when the bladder is diseased, or the urethra inflamed.

*Second*, But when the general system has gone into

disorder, the secretion of urine becomes imperfect; when dropsical collections begin to oppress the viscera, and to distend the cellular substance; when, in spite of the languor attending incipient dropsy, the patient begins to breathe with difficulty; when next he tosses, and cries out with indescribable anxiety; when, no longer able to breathe in bed, he sits up all night long, his belly tense, his ankles swollen, his face pale, emaciated, and hippocratic, the urine high-coloured, thick, and scanty, the pulse quick, and often very heavy and strong,—the system is going to ruin! all parts of the structure suffering! all the living powers subsiding! and the person is to be saved only by restoring the secretion, and we must, without loss of time, ply all our powerful drugs.

These, then, constitute two distinct purposes, and this order of medicines naturally divides itself into two classes, corresponding with the gentle and the drastic among cathartics.

## 1st.

NITRAS POTASSÆ.	SUB-CARBONAS SODÆ.
SUPERTARTRAS POTASSÆ.	SUPER-CARBONAS POTASSÆ.
ACETAS POTASSÆ.	SUPER-CARBONAS SODÆ.
SUB-CARBONAS POTASSÆ.	SPIRITUS ÆTHERIS NITROSI.

These form a class of diuretics appropriated to the more ordinary occasions of nephritis, gonorrhœa, irritability of the bladder, &c. and requiring the aid of the most gentle diluents only, as whey, mucilaginous and oily drinks, soda water, imperial or dilute solution of cream of tartar; and these prescriptions are often conjoined with opiates, to facilitate the transit of calculous concretions, to soothe disorders of the bladder, or to cure (as they do contribute to cure) gonorrhœa.

2d.

DIGITALIS.

JUNIPERUS.

COLCHICUM.

LYTTA.

SCILLA.

SUBMURIAS HYDRARGYRI.

GAMBOGIA.

TEREBINTHINA.

COPAIVA.

These are the powerful and irresistible diuretics, by which we restore the secretion of urine in the most difficult circumstances. Like narcotics, purges, and other powerful medicines, they require to be combined and assisted; they require, while they are principal in the cure, the aid of the more gentle saline diuretics; and all diuretics require for their operation, that full dilution, which the older physicians were too timid to allow. This latter class of diuretics, irritating powerfully, and exciting the organ intensely, admit of no opiates, unless when, by excess of irritation, painful symptoms have been brought on. But I request that it may be particularly recollected by the young physician, that those powerful diuretics require the interposition, sometimes of hydragogue purges, as gamboge, elaterium, &c.; that often, while the secretion seems to languish, and that our prescriptions have no longer the effect they once had, or when, even from the first, they fail of producing their usual effect, their operation is suddenly and marvellously promoted by a violent emetic, which seems to give a new impulse; or by a purge of compound powder of jalap, or of calomel and scammony, which, while it brings on frequent watery stools, causes a sudden and profuse flow of urine also.

There are three saline diuretics of infinite value, without which our art would be of little avail in disorders of the urinary passages, and still less availing in dropsy:



those are, Nitras Potassæ, Supertartras Potassæ, and Acetas Potassæ.

——NITRAS POTASSÆ, or the neutral salt obtained by saturating kali with nitric acid, has the bitter taste common to all neutral salts, with the peculiar quality of leaving a sense of coolness upon the tongue, and a kind of sharpness. Nitre, in large doses of four or six drachms, or when taken by mistake for purging salts, causes intense pain of stomach, sickness, vomiting, discharge of blood upwards and downwards, frequent fainting, extreme coldness, and death; and smaller, medicinal doses, from ten grains to a scruple, produce, if repeated at short intervals, the same pain in the stomach; to prevent which, much dilution is required.

The virtues of nitre as a sedative have been already mentioned; as a diuretic it is powerful, yet gentle, and peculiarly adapted to inflammatory diseases, and affections of the kidney itself. It is the common prescription in calculous complaints, in nephritis, in inflammation of the bladder, and in gonorrhœa. It is best given in frequent small doses, from six to eight or ten grains, three or four times a-day; and along with it we give diluting fluids, as whey, lemonade, imperial, *i. e.* a dilute and sweetened solution of cream of tartar and water. It is, in my estimation, a useful, but by no means a very powerful medicine, one very little suited to the cure of ascites, or to any general disease.

——SUPERTARTRAS POTASSÆ, I have hitherto mentioned only as a sedative: it is a useful laxative, but an invaluable diuretic, since it is in itself powerful, and makes a pleasing drink, which aids the operation of all the other more powerful diuretics; and often, when the more irritating diuretics fail, we find this gentle and pleasing medicine succeed.

Cream of Tartar is never to be omitted in ascites,

anasarca, or diseased liver. If given in electuary, it is to be accompanied with plentiful diluents. It can hardly be given in excess, for it hardly can do harm. Half an ounce in the day is the usual dose, half an ounce of cream of tartar, dissolved in twelve ounces of water, drunk at intervals. A drachm of cream of tartar mixed with honey, or with sugar and a little ginger, or with sugar and a little alcohol or gin, which forms a very weak punch, or with a small proportion of Madeira to prevent its hurting the stomach, is an excellent form. This dose of a drachm may be repeated four or five times a-day; or, having given first a purging dose, a drachm of the compound powder of jalap, small half-drachm doses of cream of tartar may be repeated every two hours, with honey and diluents. Supertartrate of potass is a medicine which becomes particularly valuable when combined with colocynth, gamboge, or digitalis.

———ACETAS POTASSÆ, the Acetate of Potass, is still more powerfully diuretic, and more of a medicine, than the tartrate of potass. It is the salt produced by neutralizing potass with common vinegar: It has a foul colour, and a sharp and cooling taste, and is so deliquescent, that it is very difficultly preserved in the form of salt; and so slight is the adhesion of the acetous acid to the potass, that the salt is decomposed by all other acids, even the vegetable; it therefore must be used in no acid mixture.

This medicine is so powerfully diuretic, as to have been all along distinguished by the name of SAL DIURETICUS, or Regenerated Tartar: It resembles the supertartrate of potass in all but its taste, which is bitter, and unpleasant; its properties are, to move the bowels, and augment the secretion of urine; and its dose is from

half a drachm to a drachm or more, repeated three or four times a-day.

This salt is best made, by directly saturating potass with vinegar; and the best prescription is, by saturating from two drachms to half an ounce of potass with vinegar, and diffusing it in any vehicle: In short, the acetate of potass is given as every other neutral salt is, and proves at once an effectual purge, and a powerful diuretic. Its operations are promoted by dilution, by lemonade, imperial, and spiritus ætheris nitrosus: Or it is diffused in almond emulsion, whey, milk and water, &c. Like nitre, it is peculiarly proper in inflammatory diseases of the kidney, bladder, or urethra; but in dropsy, it is effectual, beyond all other salts, in procuring a flow of urine.

These three, viz. NITRE, CREAM OF TARTAR, and DIURETIC SALT, are very valuable, and, when combined rightly with the more powerful diuretics of the vegetable tribe, as *Digitalis*, are irresistible; unless when the liver is greatly diseased, or the health utterly ruined, or when the dropsy proceeds from hydatides.

Next to these, we must mention certain diuretic salts, which the fashion of the day has made far too familiar with all classes of people. The debauched youth, the valetudinary, the hypochondriac, and especially the calculous patient, take, *ad libitum*, of the aerated solutions of the alkalis as daily drink, not without frequent ruin to the stomach, and intolerable irritability of the urinary passages.

The medicines I mean are the alkalis, Potassa, and Soda.—SUBCARBONAS POTASSÆ, the mild vegetable alkali, is perhaps the oldest form of diuretic salt; for the ashes of wormwood, salt of wormwood, ashes of broom, &c. were only awkward ways of procuring and prescribing

the vegetable alkali, or potass. The sub-carbonate of potass, prepared by burning cream of tartar, is that now used; but as a diuretic, it has not of late years been a favourite prescription. A dose of a scruple more or less, is taken, dissolved in a large proportion of water, and repeated three or four times a-day. It is unquestionably (so far as it is any thing) a diuretic, but harsh, coarse, and neither quick nor powerful, nor one which we dare continue long to use.

———CARBONAS SODÆ. The mild mineral alkali is similar to this, having the same bitter, pungent taste, the same harshness, and the same sole quality, of slightly augmenting the urinary secretion. Both these alkalis are little esteemed, except in their super-carbonated and diluted condition, of super-carbonas potassæ, vel sodæ. Yet carbonate of soda is often given to the poor from economy, and to the wealthy, when they find it difficult to drink profusely of soda water, in the form, prescribed by Dr Beddoes, of soda pills.

———AQUA SUPER-CARBONATIS POTASSÆ, potass dissolved in water, and super-saturated with carbonic gas, by the operation of Nooth's machine, is the Me-phitic Alkaline Water, or the Aerated Alkaline Water, now so much used, or rather, to speak truly, so much abused. This is the solvent (for it is reputed such) so much given in nephritic cases, and in calculi of the urinary bladder: From six to eight ounces of this water, morning and evening, is the usual dose; it is by many taken in hot milk, which at once hides its acrimony, and promotes its operation; for milk is the fluid most used to smoothe the acrimonious taste of the alkalis, and especially of lime water. When it occasions pain in the stomach, eight or ten drops of laudanum must be added to each dose, as in Perry's Lithontryptic.

———AQUA SUPER-CARBONATIS SODÆ, is the

super-carbonated solution of soda, made in like manner by the help of Nooth's machine. The proportion of alkali is slight; the proportion of carbonic gas makes the liquor brisk, refreshing, and exhilarating; with some it is actually intoxicating. Though it is not diuretic in that degree, to prove of special use in draining away the waters of dropsy, it is, as a gentle diuretic, useful in nephritis, in slighter complaints of the bladder, in gonorrhœa, and in calculous complaints; though it cannot act as a solvent, it assuredly proves anodyne.

This is a truly fashionable medicine, drunk as profusely by young gentlemen, having no ailment under heaven, save idleness, intemperance, and frequent intoxication, as by those who are diseased; and is in as great request in coffee-houses, fruit-shops, and taverns, as ice. The hypochondriac, the nephritic, the dissolute, equally use it; and such pernicious excess in the use of diluents, and saline diuretics, we see daily producing the most unpleasant consequences, debility of stomach, and irritability of the urinary organs.

Used discreetly as a medicine, it alleviates the pains of calculus, and cures the less formidable disorders of the kidney and bladder. But I protest, that I know of no greater folly, than that of continuing to take medicine as common drink.

———The SPIRITUS ÆTHERIS NITROSI.—The Sweet Spirit of Nitre, is much resorted to in nephritic disorders, and in those exanthematous diseases, as Scarlatina, which so often in children, during the epidemics of particular seasons, terminate in anasarca. It is excellent for promoting the operation of more powerful diuretics, and for restoring the secretion of urine in slight fevers; it is particularly prescribed in arabic or almond emulsions.

———DIGITALIS, whose narcotic powers we

have chiefly noticed, is among the most powerful diuretics: We use it ten times as a diuretic, for once that we use it as a narcotic; and the forms which we prefer for this effect, are those of tincture or infusion.—Sometimes it is given in POWDER, in doses from half a grain to a grain and a half, or as far as two or three grains.—The WATERY INFUSION is made, by pouring eight ounces of boiling water upon one drachm of the leaves, and continuing the infusion for five hours. One ounce of alcohol, spirituous cinnamon water, &c. is added to the strained infusion, to preserve it; and half an ounce of this infusion may be given three or four times a-day.

The Spirituous Tincture of Fox-glove is made by infusing an ounce of the dry and coarsely powdered leaves, in eight ounces of alcohol, and placing the infusion by the side of the fire: the infusion is to be continued eight days, and then strained off for use. This tincture may be given in doses of from fifteen to twenty drops three or four times a-day, gradually increasing the dose to thirty, forty, or fifty drops, which dose is usually conveyed in a draught of peppermint, with syrup, and nitric æther. The urine often is not increased, nor changes its complexion, notwithstanding the free use of diluents, for two, three, or four days; but it usually happens, that the first violent purge that is accidentally given, or vomiting excited, as it often is by the medicine itself, so rouses the living powers, that the urine flows profusely, and suddenly the belly becomes flabby and relaxed, and the swelling of the ancles disappears.

This medicine has little effect, unless given in dangerous doses: It is used in circumstances which sufficiently vindicate any, even the most desperate experiment. But when, without exciting a flow of urine, it produces vertigo and blindness, sickness and purging,

fainting and extreme lowness of pulse, it must be withdrawn, and the patient restored by the use of warm wine and opiates.

———**COLCHICUM AUTUMNALE**, or Meadow Saffron, a bulbous root with stringy fibres, is reputed a very powerful, and certainly must be, a very acrid diuretic; but it is little used, and thence seldom prepared in this country. Our opportunities, or temptations to use it, are very rare: it is so acrid as to occasion a burning heat in the stomach and fauces, tenesmus, and strangury: it seems to be that medicine, which approaches nearest of the vegetable tribe to the operations of cantharides. In the early season it is extremely acrid, in the end of autumn almost inert: The syrup of the colchicum is the only officinal preparation, and is sometimes given in doses from a drachm to an ounce in dropsy.

———**SCILLA MARITIMA**, Squill, a large bulbous root, is indigenous in Spain and Portugal, and in Syria. It is of a fleshy texture, consisting of reddish, and thin flakey scales, with a whitish acrid juice, of extreme acrimony and pungency, exciting salivation and sickness from its acrid principle. So great is its acrimony, that there is no secretion it may not be said to affect: it excites vomiting in larger, and purging in smaller doses; urine, expectoration, and salivation, when given slowly; and when externally applied, it acts as a blister: Though chiefly used as an expectorant, it must be recorded here in its order as a diuretic.—In dropsy it is used along with other remedies in a solid form, in pills, combined with calomel; the pills, conveying usually a grain of calomel with three of dried squills, are given three or four times a-day. Sometimes this combination augments the secretion of urine, and moderates the pulse: But it is my persuasion, that the process of drying squill

so affects its virtues of every kind, that I have little faith in this preparation.

———*SCILLA RECENS*, the raw and fresh Squill, is a preferable medicine, and may be given in doses from eight to fifteen grains.—The *OXYMEL* of squills, is a medicine more naturally used in asthmatic and pulmonary complaints.—The *VINEGAR* of squills, *acetum scilliticum*, is the most universal form in which this medicine is used, holding dissolved the acrid efficient principle of the squill in the most permanent way: It is more frequently used in pectoral complaints, though the calomel and dried squill is more used in dropsy. The dose of vinegar of squills, is from two drachms to ten or twelve; it should be diluted in cinnamon water, or camphor julep, or arabic emulsion; it slightly sickens the patient, loosens the belly, and promotes urine; and when it is found availing in this latter effect, the dose should be redoubled, and the diluents increased.

———*GAMBOGE* exudes from a tree indigenous in Siam, and some of the Eastern Islands, either from incisions in the bark, or from pinching and breaking across the leaves and young shoots, whence it distils in opaque yellow drops; and this is the reason of its being named *GUM GUTTÆ*. It has neither taste, nor smell, nor any sensible quality, till, being melted on the tongue and fauces, it leaves a permanent and strong impression of acrimony. In dropsy, if given alone, it should be in doses of three grains, rubbed down with sugar, and repeated every three hours; and it should be accompanied with cream of tartar, or powder of jalap. It is a very useful medicine, in giving a new impulse to the system, and giving activity to the secretion of the kidney, even it had been little affected by the largest doses of diuretics unassisted.



———*JUNIPERUS COMMUNIS*, is a shrub, all parts of which, wood, bark, and bud, and berry, have diuretic effects. The berries abound most in that essential oil, in which this quality resides, viz. a warm stimulant, and aromatic oil, combined with a bitterish sweet, which is yet not pleasant. The juniper berry is what gives the distinguishing flavour to gin, and it communicates, at the same time, the diuretic quality; but this is a poor apology for using ardent spirits in dropsy, which, by exciting too much, stop the secretion. Juniper berries infused in boiling water, cooled, sweetened, and acidulated, make an excellent drink in dropsy.

These are the powerful diuretics and hydragogue purges best suited to ascites and universal dropsy. But local disorders of the kidney, bladder, and urethra, demand a different tribe of medicines, which, though mentioned with strict propriety here, are hardly diuretics: They affect rather the manner in which the urine is delivered, than the actual secretion, and might be almost as aptly arranged under the title of stimulants as of diuretics. They are cantharides, turpentine, balsam of copaiva, &c.

———*LYTTA VESICATORIA*, Cantharides, Spanish Flies, are not so conspicuous for the diuretic powers, for I have never observed them to procure a secretion of urine, so profuse or instantaneous as to entitle the medicine to rank with diuretics; but for their singular influence in those diseases in which diuretics are most required, especially in local affections of the urinary passages.—First, it is due to the young physician to warn him, that this medicine is more a stimulant than a diuretic; a dangerous stimulant, producing, by irritation of the alimentary canal, vomiting, severe griping rather than purging, tormina like those of poison, and bloody stools, frequent calls, or ra-

ther a continual desire to pass urine, which is rather sparing and often bloody, with a burning heat, especially affecting the neck of the bladder. But if the medicine be imprudently continued, or if already too much have been taken in substance, and lies still lurking in the villi of the intestines, ulceration of the bowels, tormina, foetid stools, intense heat and thirst, fainting, convulsions, delirium, and death ensue: All which symptoms are best alleviated by camphor, opium, arabic emulsions, and oily draughts. Thus, though not decidedly a diuretic, the chief effects of this drug are felt in the urinary passages; even a blister of cantharides produces a degree of this irritation.

It is next due to the young physician to say, that *Lytta Vesicatoria*, though dangerous, is infinitely less so than is vulgarly imagined, and confidently stated in professional books. The sixth of a grain in substance, and five drops of the tincture, are mentioned by practitioners of high celebrity as efficient doses:—what can this mean?

Cantharides I have seldom given in any but local disorders, especially of the urethra, or paralytic states of the bladder; and in those cases, which not unfrequently occur, especially in literary men, and those engaged in studious and sedentary professions, when the bladder has become capacious beyond the natural size, and delivers itself easily of one third of its contents, but remains two thirds full: In gleet, paralysis, and debility, or want of irritability, (a less frequent disease, no doubt, than the reverse), this medicine is of excellent efficacy. *Tinctura lyttæ* should often be combined with balsam of copaiva, or with turpentine; its operation is unquestionably promoted by small accompanying doses of laudanum, and nitrate of potass, or nitric æther, together with whey and arabic emulsions; and I know from

much experience, that the medicine may be very safely given, in doses of thirty or sixty drops, viz. a drachm, three times a-day. Nor have I ever, in raising it to a much more copious dose, found it to produce alarming symptoms: always we have warning of approaching irritation by diarrhœa, a slight degree of which may be permitted. I have often found advantage too, in combining *tinctura lyttæ* with tincture of hellebore.

In dropsy it may be given along with the tincture of *digitalis*, or with the hydragogue purges, as gamboge and colocynth: But I find it chiefly useful as a tonic and astringent, when the dropsy is gone, when the patient returns to exercise and strong diet, and when only a degree of leucophlegmatia remains. I am indeed doubtful, whether it had not been arranged with more propriety, as a stimulant and tonic, than as a diuretic.

———**TEREBINTHINA**, Turpentine, is the balsam, exuding spontaneously, or procured by incision, from the various species of fir or larch. It consists of two constituent parts, Resin, which, according to the mode in which it is prepared, is tar, resin, or burgundy pitch; and an essential oil, which, in whatever way procured, is still the Essential Oil of Turpentine. And it is to be observed, that while the product, especially the resin, varies according to the manner in which it is procured or treated; it varies also in some slight degree, according to the tree or climate whence it comes.

The Scotch Fir, the Larch, and the Canadian Pine, are those from which turpentine is chiefly procured.

From the Scotch Fir, the common Turpentine; from Larch, the Venice Turpentine; and from the American Pine, the Canadian Balsam. The *PINUS SILVESTRIS*, the Scotch Fir, is so treated, that we may, in its products, exemplify all the circumstances affecting them. Tar, *pix nigra liquida*, is the resin of the Scotch Fir

melted out by fire: A hole is dug in the ground, and billets of the fir, piled from the bottom of the hole, and raised high above it in a conical form; a slow and imperfect ignition begun from the top, melts and sweats out the turpentine from the wood in the lower part of the pile, which is less perfectly ignited; part of the wood, and of the turpentine, of course, is thus consumed, in distilling turpentine from that, which is only heated; and the proportion of turpentine thus distilled runs down, while melting, into the lower cavity, blackened, empyreumatic, and every way contaminated; indeed it differs little from that procured by distillation from pit-coal, and contains resin, charcoal, empyreumatic oil, acetous acid, and a small proportion of essential oil.

Resin, again, is the slow spontaneous exudation from the several species of Fir, especially the *Pinus Abies*, and *Pinus Sylvestris*, the Scotch and the common Firs. White Resin, is that which exudes spontaneously in the summer heat; Black Resin, that which exudes in winter, from those wounds in the trees, from which, during the summer season, turpentine distils; by slow exudation the essential oil has so evaporated, as to leave the resin with very little of the character of turpentine. The resin of the *pinus abies*, melted and strained through linen, is the *Pix Burgundica*, Burgundy pitch.

Turpentine, *Terebinthina*, is the summer juice, exuding chiefly through incisions from the various species of fir, or larch, and running down into cavities in the earth, or hollows made to receive it. It contains the two principles, the resin and the essential oil, or turpentine, in full proportions: It is from this that the oil of turpentine, which, distilled a second time, is named rectified oil of turpentine, is procured by simple distillation. Five pounds of turpentine, and four

pounds or pints of water, are put into a copper alembic ; upon applying heat, the oil and water come over together, and what remains behind is resin. The species of turpentine used for this process, makes little difference in the product. The turpentine procured from the larch, is that termed Venice Turpentine, and preferred as purer ; that procured from the *pinus abies*, or the *pinus sylvestris*, is the common turpentine ; that from the *pinus balsamea*, is the Canadian balsam ; the essential oil procured by distillation, is still the same, oil of turpentine.

As for the resin which remains behind, its various aspects are determined by the manner in which the process is concluded : If, with the addition of vinegar, it be distilled to dryness, it is common resin, or colophony ; if, being mixed towards the end of the process with boiling water, so that part of the water incorporates with it, it becomes yellow resin ; if melted and strained through linen, it becomes Burgundy pitch.

Those are the forms of the resin of turpentine, according as it is more or less tainted with empyreuma, or other impurities. But the essential oil of turpentine is still the same : It is the essential oil that is precious as a diuretic, a stimulant, and a rubefacient. Its use as a diuretic, is like that of cantharides, much limited to local diseases of the bladder and urethra ; it is especially useful in nephritis, in lumbago, and in various species of rheumatism. It may be given in draughts of twenty, thirty, or sixty drops, repeated twice or thrice a-day, but never without a profusion of diluents. I find it a medicine particularly useful in gleet, and especially in paralysis of the bladder, in women after laborious labours, in men after imprudent distension of the bladder ; and it is useful in paralysis of the lower extremities, in dropsy, and in diseases of the bladder. While turpen-

tine is prescribed internally, the lower part of the abdomen should be rubbed with turpentine liniment.

Spruce-Beer, the extract by decoction from the extreme twigs and buds of the Scotch fir, fermented with treacle, or with white sugar, which forms a purer beverage, is an excellent diuretic drink, fit to assist the operation of more active medicines.

——COPAIVA, is the balsam or resinous juice exuding from incisions made in the trunk of a West India tree. It is a clear transparent oily-like juice, of a pungent bitter taste, and a strong turpentine smell; it is acrid, and the taste continuing long after it is taken, often sickens the patient, while the oil itself, if taken in frequent doses, acts as a laxative or purge. It is soon distinguished in the urine by its taste and smell; it is of the same rank with the medicines last enumerated, less of a diuretic, less fit for dropsy, but highly stimulant, strengthening, slightly diuretic, and proverbially useful in disorders of the urethra. It is usually given in doses of thirty drops twice or three times a-day, dropped on sugar, or mixed in emulsion. For the dose of this medicine we have no rule, but give sixty drops at first, and increase or repeat the dose as fast and as long as the stomach will bear it.

#### OF EXPECTORANTS.

Perhaps there is no class of medicines, which more particularly requires a few preliminary remarks, a slight definition, or description, of the function that is to be promoted.—Expectoration is very various according to the sound or diseased condition of the trachea and glottis: It is peculiar to the advanced periods of life, expectoration is no more known in childhood than piles. Sensible expectoration is the consequence only of disease, viz,

of the glands, which lubricate the trachea, being enlarged by repeated slight inflammations, and so relaxed, and so irritable, as to throw out not only a sensible secretion, but a viscid tenacious mucus. In children there is no sensible expectoration, unless when excited by inflammation and perpetual irritation, as in measles, where a thin serous rheum is discharged; or when, from severe and long-continued hooping-cough, there is secreted a profusion of thin gelatinous mucus, trailing along the trachea at every paroxysm of coughing, often purulent from inflammation of the trachea. Of this purulent mucous discharge I have seen many children die, coughing, fretful, sleepless, pining, wasted by the profuse evacuation, and dying like adults in phthisis.

Expectoration begins to be perceptible from fifteen to twenty years of age, and then consists of thick, starchy-like mucus, of a bluish tinge, from the smoke inhaled in the town, and during the winter season; and is sensible only in the morning, and in some habits in the evening. But while the person enjoys health, it is discharged in small quantity, is easily coughed up, is pure, unmixed, of a greyish colour, attended with hardly any sensible cough, brought up by the not unnatural action of clearing the throat. This slight periodical expectoration of mucus gradually increases in the progress of life, and is greater in men from their active habits: Becoming at last very profuse, it assumes the form of disease, or is at least a painful natural infirmity, increased by severe weather to that degree, which is termed the *catarrhus senilis*, the cough of old age.

Expectoration is still in the middle period of life hardly sensible but in disease. As the mucus which bedews the urethra, is palpable only when increased in gonorrhœa, expectoration is never known nor observed, till the excess of secretion, the cough, and the difficult

breathing which attends the cough, amount to disease; and in disease we perceive many various conditions of the trachea, and are sensible that expectoration consists of three distinct secretions. First, The thick ordinary wholesome starch-like mucus, which is secreted in the glands, or small follicles of the membrane which lines the trachea. Second, Of that thin, serous, and acrid rheum, which distils along the whole Schneiderian surface, from all the exhalent vessels opening upon the inner surface of the trachea and bronchiæ, distinct from the mucous secretion; it is so distinct, that the mucous secretion seems to cease when the serous effusion prevails, as in a recent cold; and the mucous secretion becomes again sensible, when the serous effusion ceases, or in other terms, when the rheum or cold subsides. Third, When instead of being inflamed and irritated, the internal surface of the trachea is in an ulcerated condition, then the vessels which before distilled a thin serum, secrete a purulent suppuration, a thick yellow semi-purulent mucus; and this thick yellow sputum, is not the secretion of the inflamed glands, but of the inflamed surface; for the clots, or coagula, of grey and tenaceous globular mucus, whose small globules preserve the mould of the minute sacculi or lacunæ, in which they are secreted, are found involved in the thick yellow expectoration.

Thus, though the sputum is often mixed and various, there are four distinct species of expectoration, four distinct conditions of the tracheal secretion.—First, The grey globular mucus secreted in the small lacunæ, still retaining the globular form of the individual lacunæ, but expectorated in small masses.—Second, A thick gelatinous but fluid mucus, secreted by the same glands, plainly of the same nature, but not retaining the globular form, inconcoct, glairy, and tenacious, secreted under an incited action of the arteries, and felt trailing



upwards and downwards in the trachea, with each paroxysm of coughing.—Third, The thin and acrid serum proceeding from all the exhalents of the inner membrane of the trachea and bronchiæ, from the whole Schneiderian surface.—Fourth, The yellow, viscid, semi-purulent, or muco-purulent discharge, from an abraded and ulcerated trachea.

Disease alone produces expectoration, and we must trace the progress of disease, and know how it affects this secretion, before we can use the various remedies skillfully: Diseases of the glottis, trachea, and bronchiæ, assume a different aspect in any different period of life.

*First,* When in a young and healthy person, the trachea is inflamed, whether in measles, or in cold and coryza; the whole lining membrane being distended, the secretion of mucus is entirely interrupted; the voice is ringing and clangorous, as if the patient breathed through a brazen tube; a thin serum distils from the whole surface of the Schneiderian membrane, occasioning frequent sneezing while it titillates the nostrils, and continual dry ringing cough while it trickles along the trachea; and as the inflammation flits from one part of the surface to another, the sneezing or the cough prevail. This is the form, and these the symptoms of recent cold in youthful and healthy constitutions; an inflammation and serous exudation, which flits from point to point of the Schneiderian membrane, from the nose to the throat, and from the throat again to the nose, all in a few hours, passing occasionally down into the lungs.

*Second,* When this inflammatory affection of the trachea is intense, the surface is dry from want of secretion, and the vascular action is such as to throw out a thick, firm, tenacious, mucous exudation, as often happens in the irritable trachea of children; the voice becomes peculiarly sonorous; it has a croupy sound.

like the crowing of a cock ; the exudation increases till the trachea is lined with it, the branches of the trachea are interrupted, and the child suffocates. This is the *Cynanche Stridula*, or Suffocating Cold or Croup.

*Third*, In a man grown to maturity, the cold or catarrh assumes a different form, from the mucous follicles having become enlarged, and expectoration having become a natural function. The trachea has, during the progress of life, been occasionally inflamed ; the mucus of the trachea is become habitually profuse ; the rheum begins with a distillation of serum from the nose, and sneezing ; then the inflammation flitting from surface to surface, affects the trachea, and a tickling, incessant cough ensues : the voice is changed by the swelling of the Schneiderian membrane ; the serum runs now hot and acrid, like the serum of a blister, along the whole trachea, exciting incessant tickling cough, without expectoration or relief.—On the fourth or fifth day, the serous exudation lessens ; the serous secretion thickens into a palpable expectoration, a mixed expectoration of much serum, a proportion of mucus, and a thick and purulent matter from the surfaces of the trachea and bronchiæ.

The expectoration now brings relief, because expectoration begins only when the inflammation declines ; and the mucus being now more tenacious and consistent, the breath impelled by coughing brings up, at each paroxysm, a proportion of mucus, which relieves the trachea and glottis of the irritation. But each renewed catarrh relaxes more and more, both the exhalent arteries, and the lacunæ which secrete the mucus ; so that, in the progress of life, the mucus becomes habitually profuse, and the membrane habitually irritable, and a periodical cough is the condition in which the individual must continue to live, more or less distressed, according

to the care he takes of his constitution, or the occupation, climate, and circumstances in which he exists.

*Fourth,* As the mucous secretion becomes more profuse in consequence of frequent colds, or, in other words, in consequence of wasteful toil and labour, the cough increases with the patient's years: He has, in his most healthy condition, a frequent expectoration morning and evening, an uncleanly cough,—*sæpe emungit*, as the satirist says; his walks, morning and evening, terminate in expectoration, and he needs to observe what Hamlet calls "his breathing hour of the day:" he needs to regulate his expectoration by exercise, as he would regulate any other bodily exertion by observances. He spits up a few masses of the greenish, globulated, starch-like expectoration, morning and evening, and feels relief. But when affected with cold, when the east wind blows, when winter begins, he is affected with catarrh.

He has, on the first severe attack of the winter, a coryza, a common cold, a serous running from the nostrils, and tickling cough: then a frequent and difficult expectoration, of hard masses of globular mucus: His morning and evening coughs are very afflictive, impelling the blood into the head, till the brain turns round, and the sight fails; and in the second or third week, the whole trachea is inflamed, the serous exudation is changed into a purulent mucus, and the grey and globular mucus is no longer distinguished, for the lacunæ which secrete it are so inflamed and enlarged, that their secretion is changed into a glairy, gelatinous, uniform mucus, which trails up and down the trachea at each paroxysm of coughing, and is expectorated with great labour.

This is the Chronic Catarrh, the *Catarrhus Senilis*, which leads, in the latter period of life, to asthma and

dropsy: In the aged, and after the structure of this glandular apparatus is much affected, the paroxysm has hardly any intermission during winter; the whole course of the trachea and bronchiæ inflames; the exudation becomes yellow, thick, purulent, and very tenacious, so that a rattling or screeching cough accompanies each effort to expectoration; the surface of the trachea is raw and ulcerated; and after the winter-cough has expired, and when in spring the ulceration ceases, the bluish and starchy mucus, the natural secretion of the follicles, begins to appear again amidst the yellow and purulent expectoration, and resumes its wonted regulated form of a morning and evening cough. It is to be observed, that while, in each paroxysm of habitual cough, the efforts drive the blood into the head, and inject it so that the serum exudes, each fit of mucous or purulent expectoration is followed by an hour or more of tickling cough, from the serous exudation which ensues.

*Fifth*, Asthma succeeds to chronic catarrh by a progression too natural, and inevitable. The mucous asthma, the most frequent asthma, is merely an increase of the catarrhal disease; and it is the peculiar disease of our sad and severe climate. When the mucous disease of the trachea gradually increases;—when, instead of degenerating, by a more profuse secretion, into a trailing gelatinous expectoration, it is condensed into a firm, coagulated mucus;—when such mucus, instead of being moveable, and easily squeezed out from its follicles by a moderate contraction of the glottis, and a moderate impulse of coughing, requires an accurate and spasmodic constriction of the glottis! then spasmodic contractions become necessary, and, of course, become frequent. In the colds of winter, the mucus is diluted; but in summer, and in warm climates, what should be a cold be-

comes an asthma, and thus it happens: In the evening, the patient seems to himself to have expectorated; he has no uneasy feeling to warn him of his danger; he lays him down to sleep; perhaps he feels a slight oppression at the præcordia, and is conscious of a slight wheezing in his breathing: In fact, the thickened mucus is all the while obstructing the glottis, the spasm is insensibly increasing, and at midnight, at two or three in the morning, he is awakened from sleep gasping for breath, drawing in the air with a slow, hissing noise, staring about him with the sense of suffocation, starting from bed, and struggling in great agony. After half an hour or more of laborious breathing, he begins to cough; small particles of firm, compacted mucus, are bolted up; much anxiety and incessant coughing follows; at last the coughing forces up the mucus, while a serous exudation, caused by the working of the lungs, dilutes it, and the paroxysm of asthma is resolved by a profuse discharge, first of globular, and then of thin and glairy mucus; and from six to ten in the morning, he enjoys a blessed repose after his hour of agony. Yet he awakens exhausted, bathed in sweat, and with an oppressive headach and languor. Thus the state of the mucous secretion, which constitutes chronic catarrh in our climate, constitutes mucous or chronic asthma in the summer season, and in warmer countries.

It belongs to another place, to investigate the condition of the glottis, trachea, and lungs,—to say what is the express state of those parts, when the glottis, and *caro glandulosa* of the *rima glottidis*, is thickened irrecoverably into a diseased consistence, with asthmatic breathing, and hissing noise, as the air passes the glottis! how the surface is inflamed universally during serous effusion! how the glands are relaxed when they pour out that profusion of glairy mucus, which suffocates

with continual trailing cough! what the condition is of the membrane of the trachea, when secreting that yellow, thick, and purulent mucus, which often terminates in a sort of mucous phthisis! But now it is most natural, and, after this introduction, most easy, to conceive and define the VARIOUS CAUSES OF DIFFICULT EXPECTORATION; and when these are correctly enumerated, the physician knows both how to alleviate those difficulties, and how to calculate upon the condition of his patient in the morning and in the evening, in stillness and in exercise.

*First,* The thin and trickling rheum, or serum, which distils from all the mucous or Schneiderian membrane, occasions frequent sneezing, perpetual coughing,—but no expectoration, no relief. There is no viscid nor mucous secretion upon which the breath, in coughing, can make impression, nor which can accumulate into a mass, so as to be coughed out of the glottis; there is perpetual cough, but no expectoration. This is the inflammatory disease which requires bleeding, drastic purges, coolness, and opiates, to lessen the serous secretion, and abate the sensibility which occasions the incessant cough. This form of cough requires also oily and demulcent medicines, to cover the inflamed membrane.

*Second,* The firm, globular mucus, which besets the trachea and glottis in those advanced in years, that grey, tenacious mucus, which constitutes the morning cough, is expectorated with difficulty, whenever, from neglecting the needful exercise, the mucus accumulates; or when, by hurry and irritation, as entering upon violent exertions in the morning before the usual expectoration takes place, the effort to expectoration is so impetuous, as to excite a temporary spasm; or, lastly, when, upon some slight accession of

cold, the trachea is inflamed, and the morning cough aggravated.

In these circumstances, we direct the patient to refrain from morning exercise or business, and either to continue at rest, or to walk gently and composedly, till the expectoration of the mucus accumulated during the night is completed. We sometimes give anodynes to prevent irritation, until the mucus is accumulated and ripe for coughing up. We find the chief difficulty to consist in the instinctive constriction of the glottis, necessary in squeezing out the viscid mucus from the lacunæ in which it is secreted, for such constriction of the glottis is necessary to give effect to the impelled air; and the chief distress and harm to the constitution arises from the impulsion of the blood upon the brain, during such intense coughing. At each severe paroxysm of coughing, the glottis is spasmodically constricted, the mucus is gathered together, and forced along the trachea by a ringing and screeching cough, which seems to split the head. The patient is left quite exhausted; each fit of coughing is felt in the brain, the head aches to distraction, the nose runs with serous exhalation; and I have often seen, by the force of the blood injected into the head, blood extravasated in the face, especially in the loose skin of the eye-lids, and under the eye.

*Third,* A more difficult and painful expectoration still, is that which is to ensue after the grosser coagula of grey mucus are bolted out; for then there begins to run from the same mucous follicles, and from all the inflamed surface, a glairy mucus, which trails upwards and downwards in the trachea; and while its irritation, and the necessity of pumping the trachea to admit the due proportion of air, excites unceasing cough, the secretion is yet so fluid, and offers so little substance and body to the impulse of the air, that the paroxysms of

coughing are intense; one fit of coughing follows another so unceasingly, that the eyes grow dim, the head swims; the brain is so far affected that the patient sickens, and sometimes falls down in a fit. I very often see the circle round the eyes green with extravasated blood, and partial extravasation in the cheeks and eyelids.

This condition affects the brain early in life, and prepares the way for all the other debilities and infirmities of old age. In chronic catarrh, then, the difficulty of expectoration is alternately that of feelings of suffocation before the gross coagula of mucus are coughed up, and of suffering under the unceasing cough which clears the lungs of this viscid, trailing mucus. Sometimes we prevent much of this distress by opiates, and well-regulated hours of exercise, food, and sleep; and when we do hope to accomplish a cure, we usually begin by emetics and sudorifics.

*Fourth,* That difficulty of expectoration which brings on asthma, deserves particular notice. The climates and seasons most propitious to health, are those which bring on this peculiar distress; for the true asthma occurs chiefly in the summer and autumnal season, and in warm climates. The mucous expectoration has become less troublesome, is coughed up at regular hours, is tenacious and firm, gives opposition to the impulse of the air in coughing, is expectorated, and the expectoration brings always perfect ease and confidence. But while the individual is thus in the enjoyment of unusual health, and is filling up with blood, he is all at once, after a walk in a sultry evening of autumn, roused from sleep, alarmed! He breathes anxiously, and is all at once involved in the most distressing condition, suffering a complete paroxysm of asthma, which is for the time resolved by a profuse excretion of mucus, but which is sure to return. The expectorating cough has not be-



gun when he goes to bed; the torpor of fatigue, heat, and natural sleep, taking off all irritation, the mucus accumulates, and in the same proportion the spasm of the glottis increases; and when he awakes, it is in extreme terror, with indescribable anxiety of the præcordia, and a hissing noise in breathing: he sits up, struggles as for life, gasps, breathes laboriously, at last begins to expectorate, and, by expectoration, the fit closes towards morning, when the patient lays himself down to a disturbed sleep.

*Fifth,* The MUCO-PURULENT, or mixed expectoration, is that produced by recent cold, combined with chronic catarrh: It is an expectoration of thick yellow mucus, of a saltish or sweetish taste, involving in it globules, or masses of the thick grey mucus. This kind of expectoration is not unfrequent, especially among the labouring part of society, even in the prime of life; it is attended occasionally with all the kinds of difficulty just enumerated: it takes place chiefly in the morning and evening, is very profuse, and as the expectoration is tough, tenacious, and as if adhering to the surface of the trachea, it is brought up with severe coughing, a screeching noise, a sense of suffocation, and a degree of impatience. The slightest aggravation of the rheumy or inflamed state of the trachea, brings on a degree of asthmatic difficulty, or actual asthma; and the excitement of frequent or violent coughing, causes an increased serous exudation, with a tickling cough, which continues after the mass of mucus and purulent sputum has been expectorated.

We shall be surely better able to select the proper remedies, and to estimate their properties truly, after reflecting on these various forms of expectoration, and the various difficulties and distresses arising from a diseased condition of the trachea. There is no part of the machinery of the human body, nor indeed of the animal

body, which sooner gives way, or more certainly hastens on all the other infirmities of old age.—*1st*, Expectoration is best promoted by being delayed! for it will be observed, that the most teasing and distressing cough is that in which the air, impelled by coughing, has, from the want of consistence of the mucus, no impulse upon the too serous fluid; this is best aided by minute portions of an emetic.—*2d*, Expectoration is next best promoted, by abating the sensibility of the glottis: for its constriction, the natural degree of which gives effect to the impelled air, is often so spasmodic, as to retain the masses of mucus in spite of the most painful efforts to expel them. This object is best accomplished by opiates and narcotics.—*3d*, Expectoration is facilitated by the inhalation of vapours, which at once dilute the thickened mucus, and do not increase the serous exhalation; but on the contrary, by soothing the excited action of the larynx, and by fomenting the inflamed surfaces of the trachea, abate the action of the exhalent arteries.—*4th*, Expectoration is promoted by certain stimulant and strong-smelling drugs, which are reputed to have an influence as direct upon the mucous glands of the trachea, as diuretics have on the kidney.—*5th*, Expectoration is facilitated by mucilaginous and oily medicines, which lubricate not the glottis, for there they cannot be admitted, but the surrounding parts, viz. the root of the glottis, the rima glottidis, and the throat, a great part in short of that surface, which is so provided with mucous follicles.—These, then, constitute the natural orders of expectorants.

## EXPECTORANTS.

1st.

IPECACUANHA,  
ANTIMONIUM,PULVIS IPECACUANHÆ  
COMPOSITUS.

2d.

OPIUM,  
DIGITALIS,CICUTA,  
CAMPHOR.

3d.

INHALATIO VAPORIS,

INHALATIO ÆTHERIS SUL-  
PHURICI,————— AQUÆ FER-  
VENTIS,

————— FUMI TABACCI,

————— ACETI,

————— STRAMONII.

4th.

SCILLA,  
ALLIUM,AMMONIACUM,  
MYRRHA,

ASSAFÆTIDA.

5th.

GUM MIMOSÆ NILOTICÆ,  
GLYCYRRHIZA GLABRA,  
LINI USITATISSIMI SEMEN,  
MALVA,ALTHÆA,  
OLEUM OLIVÆ,  
AMYGDALÆ,  
GELATINA,

CETACEUM.

1st, ——— IPECACUANHA.—The use of ipecacuan as an expectorant is very universal, and I know not but that we may ascribe to it also, all the various properties of a mechanical help to expectoration. It is, as an anodyne, fit to suspend the irritation of coughing; and as an an-

tispasmodic, fit to lessen that constriction of the glottis by which expectoration is opposed; and as an emetic, it aids the expulsion of thickened mucus.

Infants expectorate with the utmost difficulty; they suffer less than adults from the action of emetics; in the short, snuffling, suffocating cough of children, we often begin the cure by an emetic of two grains of ipecacuanha, or a small dose of tartrate of antimony. Children expectorate so little, that it is only when the trachea is almost closed by inflammatory exudation, as in *Cynanche Stridula*, that we need to give expectorants; and an emetic given in the achme of this disease, sometimes shakes the coagulum or coat of secreted gelatin which lines the trachea, and enables them to reject it.

As an antispasmodic, ipecacuanha is especially celebrated in *HOOPING-COUGH*; giving every second day in the morning, an emetic dose of ipecacuanha, is found to have the happiest effect, both in relieving the breathing, and in shortening the disease.—In *ASTHMA* it was in high repute as an antispasmodic; or rather, there is reason to believe, that it is useful by preserving a perspirable state of the skin, and an active circulation on the surface of the body. This was the favourite prescription of Aikenside, who gave three grains of powder of ipecacuan every morning daily, or on alternate days, to those afflicted with asthma. But in asthma, still more than in intermittent fever, an emetic dose anticipates and prevents the paroxysm; it relaxes the glottis by its debilitating effect, and by its mechanical operation it bolts out the indurated mucus from the glandular follicles, saves the patient from a fit of asthma, and throws him into a profuse perspiration, contributing to remove the febrile and inflammatory attack which had perhaps occasioned the asthma.

Lesser doses of an emetic, continued after every such crisis, suspend the cough; and for this purpose minute doses, six or eight grains of the pulvis ipecacuanhæ cum opio, or a grain of ipecacuan, in any absorbent powder, given morning, mid-day, and evening, often has a remarkable effect in suspending cough and curing it; in so much, that a few grains of Dover's powder taken frequently during the day, has become a popular remedy. Small doses of antimonial wine, in any mucilaginous vehicle, conjoined with an opiate, have the same happy effect.

2d,———OPIUM, the uses of which as a stimulant, narcotic, and diaphoretic, are already described, is given with a difference, when used as an expectorant, in which tribe it well deserves a place, as perhaps the most powerful! for by delaying expectoration it PROMOTES it.—Opium is given with this difference, that instead of being exhibited in powder, it is best prescribed in a mixture, or linctus, as it is called, combined with mucilages, oils, spermaceti, and liquorice. Its effects seem indeed to be very various, for it invariably appeases the cough and suspends it, by virtue of which effect, the thin and serous rheum is so thickened, that the air has influence upon it. Opium seems also to have an intrinsic power of rendering the mucous secretion more viscid, perhaps by the same virtue which enables opium to suspend all other secretions: it lessens at the same time, that irritability and spasm which at once renders the breathing difficult, and the expectoration imperfect.

Severe cough seems to be a compound disorder, violent in proportion to the thinness of the rheum, the irritability of the glottis, the viscosity of the mucus, and the degree of spasm which is sometimes excited by that viscosity of the mucus, and sometimes by intensity and

frequency of the cough; for if intense coughing be excited, and continued, whatever be the cause, whether a drop of water, or a solid substance as a fruit-stone entering the glottis, the glottis is felt sensibly closing more and more, with every renewed convulsion of coughing, till the constriction amounts at last to actual suffocation. All these causes of severe cough, and difficult, because hurried expectoration, opium is suited to alleviate at no greater expence than a headache, often less intolerable than that which the cough, if permitted to continue, would have produced.

Opium, as an expectorant, when given pure, is best administered in a mucilaginous mixture by day, and a draught at night. The form of such a julep is varied, and the virtues of it improved, by combinations with vinegar of squills, camphor, balsam of Tolu, &c.

The use of DIGITALIS, in form of tincture, exhibited in draughts or in juleps, conveying fifteen drops or more every three or four hours, is appropriated more to those disorders of the lungs, where vomica or scrophulous abscess is suspected; when the pulse is feeble and rapid, with hectic flushings; in consumption, or in that muco-purulent expectoration, which so often terminates in phthisis; and especially when our chief purpose is, to abate the frequency of pulse, and the pain in the side or breast, with which phthisis is accompanied.

The use of CICUTA is limited, (being a medicine we do not choose to use on familiar occasions), to those manifestly spasmodic coughs, where, as sometimes happens, an adult is seized with a disorder resembling the hooping-cough, viz. a loud, clangorous, intense cough, returning in paroxysms, and each paroxysm terminating in a suffocating struggle.—Or it is used in genuine pertussis or hooping-cough, in children, which, when intense and dangerous, is sometimes stopped at the moment when

the child's life is manifestly endangered, by giving cicuta in gradually augmented doses.

Cicuta is still more particularly the medicine of our choice, in that sad condition of the glottis, which we often witness in coarse and vigorous men, farmers, horse-jockies, fox-hunters, and sea-faring men:—Being continually exposed, and always neglecting their colds, they first perceive the disease of the glottis begin by a huskiness of voice; they next lose the voice altogether, which degenerates into a whisper; next, they feel frequent oppression, and asthmatic difficulty of breathing, from the increasing disorder of the mucous membrane of the glottis; and finally, die of asthma, the glottis and caro glandulosa being thickened to the consistence of leather.—In such disease, along with frequent blisters or issues by the sides of the throat, a course of Cicuta, combined with calomel, is our only recourse, often an unavailing one.

The use of camphor, as an expectorant, is very familiar in sore throats, hoarseness, and cold, and it is administered in the form of draughts, or of linctus, as a sort of emulsion, with syrups, balsam of Tolu, nitre, or squills.

*3d.*——INHALATIO, Vaporis Aquæ Ferventis, Fumi Aceti, Vaporis Œtheris Sulphurici, Fumi Nicotianæ, vel Stramonii. In recent and severe colds, with a thin serous rheum, and great irritability of the trachea; in hoarseness, or the inflamed and thickened condition of the glottis, no remedy is more successful, than the inhalation of the fumes of the warm water, which the patient may draw through Mudge's inhaler, or from the stroup of a tea-pot, filled very sparingly with boiling water; the body of the tea-pot, on account of its heat, being wrapped in flannel.—Though we speak of demulcents, and prescribe oils and mucilages for this purpose, there is in truth no true demulcent, except the steam of warm water, for that pervades the whole internal surfaces of the

lungs and trachea, fomented and soothes them by the heat and moisture, and repeated morning, mid-day, and evening, has often very happy effects.

———VINEGAR, used with the same intention, gives a pleasant pungency, sharpness, and sort of lightness to the inhalation, and operates as a gentle astringent, suppressing the immoderate exhalation.

———ÆTHER SULPHURICUS, is used with the happiest effects, not in the same diseases of raucedo, and recent cold, but in spasmodic and asthmatic disorders. But as it evaporates rapidly in open air, no heat is required for the operation now to be described. A few tea-spoonfuls of æther are poured into a tea-cup, which is held close to the mouth, so that the patient, in breathing, inhales hardly any thing except the vapour. If used for continued difficulty of breathing, this quantity may be poured out, and inhaled three or four times a-day; if with the hopes of preventing a paroxysm of asthma, it should be reserved for night.

The inhalation of æther has a slight effect upon the spirits, or, in other words, upon the nervous system; but the fumes of tobacco, to those unaccustomed with it, produce all the effects of an overpowering narcotic; first, giddiness like intoxication, and then sickness, which effectually relaxes the spasm: Smoking a pipe of the prepared stramonium, produces those effects on all kinds of persons, whether accustomed or not to narcotics. Yet it must be acknowledged, that in confirmed asthma all those resources fail, and those who have been most miraculously relieved at first by smoking the stramonium, have soon abandoned it.

*4th*,———SQUILLS, AMMONIACUM, MYRRHA, and ASSAFÆTIDA, may be classed under one term of the Warmer Expectorants, the only ones indeed which can be supposed to operate directly or specifically upon



the secreting surfaces of the trachea and lungs ; and from their qualities it may easily be imagined, that these must constitute the basis of our pectoral pills, our everlasting prescriptions for incurable defluxions and chronic catarrhs ; while the sickening and sedative medicines, the emetics and opiates, are more fitted to suspend the intensity of active and recent diseases.

The diuretic power of squills we have already mentioned ; it is a harsh medicine in taste and in qualities, whether as an emetic or as an expectorant. The dried squill, rubbed down with sugar and camphor, is prescribed as an expectorant, in moderate doses of two or three grains four times a-day, followed by opiates at night : a form of prescription esteemed especially useful in the aggravated state of chronic catarrh. When conjoined with camphor or ammoniacum, in form of pills, they should always be of a soft consistence : Though the *pilulæ scilliticæ* of the pharmacopœias be an excellent prescription, yet becoming hard, they become ineffectual : they should be recently prepared.

The VINEGAR OF SQUILLS, in which the extreme acrid bitter of the squills is combined with intense acidity, is a very forbidding medicine, and fitter to exhibit the emetic than the expectorant power of squills ; yet it is often prescribed, and especially to children. It is often added to pectoral juleps, and mucilaginous mixtures.

———AMMONIACUM, of a yellow colour, and nauseous, sweetish-bitter taste, is a green resin brought us from the East Indies, and highly reputed half a century ago, as a pectoral medicine.—Like most stimulant drugs, it affects the bowels gently, and promotes perspiration, urine, and all the secretions, when given in a full dose. It is used also in chlorotic amenorrhœa, as in catarrh.—I have not been able to perceive, that its

effects as an expectorant are such, as to compensate for its thick and turbid appearance, and nauseous taste, when given in the form of a pectoral mixture: If used, it should be in pills, which, to produce any effect, must be of no very moderate size, nor given very sparingly.

——MYRRH, the Gum Resin, flows from a tree as yet unknown, growing in Upper Egypt, and in the East Indies. It is a strong, aromatic, bitter gum, of a reddish yellow colour, and a strong and peculiar odour. Its properties of stimulating and promoting every secretion, especially the menstrual, are nearly the same with those of gum, myrrh, ammoniacum, balsams, as of Tolu, Capaiba, &c.: Turpentine, have all the same general influence in stimulating gently the general system, and promoting all the secretions. Myrrh, as an expectorant, is sometimes given in powder, oftener in pills, conjoined with ammoniacum.

——ALLIUM SATIVUM, Garlic the root, is, I sincerely believe, the most valuable of those stimulant expectorants. It has the same pungent smell, and acrimonious taste, the same diuretic and sudorific qualities, as the squill, and is preferable to it as an expectorant in chronic diseases, when a hot and acrimonious stimulant may be prescribed. It is less properly a pharmaceutic prescription, than a domestic medicine: For relief of breathing, and for promoting expectoration in asthma, and asthmatic coughs, it is best given in substance, the patient swallowing one or two cloves at going to bed, or a few transverse slices. Onions are often eaten at supper, with the same intention, and indeed with the same effect. In chronic catarrh, a decoction of garlic in milk, given to the amount of a pint morning and evening, is said to be of great service.

——FERULA ASSAFŒTIDA is imported from the Levant: it is the exudation from the root of a plant,

obtained by laying the root in part naked, cutting it across, and scraping off the gum-resin as it exudes. It has a bitter, acrid taste, and an overpowering smell, resembling that of garlic, but peculiarly and proverbially offensive. It ranks with garlic, onion, myrrh, and the other stimulant resinous drugs, as an expectorant, suited chiefly to the *catarrhus senilis*; but with a taste and smell so repulsive, that few can overcome their reluctance to this drug. Though used in hysteria, especially in form of glyster, in amenorrhœa, and in dyspepsia, its chief value is as an expectorant. It is prescribed in powder along with myrrh, or aloes, to the amount of a scruple, or half a drachm, three or four times a-day; or still more commonly in pills, or to those who can take it so, in mixture.

*5th*,——DEMULCENTS are so named, from a supposed virtue of lubricating the internal surfaces; but of these surfaces, I know of none that are accessible! Those of the glottis and larynx certainly are not so, for the smallest particle, even of water, admitted within the glottis, excites suffocating spasms! That of the trachea is still less so. I know of no surfaces, then, that can be lubricated, except that which surrounds the glottis, and the surface of the pharynx; and how far the lubrication of that surface may, by giving smooth, unctuous, and pleasant feelings, lessen irritation, it is impossible to say; certainly demulcents do somewhat affect the feeling of the whole surface, and lessen the tone of hoarseness, and the sense of rawness. But the medicines I am now to enumerate, seem to me so little important, that I hardly can regard them in any other light than as vehicles. Of their various uses in nephritis, dysentery, gonorrhœa, diseases of bladder, &c. I do not mean to speak, but only of their use in coughs, and diseases of the trachea.

——GUM MIMOSA NILOTICA, Gum Arabic, is that which, on account of its solubility in water, and its bland, sweet, pleasant, mucilaginous taste, supersedes all others. It is much used for aiding the mixture of oils with water, in all extemporaneous prescriptions; and its mucilage, with little further aid than a slight tinge of balsam of Tolu, or the addition of a small proportion of laudanum, serves as a pleasant medicine in coughs and colds, and may be administered without restraint.

——GLYCYRRHIZA GLABRA, Radix, Extractum: the Extract of Liquorice, prepared by decoction, and inspissation from the roots, is a sweet, mucilaginous juice, in which are naturally combined the two principles most useful in catarrh, viz. the Saccharine and Mucilaginous. It is, especially when compounded with a slight addition of opium, as in the prepared liquorice of the shops, a very useful medicine, and pleasant. Its other uses as a vehicle for bark, &c. we have no occasion now to speak of.

——LINI USITATISSIMI SEMEN, the Seed of the common Flax, is still more valuable; for, though inoffensive, (unless it were offensive by being insipid), it contains combined the vegetable oil and mucilage, in nearly equal proportions, and is, next to mucilage of Gum Arabic, very useful. An infusion of lint-seed is the usual domestic medicine in the cure, or alleviation at least, of colds and hoarseness; it is the demulcent, also, most resorted to in nephritis, gonorrhœa, &c. It is more a domestic medicine than a prescription.

The uses of the common MALLOW, *Malvæ Folia*, of Flores *Althææ*, MARSH-MALLOW, of OLIVE ALMOND-OIL, and of SPERMACETI, are so familiar, that it were a very waste of time to detail their natural history, chemical properties, or uses in medicine. By the help of

mucilage, or of sugar, they are made to mix with the distilled waters, in compounding pleasant draughts, and linctuses for cough: but it is sufficient that various specimens of this *placebo* kind of prescription are given among the extemporaneous receipts.

#### EMMENAGOGUES.

Were we to enumerate, under this head, such individual remedies only, as influence the menstrual discharge immediately and distinctly, as nitre provokes urine, or opium perspiration, our catalogue would be scanty indeed. The term Emmenagogue implies, and the world believes, that we are possessed of specifics, which will at any time, and in all circumstances, excite menstruation, or procure abortion: But we arrogate no such power; we know of no such medicines; we cannot procure abortion, (and abortion is more easily procured even than menstruation), without using stimulant drugs of such irritating quality, that they operate rather like poison, by exciting the bowels, and are as apt to occasion death, as to procure miscarriage: Few attempt the crime of procuring abortion, without danger of committing murder. When we come to enumerate the virtues of those medicines which we are most inclined to trust to, we dare say no more than this, even of the most powerful, "It is a medicine reputed powerful in promoting menstruation."

It is more by a combination of effects, than by any specific medicine, that menstruation, when defective, is to be promoted or restored. It is rather by conceiving just ideas of the nature of this function of the womb, of its dependence on the general condition of the system, and of the peculiar constitution of our patient,

that we are to prevail, than by the power of any individual drug. It may be right to give a catalogue, and character, of such medicines as are reputed Emmenagogue, though that would be brief indeed; but it is of far higher importance, to give a general conception, however slight, of the causes of suppression of the menses, and the condition of the system.

There is no other periodical secretion but menstruation; and its purpose is sufficiently important to account for so singular a provision. It is destined to preserve that fruitful condition of the womb, which does not begin till the period of menstruation or of puberty, which ceases before fifty years of age, when menstruation ceases, and which is suspended during the period of suckling, because menstruation is then suspended. Interruption of the usual flow of the menses is injurious to the fruitful condition of the womb, as well as to general health: but whether the injury to the health of the individual arises from the inactive state of the uterine system, or is the cause of that inactivity, is a problem to be resolved only by a general review of the phenomena of menstruation; and this is a practical question of no small importance.

It is generally believed, as indeed all ordinary expressions imply, that the interruption of menstruation injures the health; but this proceeds from not distinguishing rightly the menstrual condition of the system, from the menstrual flux, which is but a consequence.—The MENSTRUAL CONDITION,—the general action of the vascular system, by which it is prepared for menstruation, is marked by a sense of increasing fulness of blood, a hysterical anxiety of the præcordia, and difficulty of breathing; by giddiness and confusion of head, irritability of the whole frame, nervous and hysterical affections, headach, pains of the

loins, and an incited pulse: the breasts swell, the veins become tumid, the breathing quick and hurried: all preternatural tumours are increased in size: varicose tumours burst and bleed: and if menstruation, which relieves all those symptoms, be delayed, blood bursts from the various surfaces, as the stomach, the lungs, or even the pores of the skin: such is the degree of universal vascular excitement which precedes menstruation.

This menstrual condition of the female system, precedes the actual flow of the menses, and prepares the uterine system for the change: It is a period not of imaginary delicacy, but of unquestionable and very peculiar irritability: The strongest constitutions are somewhat affected, and the delicate are quite overcome; the whole system is so susceptible, that ordinary causes have very painful effects; whatever disturbs the stomach, or fatigues the body, or affects the mind, has at that time particular influence: Cold, fatigue, terror, grief, or anger, in short, any sedative power, is apt to suspend this active condition of the arterial system, and prevent the approaching discharge, or stop menstruation while it flows; and often, by preventing the uterine system assuming this necessary action, such causes occasion imperfect menstruation, and ruin the health.

The MENSTRUAL CONDITION, then, as distinguished from actual menstruation, or the actual uterine secretion, is "an incited, active, hæmorrhagic condition of the whole vascular system, which exists before the discharge flows, and which is equally relieved by the uterine secretion, or by any vicarious hæmorrhagy, and which spontaneously ceases, whether menstruation follows or not."

When menstruation fails to appear, or is imperfect, it is either from want of this general hæmorrhagic ac-

tion, or from want of corresponding action in the uterine vessels: these are the two points which the physician has chiefly to observe. The general and the local actions have a mutual dependence on each other; and I doubt not, that the general action, or menstrual condition, arises, in some degree, from the excitement in the uterine system beginning to be felt at that time, when the uterine system becomes perfect, and the breasts are unfolded,—just as the vigorous and manly condition of the male, and the change of voice, follow the secretion of the semen, and the unfolding of the genital parts. But the general action is more important than even the local excitement; this at least is sure, that the want of general action, from want of vigour in the female system, is the more frequent cause of disordered health.

When the health of a girl approaching to puberty proceeds uninterruptedly, and to the natural tone of vigour is added this new excitement from the uterine system, the whole frame undergoes a gradual and favourable change, in the animation and expression of countenance, in the fulness of the person, in its more perfect proportions, and still increasing vigour and symmetry. But when, in a delicate frame, not endowed with sufficient susceptibility or strength to sustain this new action, the menstrual period arrives without an effectual effort;—when, instead of this menstrual condition, only a slight degree of irritability and vascular action is perceived;—when, instead of becoming more florid, active, vigorous, and healthful, the girl becomes slothful, languid, unapt for exercise, feeble, with swelling of the ankles, want of appetite, and a yellow tinge of the skin,—the disease, which the French, ever more attentive to such complaints than we are, have agreed to term *LES JAUNES*, the *YELLOW DISEASE*, the *CHLOROSIS*, is established.



There are two principal forms of this disease, viz. *1st*, AMENORRHŒA, or DYSMENORRHŒA, Delay of Menstruation, or, as it may be termed, Retention of Menstruation, and Difficulty of Menstruation: These are the various forms of the disease peculiar to the age of puberty, to delicate girls of languid habits, or weakly constitutions, and frequent in the higher ranks of life:—and, *2d*, SUPPRESSIO MENSIIUM, or the sudden, and we may say, violent Suppression of the Menstrual Discharge, just when it is about to flow, or while it actually flows. This is an acute disorder, to which women of strong and sanguine constitutions are more exposed, and which is more frequent with women in the lower and labouring classes of society. When we arrange the individual emmenagogues, we must order them so, as to appropriate them to one or other of these classes.

AMENORRHŒA, defect of menstruation, the menses failing to flow at the period appointed by nature, and marked by the particular feelings of oppression, anxiety, drowsiness, headach, restlessness, irritability, and sickness, is a disease of weakness. The habit and appearance of the girl prove it. The usual tokens of this chlorotic disease are,—a pale or yellow complexion, a feeble, depraved appetite, difficult breathing, a sickly languor, an imperfect menstruation flowing sparingly, just appearing, then ceasing; continuing not two days, returning at intervals of two or three months, not entirely established even eighteen months after it has begun; all the intervals being occupied by sickly languors, listlessness, breathlessness, headachs, and sickness.

This state of the system, which threatens to entail continued ill health, arises from the want of the menstrual condition, of the full, active, and hæmorrhagic state of the system. It is a kind of debility which becomes daily more and more confirmed, the consequences,

viz. the languor and sickliness, still augmenting the cause. To this state of menstruation are appropriated all the stimulant medicines which have been esteemed specifically emmenagogue, all which either excite the uterine system, or irritate the adjacent and consenting parts, as Savine, Madder, Myrrh, Iron, Hellebore, Aloes, and Cantharides:—We never neglect to use also those more familiar stimulants, which best support the strength of the system, and the vigour of its secretions, as air, exercise, riding, dancing, the cold bath, and ferruginous mineral waters; many of which are equally fitted for supporting the general strength, and exciting the uterine action.

SUPPRESSIO MENSIIUM is the term applied to that sudden, and we may say violent suppression of the menses, which arises from causes quite different from debility, and which occurs more frequently in habits every way the reverse of that just described, viz. from the HYSTERIC HABIT. Languors, faintings, and hysterical suffocations, are frequent, no doubt, in the languid and chlorotic female; yet the true hysteria, the violent paroxysm, the suffocation, grasping of the throat, clenching of the hands, and writhing of the body! the hysterical sobbing and cries! the delirium, and temporary hysterical mania, are peculiar to strong, full, sanguine, and passionate women, especially of the lower ranks of life.

Both from the habits in which sudden suppression of the menses occurs, and from the causes, and also from the cure, I am inclined to regard this as one example of the general fact which I have stated, viz. that, during the most intense arterial action, all the secretions, and this among others, is suddenly suppressed.—In strong and athletic women of the lower ranks of life, menstruation is often suddenly arrested by passion and emotion, by cold, or by violent labour: and straightway ensue

colicky feelings, disorder of the whole system, and violent hysterical paroxysm of sobbing, alternate fits of laughter and crying, suffocating struggles, and violent hysterical paroxysms. This sudden suppression is not brought on by grief and distress in the feeble and sickly, but by anger and passion in the sturdy and athletic: for example, by cold suddenly applied, while the system is heated;—by washing the steps of the stair;—or by the labours of the laundry or the dairy.—Those are the habits, those the causes, of sudden suppression of the menses; the most approved medicines are, bleeding, gentle opiates, pediluvia, and tepid baths; and the topical application of steam, or stupes, and quietness, and peace of mind, administer to the cure. These are not the habits, nor this the form of the disease that requires stimulants, cold bathing, or mineral waters, in the interval of menstruation; but, on the contrary, a composed, indolent life, with the frequent use of baths to relax the system, and the repetition of opiates when the period of menstruation approaches.

We are told that there is, in such cases, a spasm on the uterine vessels: What is spasm? An undefined and arbitrary term: So little are we warranted in using it on this, or almost any occasion, that we know no more of that condition of the uterine exhalent vessels, which prevents menstruation from flowing, than we do of that state of the emulgent vessels, which prevents the secretion of urine; and are no more entitled to say there is “a spasm of the exhalent vessels of the uterus,” than that there is a SPASM of the descending aorta, such as to prevent blood descending to these said extreme vessels. By SPASM, then, of the UTERINE vessels, pathologists mean no more than this, that there is some condition of the

uterine surface unfavourable to menstruation, which anodynes, and tepid fomentations, tend to relieve.

The use, then, of Emmenagogues, and the classification of them, is extremely simple:—*1st*, In AMENORRHEA, or DYSMENORRHEA, we have first to improve the strength, to nourish the constitution, and to prescribe such medicines as excite habitually all the secretions; and, at the return of that period when approaching menstruation is announced by pains and distress, to make a particular impulse by irritating purges: *2d*, In SUPPRESSIO MENSIIUM, to lower the tone of the whole system, to bleed the athletic and violently hysterical, to soothe the system with tepid baths and opiates, and to prepare for each menstrual period, by baths, opiates, and slightly stimulating purges, which, by operating on the rectum, are the only true emmenagogues.

I proceed, then, to enumerate the few remedies, or the few methods rather, that we are possessed of, for promoting the menstrual discharge; which comprehend not only the means of preserving the fruitful condition of the system, but of improving health, of which a justly-regulated menstrual discharge is the sign, and not the cause. But let me remark; that the methods and processes we use, though not specially emmenagogue, (a quackery against which I protest), are yet of most powerful influence, exactly because they are not medicines, but natural excitements and supports of vascular action: and we are every day conscious, that there are no circumstances in which the advice of a prudent physician, even though he prescribe no drugs, is so critical and important, as in those disorders.

## EMMENAGOGUES.

JUNIPERUS SABINA,  
 LYTTA,  
 RUBIA TINCTORUM,  
 MYRRHA,

FERRUM,  
 ALOES,  
 HELLEBORUS NIGER,  
 HYDRARGYRUM,  
 OPIUM,

ELECTRICITAS,  
 AURA GALVANICA,  
 BALNEUM CALIDUM,  
 INJECTIO AQUÆ TE-  
 PIDÆ VEL LACTIS,  
 EQUITATIO,  
 SALTATIO,  
 BALNEUM FRIGIDUM,  
 VINUM,  
 THERMÆ.

——SABINA, JUNIPERUS SABINA, Savine. The leaves of this plant, which grows spontaneously in Tartary and Siberia, have a strong animal smell, a taste extremely acrid, and, when dried and applied in the form of powder for extirpating warts, or reducing fungi, are so extremely irritating, that we dare hardly use the medicine, even for those coarse purposes of external application. It may well be judged dangerous to use such a medicine internally; and, indeed, those who, in their ignorance of its powers, have thought very simply to procure abortion without any danger, have found themselves involved in a greater crime. Savine procures abortion, as any other poison would, by its extreme acrimony; for the effect of a large dose, two drachms for example, is, that the bowels are tortured, blood begins to flow by stool, the straining affects the uterine system, and a bearing down comes on, with flooding, labour pains, and increasing diarrhœa; the unhappy victim of the experiment miscarries on the second or third day, and, being exhausted by diarrhœa and loss of blood, falls into fainting-fits, continual hiccup ensues,

with pallid countenance, and cold extremities, and she dies: Yet, if there be a true emmenagogue, it is this.

The fresh leaves of savine are infinitely less acriminous than the pulvis sabinæ; a conserve of the fresh leaves may be safely given in two scruple doses, the dried powder in smaller proportions, combined with myrrh, with carbonate of iron, or with aromatics. But this is a dangerous medicine still, nor dare we say much in behalf of that which is next named, viz.

———The LYTTA, the MELOE VESICATORIA, or Spanish Fly, whose diuretic and stimulant qualities, and whose dangerous effects on the bowels, have been already described. The irritation it occasions within the pelvis, whether from the rectum or the urinary bladder, affects the uterine system; and the stimulant power of the cantharides, when they produce strangury, or tend to do so, cannot but have some influence. I have been much accustomed to prescribe the Tinctura Lyttæ in such disorders, (and more freely in females when the urinary passages are less complicated), combining it always with the tincture of hellebore, and giving it in doses of half a drachm, increased to a drachm or a drachm and a half, daily.

———RUBIA TINCTORUM, Madder, can by no means rank with these distinguished stimulants, and yet is esteemed the purest emmenagogue of all, for no other reason that I can divine, but its being destitute of almost all sensible properties, and having no other imaginable qualities. If, indeed, madder be a powerful emmenagogue, it is a wonderful one; it is prescribed by Dr Home, our late Professor, in doses of half a drachm, three or four times a-day: I have both doubled the dose, and given it more frequently, but without any sensible effect. It is, in my poor opinion, a useless load to the stomach, and by no means an ornament to

the pharmacopœia, but fitter for the dyer's vat. It is from no passion for saying quaint things, that I allow myself to speak with seeming levity, but from experience, and repeated disappointments. That madder tinges the urine, the perspiration, and even the bones, is true; but that such property of colouring the secretions infers extraordinary powers, is a very vulgar error.

—— MYRRHA, Gum Myrrh, is more effectual as an emmenagogue, than as an expectorant; its qualities of warming the stomach, and exciting the system, and promoting all the secretions, ensures it a place among those remedies by which we seek to correct a cold, sluggish, chlorotic habit.

—— FERRUM, Iron, the best reputed tonic, and general stimulant, the medicine most particularly interdicted in hæmorrhagic and inflammatory diseases, is assuredly the best suited to the chlorotic constitution of a weakly girl as yet unconfirmed in health, and especially unconfirmed in that function, which is in women the very test of health.—The carbonate of iron, the sulphate, the acidulated tincture of iron, are all promiscuously prescribed in this disorder; and the carbonate is often combined with myrrh in pills and powders, for promoting the flow of the menses. But the more powerful medicines, for making an immediate impulse on the uterine system, and exciting its vascular action, are the Resinous purges, especially aloes.

—— ALOES, hitherto mentioned chiefly as a laxative, or cathartic, is found almost specific in procuring a flow of the menses: Even when used as a cathartic, its chief effect is upon the extremity of the rectum; it irritates the part, produces tenesmus, excites piles, stimulates the bladder, and promotes menstruation.—When, by every token of the preceding heaviness, and increasing pains in the loins, we know that menstruation is ap-

proaching; when the *menstrual condition* has been rising towards its achme for some days, but the uterine vessels have not seconded this general action; then, by bathing the feet, and giving an opiate at night, and adding a drastic dose of aloes in the morning, menstruation often begins to flow, chiefly during the quietness of the succeeding night; and though the *show*, as it is named, or first appearance of menstruation, be but slight, the repeating this process, at one or two periodical terms, completes the cure.

The Tinctura Aloes Composita, or combination of aloes with saffron and myrrh, used in smaller doses, and as a stomachic to invigorate and excite the system, has conspicuous effects in chlorotic constitutions.

——HELLEBORUS NIGER, Melampodium, Black Hellebore, is an old and much neglected medicine, of great intrinsic power, not as a purge, in which sense I never have used it, but as a warm and stimulant medicine, such as aloes is, and like it, peculiarly appropriated to the languid and chlorotic constitution. It is not, like the Veratrum or white hellebore, an acrid burning poison, yet is used as if it were, doubtfully and timidly. The celebrated Dr Mead found this one of the most efficacious emmenagogues: there is no medicine of whose virtues I am so little doubtful; it may be given morning and evening, a tea-spoonful for a dose, in a glass of warm water, increasing the dose gradually till it produces its effects. Nor is hellebore a medicine to be reserved entirely, like aloes, for the critical moment in which menstruation is expected to show itself. I often give it in combination with tinctura lyttæ.

——HYDRARGYRUM, MERCURY, is less frequently resorted to as an emmenagogue than it should be; and the reason is plain, we use mercury in no disease with sufficient confidence, except in lues. The barba-



rous practice of severe salivation in every case caused it to be abandoned, and to this barbarous and ill-regulated use of mercury, more befitting the usual proceedings of Paracelsus, or Van Helmont, than of rational physicians, succeeded that pitiful inefficient practice of giving what is called an alterative course, viz. slightly affecting the gums, and keeping them slightly affected, from which, I can too surely affirm, very many have irretrievably lost their health. No sooner was this distinction established, than it became also an established rule of practice; that for all other diseases except lues, alterative methods only were required. Daily we deceive ourselves with this word Alterative! We imagine, we believe, that we are altering, only because we are not sensibly affecting our patient's habit. Mercury, to be useful, must have physical effects, and these must be sensible: to be conspicuously useful, it must be made to operate powerfully: To cure suppression of the menses, (for amenorrhœa it is the reverse of useful), mercury must be so given, as strongly to affect the mouth; and having affected the mouth for some space of time, the patient begins to recover her strength; and the return of the menses, which often happens, will be more than a compensation for the alarms the patient has felt, at using a medicine which the female sex are accustomed to dread more than any disease. Some have been accustomed to use the blue pill, which I do not quarrel with, but rather prefer the *submuriâs hydrargyri*, in doses of two grains, repeated three or four times a day.

Those are perhaps all the principal remedies that we ought to name,—all surely that we need to use as emmenagogues: one only remains to be mentioned, OPIUM!—What process of the medical art, what cure is there, in which this invaluable medicine does not hold a

place, as an auxiliary at least, if not as a principal means of cure? Opium, given at bed-time, whatever stimulant medicines are used during the day, prepares the uterine surface for the menstrual discharge; and in almost all our processes of cure, an anodyne is given at night.

The other means inscribed in the list, though not peculiarly emmenagogue, are yet most essentially useful in co-operating with those we have named, as proper to be prescribed during the menstrual condition or orgasm. The **TEPID BATH** is eminently useful; or **PEDILUVIÆ** every night at going to bed, which almost supersede the warm bath; or **HOT FOMENTATIONS**, covering all the pelvis and private parts; and what is far too much neglected, the direct injection into the vagina of warm water or milk.

Those are the means which complete the whole process of cure, and assist the operation of the anodynes and emmenagogues. They are resumed at each returning period, but all the interval is occupied with the use of whatever may invigorate the system, unless where mercury is given,—**RIDING, WALKING, DANCING**, the moderate use of **WINE, COLD BATHING**, and **MINERAL** waters of the Chalybeate kind.

## CLASS VII.

OF STIMULANTS, AND OF RUBEFACIENTS OR EXTERNAL STIMULANTS.

HOWEVER conspicuous various remedies hitherto described may be for their stimulant power, some exciting the nerves, others the organs of secretion, still it is natural to set apart in one class, the remedies which have no other distinguishing quality, which merely stimulate and excite.—**Garlic, squills, cantharides**, stimulate: Every

emetic, and every cathartic, and every sudorific, stimulates: but these are not remedies to be given in lowness of spirits, fainting, or any other kind of languor. "Stimulants are such medicines as are given to excite and support the vital powers, having no further operation." But it is to be confessed, that of this class of medicines, many stand no higher in the opinion of sensible men, and are indeed prescribed with no other design, than as mere placebos.

The remedies I am now to enumerate are, the Essential Oils, Æthers, Camphor, Aromatics, and Bitters; which, in their various combinations, comprehend the polite and modern accomplishment of prescribing; an art more prized than all the science of modern anatomists, or the observations of ancient physicians. Their compounds, if not mere placebos, are comforting and cordial draughts, vastly like placebos; the medicines are such as may be varied or changed ad infinitum; they are not appropriated to any important class of diseases; they are prescribed when nothing else is required but a momentary excitement; they are prescribed in circumstances in which it is no way a matter of conscience with the physician, to be very tenacious, or very steady, either in regard to the medicine or the form. So trivial are the occasions on which this class of remedies is most frequently used, that it is by no means easy to separate in imagination, the prescriptions of Spiritus ætheris nitrosi, Oils of peppermint or cinnamon, of Aqua ammoniæ with distilled waters, from their usual title, PLACEBO. But so far as it is possible to prescribe those by system, and with a bona fide intention, it must be by recollecting what the diseases are in which stimulants may be useful; and these seem to me to be chiefly as follow.

1st, In faintings and hysteria, in nervous fits, and

nervous dyspnœa : In those delicate and irritable females, who are subject to all the anomalous symptoms termed nervous, in whom it often happens, that after fainting there come on slight convulsions, and long insensibility, the pulse low and tremulous, the breathing suspended for hours, and the patient lying in a state of nervous languor! Stimulants, or in other terms, cordials and exciting powers, are required.—Heat applied to the chilled extremities, and cold water dashed upon the face and neck, equally tend to excite the system. Draughts of ammonia, or of nitric and sulphuric æther; turpentine and opiate glysters; friction, smelling of ammonia; Æther, warm alcohol and water, and in an especial manner the golden tinctures, or spirituous distilled waters of the German practitioners, are given to restore and re-animate. These stimulants give that immediate and temporary excitement which is to be seconded by tonics, nutritious diet, and such medicines as tend to promote and regulate the secretions

2d, Next to this nervous debility to which delicate women are subject, even in youth, are those vertiginous complaints, fainting, feebleness of limbs, and slight palsy, which marks in extreme old age the period of approaching dissolution. Palsy is not in all cases the effect of arterial action, and gorging of the vessels, producing internal compression, such as to affect the function of the brain! When the brain is deserted of blood, its function fails more instantaneously, than even when it is oppressed:—from loss of blood we faint, the circulation being suspended, on which the office of the brain entirely depends:—from terror, fear, or grief, circulation is suspended, and we faint:—from long-continued fainting palsy often ensues, the circulation of the brain returning only partially!—When in a state of great languor and weakness, we rise suddenly from the recumbent pos-

ture, the circulation within the brain fails, and we faint!

Very old men, men who are emaciated in body, and pale and shrunk in countenance, from the circulation having become habitually languid, are from time to time affected with giddiness, and become sick and pale: they in the end fall down in a fit of sickness and faintness; and though they never are insensible, nor apoplectic, and have no flushing, nor other mark of vascular action or congestion in the head, are found, upon being raised up, to be paralytic of one side.

This is one of the occasions in which high stimulants and spirituous cordials are useful. To bleed a paralytic of this description, would be a flagrant misconduct. The cordial spirituous waters, warm brandy and water, ammonia, sulphuric æther, or the spiritus ætheris nitrosi, are to be given in draughts to restore and awaken the nervous energy, and to animate the circulation, which is to be farther sustained by generous wines and rich diet; by mustard, horse-radish, aromatics, bitters, and steel medicines, by electricity too, and if the paroxysm of faintness and insensibility continue long, by stimulant glysters of turpentine and aloes.

3d, In those severe pains of the stomach, which are so frequent in dyspeptic and hypochondriac patients; in violent paroxysms of hysteria, in which the patient grasps the stomach with the clenched hand, and tosses in agony; and in all those sudden pains of the stomach to which the most healthy are liable, STIMULANTS, which some will choose to call antispasmodics, are to be given without delay, and almost without reserve, especially OPIUM, Æther, or Brandy, Oils of Peppermint, Aniseseed or fennel, Pulvis Cinnamoni Compositus, Pulvis aromaticus, &c.;—and it is wise, as soon as an interval can be procured, to give juleps with carbonates of lime, or

magnesia, and diluents and demulcents, if there be reason to suspect any thing acrid as the cause of the spasm.

4th, In LOW FEVER, or Typhus, various modifications of stimulants, but most especially WINE, CAMPHOR, and OPIUM, are to be given.—It is but from want of distinction, that there arises the slightest fear or doubt of giving such medicines in FEVER.—Synocha is not fever; Synocha is a mere vascular excitement, a temporary intensity of arterial action, caused by some local disease. But Fever, exclusively so termed, low fever, nervous fever, remittent fever, is the operation of a poison (as of Infection, the poison of a wound for example, in dissecting dead bodies, of Marsh Miasmata, the foul air of Hospitals or Jails) upon the nervous system: The brain is poisoned; the low quick pulse, confused head, delirium, and trembling of the hands and tongue, are the principal signs; and during the prevalence of this influence, our whole solicitude should be, to sustain the strength till the poison is exhausted; just as in poison from opium, or in suffocation by carbonic gas, our care is to keep the patient awake and excited, and to support the vital functions till the influence of the poison has expired.

After all our attempts, then, to procure perspiration and a crisis, have proved ineffectual: when the fever has settled down into its proper form; when it is moderate, as in ordinary practice, and in cold climates, and especially in the fever of young persons: when the nervous system and brain are not irrecoverably affected: in long protracted, and yet not indolent fever, when there is a rapid, but not feeble nor trembling pulse, a furred tongue, a confused head, and slight delirium, with slight twitching or spasms of the muscles, especially observable in the tendons of the wrist, we begin to support the patient's strength with

diluted WINES in moderate quantities:—we allay the quickness of the pulse, and quivering of the hands, by Camphorated mixture, Camphorated emulsion, draughts of spiritus ætheris nitrosi, and cool fresh air circulating through the sick chamber:—At night we compose the patient to gentle rest, by a moderate draught of tincture of opium: and always we preserve the bowels in an active state.—Æther sulphuricus given in pleasant draughts, removes the tremors, and subsultus tendinum, and preserves the patient composed and cool, strengthens the pulse, and clears the head, and relieves the anxiety, tossing and sighing, and steadies the sickly stomach.

Those modest unpretending methods carry the patient safely through the delirious stage of fever. If symptoms require other prescriptions, they are still from the same class. If severe headache, or a degree of stupor, require a different excitement, we apply large blisters to the head, or to the back, or to the ankles, especially where the strength is sinking, or the low muttering delirium begun. The reason why it is so much a matter of indifference to which part of the surface the blister be applied, is plainly this, that a blister is but another form of STIMULANT! it conveys, indeed, a sensation merely, but it is a permanent and powerful one through the nerves of the skin; and it is as much a matter of indifference, (in fever), to which part a blister is applied, as to what part of the surface heat or cold is applied, or whether, in giving opium, it be swallowed into the stomach, or injected into the rectum.

When sickness and languor of this febrile description, induce us to prescribe those forms of stimulant which peculiarly affect the stomach, we give draughts of SERPENTARIA, COLUMBO, AMMONIA, CAMPHOR, and sometimes BARK, along with those AROMATIC waters which serve as pleasing vehicles for stimulants, or with those aro-

matic powders which associate so well with serpentaria, columbo, and bark.

It is not my intention to enumerate, in the following list, all the medicines that may be reckoned stimulants, but the principal stimulants and cordials only. Nothing perhaps contributes more to decision in practice, than a correct and scientific arrangement of the means of cure; for among the multifarious articles of the *Materia Medica*, the variety and profusion, and, as in this very instance, the very name and designation, "Stimulants," is apt to occasion indecision. The most natural arrangement of stimulants I can imagine is this.

*1st*, UNIVERSAL STIMULANTS, and of a diffusible kind, such as are fit to rouse and support the vital powers, in that most dangerous of all diseases, Fever; when the springs of life are tainted by the poison of foul air, or of infection; and when our main purpose is, to support the vital powers till the influence of the poison ceases. They are, WINE, OPIUM, ALCOHOL, ÆTHER, CARBONIC ACID, CAMPHOR, SERPENTARIA, CINCHONA, BLISTERS, and SINAPISMS.

*2d*, ACRID STIMULANTS, useful in Palsy and Chronic Rheumatism, in Amenorrhœa, Gleet, and Fluor Albus. Those are, ARNICA, ARMORACIA, SINAPIS, TEREBINTHINA, LYTTA, AMMONIA, IRON, SQUILL, COPAIVA.

*3d*, STOMACHIC STIMULANTS, Antihysterie Medicines, and such aromatics as have a stimulant power, but are chiefly useful as vehicles for other drugs. These are, GINGER, CAPSICUM, OR CAYENNE PEPPER, ESSENTIAL OILS, as those of PEPPERMINT, CINNAMON, OR FENNEL, OF PIMENTO, and of ORANGES.

Thus, then, stands arranged the catalogue of our stimulant drugs, not of all, but of the more valuable.



## 1st.

VINUM,  
ALCOHOL,  
ACIDUM CARBONICUM,  
CAMPHOR,

SERPENTARIA,  
CINCHONA,  
EPISPASTICA,  
SINAPINA.

## 2d.

ARNICA MONTANA,  
COCHLEARIA,  
ARMORACIA,  
SINAPIS,  
TEREBINTHINA,

LYTTA,  
AMMONIA,  
FERRI CARBONAS,  
——— SULPHAS,  
SCILLA,

COPAIVA.

## 3d.

ZINGIBER,  
CAPSICUM,  
MENTHA PIPERITA,  
CINAMOMUM,  
ANETHUM,

FÆNICULUM,  
PIMENTO,  
AURANTIUM,  
THERMÆ BATHONIÆ  
ET BUXTONIENSES,

BALNEUM FRIGIDUM.

There are not many of those medicines that require a particular description, after the progress already made in recapitulating the virtues of individual drugs; and there are many, as Alcohol, Wine, Æther, and Camphor, or essential oils, which follow each other in classes, where the individual article to be preferred can hardly be distinguished, otherwise than as more or less acceptable to the taste or the stomach.

———VINUM, Wine, a compound of sugar, acid, and alcohol, in various proportions, is, according to its kind, useful in various diseases, and is always a most precious remedy, being a powerful support of the vital energy, acceptable to the palate, and grateful to the stomach. Port wine, a stimulant accompanied with a

degree of narcotic power, is also useful as an astringent. Port is thence particularly useful in dyspeptic complaints, in diarrhœa, in dysentery, and in the cachectic habits of feeble ill-nursed children, who should have half a glass of port wine as a medicine repeated two or three times a-day.

In fever wine is an invaluable remedy, not to be replaced by any from the shop. In fever, (low fever surely, for no other is properly fever), our chief care is, to support the vital powers till the effect of the poison which caused it expires: and wine, while it supports the vital powers, plainly lessens the affection of the sensorium, and at once abates the delirium, revives the strength, and steadies the pulse. In fever, the best wine is claret, or diluted port, drunk cold, and given to the amount of a bottle in the day; more in the last stage, or worst species of the typhus; and to the extent of two bottles in sphacelus or gangrene. In gout, when the disease attacks the stomach, or invades the head, strong Madeira or brandy must be allowed: In the convalescence from gout, fever, or dysentery, Rhenish wine, (old hock), is the best cordial and astringent.

——ALCOHOL, though a powerful stimulant, is rarely used alone; it is usually reinforced by stimuli still more powerful, especially by ammonia; often also it is joined with bitters, with camphor, &c.; and those combinations are particularly prescribed in FEVERS, Typhoid fevers. ÆTHER SULPHURICUS ALCOHOLISATOCAMPHORATUS, is such a combination, viz. a drachm of camphor dissolved in an ounce of sulphuric æther: the dose is from half a drachm, which contains three grains of camphor, to a drachm, repeated three or four times night and day in low fever: In hysteric faintings it is also useful. This, applied externally, is the best cooling embrocation in external inflammations.

——ALCOHOL AMMONIATUM, the mixture of one part of liquid ammonia with two of alcohol, is prescribed in the same dose, of half a drachm or a drachm in asthma, as a stimulant and antispasmodic; and also in hysteria, but most especially in the paralysis of old and extenuated habits.

——The ALCOHOL DILUTUM AMARUM, is a far less pleasing form, indeed I know not why it should bear the title of Alcohol. It is no more nor less, than an intensely bitter tincture of gentian and wormwood, in ardent spirits; not a very elegant, but rather a sickening prescription; not adapted to fever, hysteria, nervous languor, or paralysis, but appropriated to languor of stomach and dyspeptic complaints. It is prescribed in doses of two or three ounces a-day, diluted with cinnamon or any other distilled water: If reinforced by the stimulant and diuretic powers of turpentine, if to each dose, to each ounce of the bitter alcohol, be added fifteen or twenty drops of spirit of turpentine, it forms a medicine particularly serviceable in dispelling the remains of dropsies, and restoring the strength and general excitement of the system. It is a coarse medicine, fitter for the military hospital or poors-house, than for refined practice; yet it is a useful drug.

——ÆTHER SULPHURICUS, already described as an antispasmodic, is often found a precious medicine in low fever. The best form in which it can be given, is in combination with camphor. The æther sulphuricus camphoratus already mentioned, the drachm of which contains from six to eight grains of camphor, thirty drops, conveying less than four grains of camphor, may be given dropped on sugar, in cardialgia, hysteria, hiccup, or any kind of spasm; or in a draught repeated three or four times a-day, in low fever. Its immediate effect is, to lessen the anxiety, relieve the breathing, raise and

strengthen the pulse, and produce a moisture on the skin; in short, it is a cordial and diaphoretic.

———ACIDUM CARBONICUM, is the medicine which should have been placed next to wine, as a refreshing cordial in fevers; with this distinction, that wine is more adapted to the last stage of fever, and to that which is attended with low muttering delirium, while this is adapted to the early stage of fevers, attended with vomiting and incessant sickness.

———The AQUA ACIDI CARBONICI, is in my opinion the best form in which we administer the carbonic acid, combined with a little sugar, citric acid, and Madeira wine. The Aqua Acidi Carbonici, is the better part of the effervescent draught: or it may be given without addition, to the amount of two or three pounds in the day. It is a refreshing stimulant, exhilarating, and to some, intoxicating beverage; useful especially in the less malignant fevers, in sickness, in vomiting, and in dyspepsia. When used in dyspepsia, it is best combined with another powerful and very universal stimulant, iron, which diffuses its influence more universally through the system than one would expect; and changes very suddenly the state of the circulation, the complexion, the secretions, and the colour of the blood. An iron wire being suspended in the aqua acidi carbonici, dissolves, and gives the full impregnation of a mineral ferruginous water, an excellent light preparation, a stimulant and tonic.

———AMMONIA, which is in asthma so powerful an antispasmodic, is still more frequently used as a stimulant, anodyne, and cordial. In hysteric faintings it is the stimulant most used of any; in grief, dejection, lowness of spirits, and hypochondriasis, it serves as an excellent anodyne, much preferable to opium; in the palsy of old age, proceeding from debility, and appear-

ing first in the form of a slight paralytic shock, viz. by vertigo and fainting, a dose of aqua ammoniæ is the best stimulant medicine; and continued two or three times a-day, and seconded by the external application of aqua ammoniæ to the palsied limbs, it is a medicine the most likely of any to restore the sensibility and muscular power of the part. To further its effects, it is combined with a variety of medicines, iron, valerian, and aromatics.

First, In the form of CARBONATE OF AMMONIA, it may be given in doses of two or three grains, from hour to hour, as in the mixture prescribed in the Section of Ex-temporaneous Prescriptions; a form, in which it is particularly appropriated to hysterical affections, lowness of spirits, or stomach complaints.—Second, It may be given combined with IRON, in the form of AMMONIATED IRON, which is prescribed as a bolus, to the amount of ten or twelve grains two or three times a-day; this form is peculiarly adapted to dyspeptic complaints.—Third, It is successfully combined with VALERIAN, in form of draughts, adapted to hysterical and menstrual affections, and to nervous headaches, and given also in low fevers, or intermittents, accompanied with pain and weight of the forehead.—Fourth, Combined with AROMATICS, in a mixture of which a few spoonfuls are given occasionally, it is useful, like camphor, in the last stage of low fever, to sustain the vis vitæ.—Fifth, To aid its stimulant power, when the irritability of the nervous system has almost expired, from a gradual waste of the body, it is often combined with LYTTA VESICATORIA. This approximates it to the acrid medicines, and is peculiarly adapted to the shaking palsy of old age, and more especially to that palsy which is attended with debility, and feebleness of the lower extremities, and incontinence of urine.

—————ARNICA MONTANA, Leopards-Bane, the

flowers, herb, and root, is found chiefly in Germany and Switzerland. This herb is an acrid stimulant, with a bitter aromatic taste, and is apt to excite vomiting, especially the powder of the herb itself: It is a cheap, rather coarse, but very effectual febrifuge, and a fit substitute for Cinchona; but is more distinctly stimulant than the Peruvian Bark: It quickens the pulse, and excites the sanguiferous system; it sharpens sensation so immediately, as to cause a universal prickling, like that of a limb benumbed, and recovering from compression, (sleeping, as it is vulgarly termed): It is from those qualities useful as an emmenagogue; it is useful also in chronic rheumatism, and most of all, useful in the palsy of mere debility and advancing age, especially when attended with incontinence of urine.

The powdered root is given in low fevers, and in the wane of dysenteric complaints, in doses of thirty grains three or four times a-day; but the infusion is the form universally preferred. In making the infusion of the leaves, they must be wrapped up in a piece of linen, to prevent the prickly down from being diffused in the fluid, for it occasions burning and irritation of the throat. Three drachms of the leaves infused in a pound of boiling water, makes a strong infusion, which may be taken by cupfuls in the course of the day; and its powers are sensibly quickened, especially in the last stage of typhus, by adding half an ounce of nitric, or of dilute sulphuric æther, to the decoction. In fever it supplies well the place of Peruvian bark; but in truth, wherever in the last stage of fever stimulant remedies are required, wine supersedes all others. Where a decoction of bark might with propriety be used, Arnica, or Arnica conjoined with Peruvian bark, will be found more effectual in supporting the pulse, and promoting the secretions; but it is chiefly

excellent in chronic Rheumatism, in Paralysis, and Ischurica Paralytica.

———COCHLEARIA ARMORACIA, Horse-radish-root, is too much an article of food, to be highly valued as a medicine; yet it is a slightly acrid stimulant, having a very general influence on the sanguiferous system, which it affects to its very extremities, and excites action in the very remotest glands. Hence its use in scurvy, or debility from unwholesome food, moisture, and want of exercise, whether by sea or land. It is used in scrophulous debility, which arises from peculiar weakness of fibre, or from a longer prevalence or habitual subjection to the same causes: It is useful in the dropsical effusions which follow agues and slow fevers; in chlorotic debility, where menstruation is sparing, or quite suppressed from feebleness of constitution; and last and most of all, important is its use in palsy.

In palsy, the shaved root of horse-radish may be eaten in the quantity of one or two drachms twice or thrice a-day; or taken in the form of expressed juice, a table-spoonful of which may be given morning and evening; or in infusion, a cupful of which may be taken in rheumatic or scorbutic cases, three or four times a-day. Always the sliced root, soft and recent, may be applied to the affected parts, with especial advantage in rheumatism, and even in palsy, and that without blistering the skin.

———SINAPIS, Mustard-seed, another acrid stimulant, so much resembling the horse-radish in all its properties, that what is said of the one might be repeated of the other; with this difference, that externally applied, this is the more acrid, the more powerful, and the most frequently used. Mustard-seed is useful in dyspepsia as a stimulant and laxative; as an emmenagogue in chronic cases; but chiefly it is useful in those two

diseases which I find to be so nearly allied to each other, viz. Chronic Rheumatism, and the Palsy of frail and debilitated habits. A botanical history of mustard, or any such familiar article, is not to be expected here; the medicine is always at hand, and always good. The entire seeds slightly bruised, are given to the amount of a table-spoonful, in a cup of water every morning, in dyspepsia and amenorrhœa. In rheumatism, and in palsy, we add every night at bed-time, a draught, a large tumbler full, of the mustard whey, viz. an infusion of bruised mustard-seeds in milk, boiled afterwards with vinegar, or Rhenish wine.

The most precious use of mustard is as a stimulant application, in rheumatism, palsy, or the last and mortal stage of typhus. In rheumatism and palsy, one of the best applications is the quack medicine known by the name of Essence of Mustard, in which the acrid principle of the mustard is reinforced by a strong impregnation of spiritus terebinthinæ. But in low fever, when blisters to the ankles have failed to rouse the vital powers; when stimulant medicines can no longer be swallowed; when the strength is ebbing fast, with a low and muttering delirium, a blackened tongue, and dry fauces, we apply SINAPISMS to the feet and ankles; a prescription which, it must be confessed, savours of extreme unction, and can hardly be supposed to succeed.

———ARISTOLOCHIA SERPENTARIA, Virginian Snake-Root, derives its stimulant and febrifuge virtues from that essential oil, which gives it the fragrant camphor-like smell of valerian. Its virtues are not unlike those of camphor, warm, stimulant, febrifuge, and diaphoretic in a slight degree; and I find it often an effectual anodyne, especially when joined with fifteen drops of tincture of hyoscyamus. It is often joined with camphor, to abate the febrile headache and low delirium; it



is given in powder or bolus, to the amount of a scruple three or four times a-day; or in decoction, or in the form of draught, to be shaken when given.

———CINCHONA OFFICINALIS, Peruvian Bark, Jesuits Bark, Pulvis Comitissæ, Quinquina, are a few of the innumerable names by which this far-famed remedy has been known. Its celebrity exceeds that of mercury, opium, or any other of the most valuable of our drugs: many accidental circumstances conspired to give it a factitious value. It was brought from a very distant country, in an age when all were equally ignorant, and equally fond of the marvellous; it was introduced by Jesuits, intriguing, and disposed, in all courts and kingdoms, to trumpet forth its incredible virtues: it had happily cured of an intermittent fever, the lady of a Spanish viceroy, the Countess of Cinchona: marvellous tales were recited of Indians, aye, and wild beasts, cured by drinking from pools into which the bark trees had fallen; and the bark was brought home, with such difficulty and mystery, and in so small a quantity, that it could be given only to princes, and was estimated at its weight in gold. I mean undisguisedly to express my dissent from those who have praised cinchona as a panacea, and to intimate my doubts of its being very useful in any disease, one excepted, intermittent fever.

From our medical histories it would appear, that for nearly two hundred years, the great contention has been, who should give, or, to use the magnificent word, *exhibit* this favourite remedy, in the greatest variety of diseases; and who could praise it most extravagantly. There is no disorder in which I have not found it useless! for which I do not find it praised!—it is extolled as efficacious in every opposite disease, in spasms and hooping-cough first; and then in small-pox and measles!—in fever and scrophula; in gangrene, and in rickets!—in phthisis and

dysentery ; in the plague, and in dropsy !—what rational man can hearken contentedly to this ?

It will be easily imagined, that I am not prepared to write the eulogium of Peruvian bark ; though I hope no one will believe, that I am capable of denying the multifarious properties of a medicine which I have not fairly tried. I do protest that I was sanguine in my expectations of finding Bark useful in many acute disorders, and certainly in the wane of all diseases. My doubts have all arisen from disappointments ; I have supported a spirit of credulity as long, as willingly, as perseveringly, as most of my fellow-labourers, but cannot say that I have been often gratified by success.

But there is one fact, which may perhaps explain my scepticism, and that of many sensible men with whom I have conversed on the subject : of one hundred pounds of Peruvian bark brought to these countries, (so great is its value, and such the temptation to deceit), not five pounds are genuine ! “ *Corticis cinchonæ officinalis, centum libræ, ad nos adlatæ, vix quinque vel decem genuinas, ut experientia docet haud equivoca, præbent.*”—WYLIE, p. 41.

There is one disease in which it is so indisputably useful, much as it may be adulterated, that in it the medicine may be reckoned a specific,—in AGUE ; and since it is, in Intermittent Fever, so conspicuously, so decidedly a cure, we cannot avoid a sort of persuasion, that in Remittent and in Low Continued Fever, it may be useful ; and from this prepossession have I placed it by SERPENTARIA. I shall not be at much pains to detail its botanical history, which is as yet avowedly obscure ; nor to distinguish the properties peculiar to the several species of red, pale, and yellow barks ; but not choosing, at my own peril, to treat too slightly a medicine so highly commended, I shall give

specimens in the next Section of this Work, of the forms and doses in which it may be most advantageously prescribed.

The diseases in which I believe Bark to be most conspicuously useful, are, in Intermittent Fever, Cynanche Maligna, and Gangrene; in Contagious Dysentery, and Low Continued Fever. In the former diseases, it must be given with unsparing hand, in doses as large and as frequent as the stomach or bowels will bear. In continued fever, it is best given in form of infusion, or decoction; or in the form of julep, conveying a moderate dose of the powder, suspended in some mucilaginous fluid; or with a proportion of the spirituous tincture, or in combination with serpentaria.

It is the bark of a tall mountain-tree growing in the province of Quito, in Peru. The demand has long been such, that the tree, which is destroyed when despoiled of its bark, has become rare, small, and degenerate: The bark imported into this country is sophisticated, or is represented by others of the same species. Its virtues reside in its tannin, or astringent principle, combined with a small proportion of essential oil, and of aroma. It is not perceptibly stimulant; it is bitter, and to many nauseous: given in any considerable doses, it loads the stomach, brings sickness and constipation, and sometimes excites diarrhœa. The dose of bark must therefore be conjoined, sometimes with aromatics, to make it sit lightly on the stomach; sometimes with opium, to prevent its purging; and in the convalescent state, whether from ague, fever, cynanche maligna, or dysentery, it should be conjoined with sulphas ferri and other astringents. But the sulphas ferri, with whatever astringent it is used, must not be combined directly in the same draught, but given separately at a different hour.

To take bark in substance, and in large doses, without endangering nausea, it should be given in milk, or with

extract of liquorice, or in form of a soft bolus, made with marmalade; or, best of all, by taking a piece of extract of liquorice in the mouth, till the tongue and fauces are thick coated with the mucilaginous extract, and the palate so impregnated with the bitterish-sweet of liquorice juice, that it mixes with the bitter of the bark, which is then scarcely discernible. Or it may be combined with the liquorice, and almost suspended by it, in a draught, to be repeated from hour to hour, or in mixtures.

For an infusion of bark, two drachms saturate a pound of boiling water; and the infusion is as perfect in two hours, as in twenty-four. The tincture of bark, (*Tinctura Cinchonæ Composita*), in which it is combined with snake-root, and orange-peel, is an excellent stomachic bitter, and an ounce or more of it is often added to an infusion or decoction of bark: But of the extract of bark we cannot say even this; it will not cure an intermittent; it is hardly useful as a stomachic; it is a useless, expensive preparation; the bark is actually decomposed, and its best virtues lost in the process. Were it not that there is much *placeboism* in prescribing bark, this same *extract* would, upon the authority of our best chemists, be thrown out of the Pharmacopœia.

I hold bark of little value in any diseases, except intermittent fever, and in full and frequent doses: but, far from feeling myself entitled to dissuade others from using what has been long thought, next to opium and mercury, a valuable medicine, I shall, in the Section of Extemporaneous Prescriptions, be at pains to lay before my reader the most approved forms of prescription, of powder, pill, electuary, draught, and mixture, infusion, decoction, and injection.

——CAPSICUM ANNUM, Indian Pepper, or Cayenne Pepper; the pods, seeds, and dry loose pulp,

of the capsicum, are all mixed in the spice, as it is brought to us from the West Indies. It is not acrimonious in the sense that mustard, horse-radish, turpentine, &c. are, but intolerably hot, and intensely stimulant. Its uses as a seasoning in curries, sauces, and soups, correcting the acescent tendency of vegetable food, and preserving the stomach in vigour, is well known even in this country; and in warm countries, such spices are essential to digestion and health. It is a pure stimulant, contains nothing narcotic, nor ultimately deleterious of the powers of the stomach; it prevents acidity, promotes digestion, and supplies the place of the more dangerous stimulants, spirits and wine. When given in dyspeptic complaints, it is usually in form of pills, combined with aromatics, and given to the extent of five or six grains, repeated three times a-day. It is advantageously combined with absorbents and aromatics, as Cinnamon and Magnesia for example.

A dilute infusion of the capsicum is much used in chronic ophthalmia. Capsicum is, in tropical countries, applied externally as a stimulant in low fever, as we use mustard or Lytta in this country: It stimulates and excites powerfully, yet without blistering. For such purposes, and especially for the cure of cynanche, it is infused in strong vinegar, and rubbed on the throat, and over the place of the tonsils.

It is also internally used as a stimulant in low fever, especially in the last stage, and in yellow fever: Three grains are given in form of pill, with half a grain of opium, and repeated every three hours: the pills, too acrid to be swallowed without pain and sense of suffocation, are either given in wafer, or involved in a coat of kneaded crumb of bread, or coated thick with mucilage.

————GINGER is another hot and aromatic spice,

useful as conspicuously as a seasoning for drugs, as for viands. The syrup of ginger is an excellent and pleasing vehicle for all varieties of medicine; the powder of ginger I like to mix with those absorbents which are given in dyspeptic complaints, in pains of stomach, or in that weakness which remains after protracted dysentery. It is mixed with super-tartrate of potass, and other saline purges; with all those medicines which are given in amenorrhœa, in the purges and anodynes prescribed for flatulent colic of the lower intestines, and in the infusions of gentian, and other stomachic bitters. Without prescribing doses of ginger, the purpose of using it is here so expressed, that when it is found among the extemporaneous prescriptions, the purpose will be conceived. The powder of ginger is sometimes, as a stimulant and astringent, applied to relaxed tonsils, taking up a pinch of the powder, and laying it with the point of a paper-folder into the hollow of the tonsil.

———*MENTHA PIPERITA*, Peppermint, the leaves, a common plant, affords yet one of the most powerful cordials. An acrid, stimulant oil, having much of the camphor principle, volatile, and easily forced over in distillation, constitutes the chief virtue of this medicine. This principle presents itself for practical use in two forms; in a distilled water, when the oil is diffused; and in pure oil, which is the form in which the medicine is most powerful. As a vehicle, merely, for other stomachic drugs, the distilled water is most familiarly used; but when we would put forth all the strength of the medicine, it is in form of essential oil.

The oil of peppermint dropped on sugar, is a very powerful cordial in gastrodynia, or pain of the stomach void of inflammation, and in hypochondriacal and hysteric affections of the stomach and bowels. In cramp of the

stomach, it is best combined with opium, in form of pill, of powder with sugar, or of draught. In the composition of all cordial draughts, pills, and powders; in the composition of stomachic pills and powders, or warm emmenagogue medicines, it is a precious ingredient. But I never could find febrile patients benefited by such a prescription, nor could they even bear it.

The leaves of peppermint may be given in form of powder, from a scruple to a drachm for a dose; two or three ounces of the distilled water may be given at a time; and of the essential oil, from two drops to five.

—LAURUS CINNAMONUM, Cinnamon, another stimulant aromatic, requires no detailed description; it is an equally powerful and much more pleasing stomachic stimulant, and one which it is much more natural to prescribe in form of powder. Cinnamon is in effect so acrid, that the surgeons whose province it was, under the Dutch government, to taste and assort the spice for the depots of it at Ceylon, found their tongues and fauces so tormented and ulcerated, that they could not long continue the process of tasting. Another proof of its intense power is, the effect of oil of cinnamon, beyond any other essential oil, in deadening the nerve of a corrupted tooth, and at once assuaging the pain of it. This medicine is at once pleasing to the taste and sense, and grateful to the stomach; the powder is an ingredient indispensable in cordial, astringent, and stomachic powders, and thence much used in powders, whose chief virtues lie in the magnesia, chalk, serpentaria, &c.; with these it is often joined.

The distilled water of cinnamon is the common vehicle of æther, spirit of nitre, camphor, and other medicines, given in draughts. Its essential oil, more powerful and grateful than any other, is exceptionable only on account of its price; and not on its price

truly, because there are few occasions in which we could grudge, even to the poor, the most expensive, or, as they were formerly designated, heroic and princely medicines, but because its price is a motive for adulterating it. Two or three drops of oil of cinnamon, have a powerful effect in a stomachic pill or powder, especially in pains of the stomach, and cramps.

——ANETHUM FÆNICULUM, Sweet Fennel Seeds, have the same stimulating aromatic properties, but the oil these seeds afford is coarse, neither pleasing nor powerful, compared with those just described. A drop of the distilled oil is often given in the colic of infants, along with their dose of purging syrup, or of magnesia and rhubarb; or a few tea-spoonfuls of the FENNEL WATER are given to a child as a carminative. Infusion of fennel is made, with two drachms of the bruised seeds to a pound of water: of the distilled water, three ounces are given for a dose to an adult, and from two to five drops of the essential oil.

——MENTHA PULÉGIUM, Penny-royal, is another of the tribe, resembling spearmint, and giving out to distillation a less pleasing essential oil, or distilled water. It is strong in the stimulant property, is much used among the poor, especially in the whooping-cough, and in the colics of children. An infusion of this mint in white wine, with steel-filings, was esteemed by Haller as among the most powerful emmenagogues.

——PIMENTO, Jamaica Pepper, or All-spice, as it has been named, from having a taste of each, viz. of cinnamon, cloves, and nutmeg, is among the most acceptable of the aromatic stimulants, not for its powerful effect, nor for any essential oil extracted from it, but from its pleasing flavour in the form of distilled water. It serves as a vehicle for whatever medicine we wish to prescribe in a pleasing form.



These are the principal stimulants, some of which are used for their power and efficacy, others as vehicles, and others, as it will be perceived, as placebos. We turn from them to that invaluable class of applications, the **EXTERNAL STIMULANTS OR RUBEFACIENTS.**

**CLASS VIII.**  
OF EXTERNAL STIMULANTS, RUBEFACIENTS, AND EPISPASTICS.

I REGARD this class of medicines, not as a trivial appendage to the stimulants which we use internally, but as a supplement to the whole materia medica; for I hardly know the medicinal process which would not be imperfect, without corresponding medicines externally applied. I shall endeavour to illustrate my opinions on this subject, by submitting to my reader a rational and very simple arrangement.

As far as I can recollect, external stimulants are used for one or other of the following purposes:—*1st*, Their most direct and natural use is, in reinforcing the power of stimulants given internally, to sustain the sensorial power in those circumstances in which it is most fatally affected, viz. Fever or Palsy. In fever, infectious fever, the nervous system is assailed by a subtle poison, the influence of which must expire before the patient can recover; and while its influence prevails, especially in the latter stages, we must ply all our stimulants, external as well as internal! To wine, camphor, and opium, we add sinapisms and blisters. But in palsy, the nervous influence is partially destroyed, by a direct injury of the substance of the brain; and being weakened in the extremities, demands, along with internal stimulants

and cordials, the use of acrid stimulants, as ammonia, mustard, &c. externally applied.

2d, In chronic rheumatism, a disease singularly allied with palsy, rigidity being, in this disease, conjoined with torpor, insensibility, and feebleness of the limbs, the same external stimulants are used, but combined with oils, and assisted by friction, to restore circulation and feeling to the diseased members.

3d, We often employ external stimulants for purposes directly the reverse of all those hitherto defined, viz. to cooperate with sedatives, narcotics, bleeding, and all other debilitating powers: for, while we seek to moderate the intense arterial action which endangers the mechanism of some important organ, by emetics, opium, or digitalis! we endeavour to turn aside the tide of blood from the parts thus threatened with destruction, by exciting the action of other sets of vessels; we relieve the brain, the lungs, the viscera of the abdomen, and the delicate internal mechanism of the joints, by rubefacients, blisters, and stimulants.

4th, There are certain circumstances of inflammation, in which the superficial vessels of the skin and its cellular substance being highly excited, all our efforts to allay this action, and to resolve the inflammation, fail; it then becomes our duty to assist the process of suppuration, as the only means of putting an end to the incited action. We seek to promote the effusion of gluten, by the more kindly stimulants of gentle and relaxing heat, moisture, poultices, oily embrocations; and if the suppuration be slow, and seated in a gland, we use plasters of various stimulating gums.

If certain medicines of the stimulant tribe correspond with those several intentions, then must it be a great pleasure to the young physician, to find the qualities and the uses of the several stimulants indicated by

the order in which they are arranged,—to find, in short, the aids best adapted to forward and assist his several processes, ready at hand.—By this he will feel himself insured against the most painful and dissatisfied feeling, viz. that of using external stimulants promiscuously, yet busily, without one distinct or rational intention! applying a blister, or some other intense stimulant, with no more regard to propriety than if he were prescribing a *placebo*, and without any apology but this, that an external application can hardly be a poison. Yet I think I have seen an ill-timed blister, or irritating stimulant, unadvisedly applied at a critical moment, do harm equal almost to a poison.

It is not possible that there should be certain orders of stimulants, precisely and exclusively applicable to those several uses: from various and slight considerations, the practical physician will interchange and vary these, as suits the exigencies of the moment; but still the several stimulants may be usefully arranged as follows.

1st,——ACRIA, acrid and irritating applications, fit to excite and support the whole nervous system in the last stage of fever, and to rouse the sensibility of palsied parts: Among the principal of those are, Lytta, Terebinthina, Sinapis, Ammonia, Allium, Scilla, Capsicum, Armoracea, Alcohol; none of them exclusively, but all of them peculiarly, applicable to those conditions of the system.

2d,——CALIDA, applications more moderately stimulant; more gradual and kindly in their operation; more suited to the ordinary purposes of exciting the languid circulation and dormant sensibility of parts, stiffened with rheumatism, or injured by sprains or bruises. Here oils are peculiarly useful, and stimulants combined with oils; as CAMPHOR, combined with oil or

axunge; AMMONIA, in form of soap; Soda, and MURIAS SODÆ, in form of fomentation;—ALCOHOL and ÆTHER, with several stimulant gums, as opium, camphor, and essential oils, which they dissolve;—Balnea Calida, and Therm; and, finally, Friction, after the manner of Mr Grosvenor, a means of exciting circulation, growth, and the power of motion, more effectual, as I have proved in my Quarto Volume on Tumors, than all the other means united.

3d,——SUPPURANTIA, medicines which, along with a gentle and kindly excitement of the whole mass of vessels, have in themselves, or by their mode of application in fomentation, poultice, or plaster, the effect of relaxing the cellular substance, and facilitating effusion. Such are, Allium, Camphor, Ammonia, Opium, Galbanum, Myrrh, Pix Burgundica.

4th,——ANTISEPTICA, as they have been termed, medicines which are supposed to have the power of arresting the progress of gangrene. If gangrene were what the older physiologists imagined it, a tendency of the blood, and humours, and what not, to putrefaction! or a stagnation of blood, by which it became subject to the usual laws of chemical affinity, the term might have a meaning: But gangrene is a putrefaction of parts which have ceased to live, because they have been killed by the intense action and suffocation of their own vessels: and the medicines to be applied in gangrene are merely stimulants, which, by exciting the vessels still alive, enable them, by the action of suppuration, to throw off the dead parts, or such other medicines as may serve, in some degree, to qualify the putrescence of the matter already dead, and likely to be absorbed.—The medicines are, Powders, of Nitre, Bark, Myrrh, and Camphor;—or Balsams, of Alcohol, Turpentine, and Camphor.

*5th*,———**RODENTIA**, or Stimulants from the mineral kingdom, chiefly of power to stimulate intensely, or, if required, to ulcerate the part, and thus carry vascular excitement, and its consequences, to the highest pitch. Of those the chief are, Calx, Tartras Antimonii, Nitras Argenti, Moxa.

To go farther in the enumeration of chemical stimulants, would be to anticipate the surgical Pharmacopœia; I mean now to enumerate those stimulants only, which are necessary towards completing every medical process; and therefore I think it not injudicious to add to my list Collyria, or washes for inflamed eyes,—Gargarisms, or washes for inflamed throat,—and Fomentations, for ill-conditioned sores.—We shall thus have under our eye, an orderly list of all the external applications, which it is any time the province of the physician to administer.

#### CATALOGUE OF THE PRINCIPAL STIMULANT APPLICATIONS.

I profess not to give a catalogue of all the stimulants that have been used, or which are now in use, but of the chief, of all indeed, that can be required, and of the most approved forms.

There is little motive for engaging in botanical or chemical details, in regard to applications so familiar: But there is a variety of form, and manner of applying those, which certainly adds to their usefulness, and must be described. Stimulants are applied sometimes in form of FOMENTATIONS, or watery decoctions and solutions, especially useful where the purpose is to appease inflammation, or to promote suppuration;—of EMBROCATIONS, or solutions of stimulant drugs in oil or spirits, fit to be poured upon the part affected;—or of LINI-

MENTS, when the stimulants are mixed with axunge, wax, or oils of a thicker consistence, to be applied as ointments, or rubbed into the parts affected with the palm of the hand;—of CATAPLASM, or poultice, a form which combines with the stimulant drugs, the powerful influence of heat and moisture, frequently renewed; by such poultices, the parts are moderately excited, and finally relieved by gently promoting the effusion into the cellular substance, or, in other terms, by promoting suppuration;—of PLASTER, where the stimulating medicine, though very properly added, has probably very little effect, compared with the adhesion and supported warmth of the plaster, as a plaster; by its adhesion and continued warmth, tumors, languid in their vascular action, are induced to suppurate;—or, finally, in the form of POWDER, which is chiefly useful when the inflamed part has burst into an open sore, or when the extreme violence of inflammation has terminated in gangrene.

To these forms of external stimulants, it is my purpose to add various forms of GARGLES, COLLYRIA, and INJECTIONS for GONORRHŒA.

CATALOGUE OF EXTERNAL STIMULANTS.

LYTTA,	PIX BURGUNDICA,
OLEUM TEREBINTHINÆ,	BITUMEN,
SINAPIS,	CAMPHOR,
ANTHEMIS NOBILIS,	AMMONIA,
ALLIUM,	SODA,
SCILLA,	MURIAS SODÆ,
CAPSICUM,	ALCOHOL,
ARMORACEA,	ÆTHER,
OPIUM,	MOXA,
MYRRH,	CALX,
GALBANUM,	TARTRAS ANTIMONI
TEREBINTHINA,	NITRAS ARGENTI.

Now, it is not to be denied, that the forms in which those various stimulants are used, modify their effect; and that certain forms, as well as particular medicines, are adapted by nature to certain affections.

1st, The forms of external stimulants most naturally resorted to in the last stage of Low Fever, and in Paralysis, are the most pungent applications that can be contrived, viz. of Spanish flies, mustard, ammonia, and turpentine, or of ammonia with camphor, or with turpentine; or of lime, the most acrid of all, in form of embrocations, or plasters.

2d, The medicines, and the forms of medicines, most naturally used in Chronic Rheumatism, Sprains, Bruises, Dislocations, and Indolent Swellings of the Joints; in the thickening and knotting of the joints, caused by gout; or for the resolution of Venereal Nodes, for stimulating dropsical joints, &c. are less acrid than those required in palsy, or in low fever. They are hot fomentations of Murias Ammoniaë, of Murias Sodæ: Liniments of Soap: Embrocations of Æther, Alcohol, and Essential Oils: Epithems of Turpentine, or liniments of Ammonia and Camphor, or of Ammonia, Opium, and Soap, or of all these combined.

3d, Cataplasms and Plasters, such as I now proceed to enumerate, though very useful, and indeed too rarely prescribed for pains and palsy, thickening of ligaments, and stiffening of joints, are yet more peculiarly appropriated to those circumstances in which we wish to promote suppuration in slow and glandular tumors. They are Poultices with Camphor, Onions, or Squills; Embrocations of Tartris Antimonii; combinations of Mercury, camphor, and ammonia, with axunge, rubbed into the tumors; or Plasters of Galbanum, Myrrh, and Camphor; or a plaster composed of lime.

4th, and lastly, Strong Stimulating Decoctions, warm

dressings, as they are called in hospital practice, viz. hot Turpentine, Ointments, or strong powders, as of Camphor, Myrrh, &c. These are the applications which we use in sphacelus, mixing the turpentine or powdered myrrh, &c. with the putrid skin of the gangrened limbs.

These slight notices may serve as a sort of general index for the order in which stimulating applications are to be enumerated.

*First Class of External Stimulants.*—The Common Blistering Plaster, *Emplastrum Lyttæ Vesicatoriæ*, is composed of simple ointment, mixed with a little proportion of axunge, to give it softness and ductility, and nearly one half of powder of Spanish flies. It should be recollected, that ointment, viz. oil and wax, deadens or involves all stimulant medicines; therefore, in applying a blister, the part should be previously rubbed with strong vinegar. It should also be recollected, that there are many excellent substitutes for blistering plaster; that the powder of Spanish flies may be scattered over any simple ointment, spread on leather, or strewed upon bread poultice; and that, in this latter form, they operate very immediately. It should not be forgotten, that Ammonia, Mustard, Squills, even Common Onion, or Horse-Radish, will, with the help of friction, operate as blisters; and that, to maintain a serous or purulent discharge in form of issue, either a dilute solution of the blistering ointment, or the ointment composed of savine, are excellent.

The Liniment of Ammonia and Turpentine is, next to actual blister, the most powerful stimulant we have: It is compounded of equal parts of Liquid Ammonia, common oil, Spiritus Terebinthinæ, and water, to which, when we would give it all the strength possible, we add



two parts of Tincture of Cantharides. Another embrocation, very powerful in exciting paralytic parts, in resolving the thickening round rheumatic joints, and in relieving spasmodic pains, is the CAMPHORATED LINIMENT with AMMONIA: This is another very effectual combination of camphor, dissolved in spirits of wine, mixed with lard, and strengthened with liquid ammonia. This liniment is useful, not only in exciting paralysed parts, and in rheumatagia, venereal nodes, &c.; but those who suffer a degree of impotency from want of excitement, are said to find this effectual.

POTASS is often found a powerful ally to those intense stimulants, and is, with this intention, joined with them in the solid form of soap, or Saponaceous Balsam. The Turpentine Soap is a combination of this nature, viz. of common soap and oil of turpentine, in equal proportions, with an added proportion of carbonate of potass. The RUBEFACIENT SOAP LINIMENT is just this in a liquid form; it is turpentine soap, dissolved in spirits of wine, and rendered more pungent by the addition of more turpentine, together with ammonia and tincture of cantharides; all of them stimulants sufficiently powerful for the purposes even of farricry.

Of the prescriptions of mustard I have not yet spoken, because there is one which supersedes all others, I mean the Essence of Mustard, easily procured, and well prepared. Whitehead's Essence of Mustard, for bruises, sprains, and rheumatisms, is merely an infusion of mustard-seed in spirit or oil of turpentine, in which the turpentine is far the more potent ingredient; and that it may be made, whenever, by accident, it cannot be procured, I write down the proportions: One ounce of bruised mustard-seed is infused for eight days in a pound of oil of turpentine; and wherever it may be supposed

useful to strengthen this hot application, two or three ounces of tincture of cantharides may be added.

These are our most acrid stimulants, and they are used in exciting paralytic limbs, in stimulating the genital parts in cases of impotency, in sciatic pains, in disease of the knee-joint, in thickening of the capsules of the joints, after sprains and laxations: But when it is necessary to have recourse to more powerful excitement, there is one stimulant still more acrid, viz. Lime. Lime is successfully applied as a stimulant thus: You mix one part of slaked or powdered lime, with two parts of oat-meal, and knead the powder with hog's lard, into the consistence of a thick ointment, or of poultice, which you apply thick to the loins, or round the hip-joint, in lumbago or sciatica. You may, with excellent effect, wrap this cataplasm round the knee-joint, when, in a feeble and scrophulous lad, it is swollen, and thickened, with a pale massive induration of the skin, ligaments, and periosteum.

SINAPISMS are domestic preparations: there is no occasion to give receipts in scientific form, for the compounding of mustard with vinegar and crumb of bread; that were indeed a refinement in the science of prescribing. The simple sinapism, CATAPLASMA SINAPINUM MITE, such as is fit to be wrapped round the ankles in the last low stage of fever, is made by mixing mustard-seed with oat-meal, flour, or crumb of bread, in equal proportions, and moistening and kneading them together into the form of a pulp or poultice, to be spread thick on a linen cloth, and bound slightly round the ankles, or applied, in form of plaster, to the soles of the feet.—When it is thought necessary, in case of deep apoplectic stupor, or in total and sudden palsy, to add strength to the Sinapism, it is converted into the stronger sinapism, CATAPLASMA SINAPINUM ACRE, by adding to

the mass one-third of shaven horse-radish, and a like proportion, or rather less, of the muriate of ammonia.

*Second Class of External Stimulants.*—The second class of external stimulants, consisting of Fomentations, Embrocations, and Liniments, suited not to fever, palsy, or the worst species of chronic rheumatism, but to the slighter accidents of sprains, blows, and rheumatic pains, is of course far more numerous, and in more familiar use.—The first and most simple of those gentler stimulants are, decoctions of Chamomile, of Southernwood, of Spearmint, and other aromatic herbs.

The best fomentation of this kind to bruised parts, is that used in warmer countries, viz. the Lees of Wine, an excellent astringent, and gentle stimulant. Our best fomentations, consisting of aromatic herbs, with the addition of vinegar and alcohol, is but an imitation of this. The DECOCTUM PRO FOMENTO, the common decoction for fomentations, is a decoction of Southernwood, Wormwood, Chamomile, and Laurel, in equal proportions: But it is to be remembered, that the spearmint, wormwood, southernwood, &c. are all so very much alike, that Chamomile, the most common, may represent them all; and the decoction of chamomile, being made strong, may be still farther strengthened, by the addition of three drachms of the muriate of ammonia, and two or three ounces of common vinegar, with a proportion of alcohol, or any common spirit:—As a fomentation to limbs or joints recently bruised, sprained, or dislocated, it is to be used extremely hot, changing the flannels every five minutes, and is to be continued (to be at all useful) nearly an hour at each time, and repeated three times a-day.

A similar fomentation, viz. of Alcohol, Vinegar, and Sulphuric Acid, is very useful in stimulating and

cleansing ulcers left after erysipelas, or in extensive scabby ulcerations. The Embrocation composed of Vinegar, Spirits of Wine, and Camphor, is also very useful in bruises, sprains, and ecchymosis. The Acetate of Ammonia, Spiritus Mindereri, is much used in slight sprains of the wrist and ankle, and in slighter degrees of rheumatism; and acetate of ammonia with soap, is also much used.

Fomentations and embrocations, more powerful by a few degrees than these, are formed by combining stimulant applications; by adding, for example, to the solution of soap, a proportion of acetate of ammonia, which may indeed be said to dilute, and of liquid ammonia, which certainly strengthens, the fomentation. The solution of soap in alcohol, the simple Soap Liniment, is another of the slighter stimulants, the most frequently prescribed for rubbing sprained or swollen joints, or the swollen glands of scrophulous and rachitic children.

The more powerful stimulants of this class are, the COMPOUND SOAP LINIMENT, compounded of soap and camphor, dissolved in alcohol; or the same rendered Anodyne at the same time that it is stimulant, by the addition of Opium.—The Liniment of Ammonia is a liniment composed of the Aqua Ammonia, mixed with three parts of Oil; and this again is reinforced, according to the exigencies of the case, by the addition of Turpentine, almost to the strength of that already prescribed for paralytic affections, by the addition of two most powerful stimulants, viz. Prepared Kali, and Camphor, in form of a liquid soap:—or without soap, the camphor may be simply dissolved in aromatic spirits, which form a cleanly and very effectual stimulant, such as may be applied to the swelling of the throat, of the testicle, or of lymphatic glands. The OINTMENT compounded of unguentum resinosum, Camphor, and Turpentine, may

be said to close this series of less acrid, and more familiar stimulants, or that composed of oil, turpentine, and sulphuric acid.

*Third Class of External Stimulants.*—Of those Ammoniated Camphor and Turpentine Embrocations, we have prescribed quite enough, and varied the forms perhaps too much; we come next to enumerate poultices, plasters, and liniments, for promoting suppuration, by exciting the whole vascular structure of the part, or, as we may say, the whole mass of vessels belonging to a swollen gland, or joint, or limb.

The DISCUTIENT INFUSIONS, and CATAPLASMS, as they are called, are really better calculated than any other, by their heat and moisture, and their gently stimulating virtue, to promote a kindly and moderate effusion into the cellular substance of an inflamed part. The DISCUTIENT INFUSION is composed of Aromatic Herbs; of Mint, Thyme, Wormwood, Origanum, and Chamomile, in equal proportions. These are infused for an hour in boiling water, and then brought to boil for a few minutes. To the pound of this infusion is often added a drachm of the muriate of ammonia, and two ounces of vinegar, or half a pound of alcohol.

It is the residuum of this process, the aromatic leaves which remain after this decoction, that, by adding to it a sufficient proportion of axunge, or of simple ointment, forms the DISCUTIENT POULTICE. But it is more properly a poultice for promoting suppuration! and is excellently well imitated, by adding to the common emollient poultice, or to lint-seed poultice, or bread poultice, a proportion of Gum Ammoniacum, previously dissolved in Alcohol, along with two or three drachms of sal-ammoniac, and a small proportion of alcohol. These fomentations and cataplasms are what we first prescribe

in indolent tumors, swollen glands, and serophulous joints.

The CATAPLASMA MATURANS is a stronger compound, consisting of Soft Soap, Flour, Roasted Onions, and Honey; or of oatmeal and honey in equal proportions;—or of an ounce and an half of Onion to the pound of common emollient poultice;—or finally, of onions stewed down in water, to a soft and thickish pulp, fit for poultice. Lily root, which was often used of old, being merely mucilaginous, is exchanged now for the common bread poultice, in forming these suppurating poultices.

——SEA SALT, MURIAS SODÆ, is a very powerful stimulant; the addition of a proportion of this salt contributes greatly to the power of such a poultice, and not unfrequently itself is made the sole stimulant ingredient in a hot poultice, being mixed with lint-seed or bread poultice. Murias ammoniæ is especially useful in bronchocele, strumous lymphatic swellings, salivary tumors, &c.

It has been questioned, whether, in the form of plaster, these stimulant applications are at all efficacious: there is no reason to doubt, that the softer forms, viz. of ointment and liniment, are more propitious to the action of acrid medicines; that the firmer composition of plaster prevents their influence; the more intense that stimulants are, the more fit to be combined with ointments. The stimulant gums combined with resin, in form of plaster, are better adapted to more indolent and glandular tumors.

Among the first of these, ranks the Ointment of Tartrite of Antimony; a scruple of tartrite of antimony, mixed with one ounce of axunge: Such ointment is often rubbed into a white swelling of the knee to excite it, or into a glandular swelling to promote suppuration.—The ointment, formed by mixing the nitric acid

with axunge, in the proportion of an ounce of acid to half a pound of ointment, is used for the same purpose, viz. of resolving white swellings, and procuring the suppuration of indolent tumors; it is besides useful also in the itch, and in herpetic eruptions.

All the varieties of bitumen, or mineral oil, whether the finer Naphtha and Petroleum, which comes from Modena in Italy; the Barbadoes tar, brought from the islands of the West Indies; or finally, the coarser bitumen distilled from pit-coal, and known among the vulgar by the name of BRITISH OIL, are all found very efficacious in chronic rheumatisms, in white swellings, and in glandular diseases. These mineral oils may be occasionally strengthened by the addition of other stimulants; one of the best and most approved forms, is the combination of Petroleum and Camphor.

——MURIAS AMMONIÆ, Mercury, Squills, &c. are often embodied in the denser form of STIMULANT PLASTER. The form of GUM PLASTER, the plaster most frequently used, is a compound of wax and resin, with oxide of lead to give it firmness; and of Gum Ammoniac, Galbanum, and Turpentine, to give it stimulant power. This is a plaster very frequently applied with the hope of procuring suppuration in indolent tumors, especially of the glands of the neck and jaws. The gum ammoniacum is often very judiciously combined with mercury, or with squills; the quicksilver, killed as it is termed, by long and diligent trituration with sulphurated oils; the squills dissolved in vinegar, and then mixed with the gum ammoniac.

*Fourth Class of External Stimulants.*—The stimulants best fitted to support the excitement in gangrened parts, and to excite the vessels to the point of suppuration, are strong stimulant fomentations, and

antiseptic powders as they are called. The best infusion for fomenting a gangrened limb, is the common infusion, adding to each pound of it three ounces of tincture of bark, and three ounces of camphorated spirits, or of camphorated vinegar, with occasionally a few drachms of muriatic acid, to correct the foetor.—After being fomented, which should be done three times a day, with this hot infusion, the gangrened limb should be wrapped in a poultice of oat meal, barm, and camphor, denominated the antiseptic cataplasm. But the best application to a limb so gangrened, that we are obliged to lay open the putrid parts, by making scarifications through the dead and hardened skin, or so macerated by the fall of machinery, or by cannon-shot, as to lie out a putrid and insensible mass, is a powder of equal parts of Myrrh, Nitre, and Camphor, which should be liberally strewed over the gangrened surface after each fomentation.

#### CLASS IX.

##### OF TONICS.

WE account TONICS as not merely those medicines which operate through the stomach, but various modes of general excitement contributing to raise and support all the functions of the animal body in their utmost vigour, or which, in other terms, maintain the re-action and tone of the living system. There can be no ambiguity in the term; whatever gives permanent incitement, ensures regular vascular action; incited vascular action is followed in its turn by increased exudation, which fills up the cellular interstices, and by increased secretion, which augments



the bulk of every fibre of the body. Increased nutrition, secretion, and growth of fibre, bring an increase of strength and tone; all the powers of the system are kept in high action, and all the changes, both of nutrition and absorption, are made to go on with still increasing rapidity.

The usual excitements to animal feeling and action, discreetly used, are tonics: Exercise includes almost all of them:—Exercise is an excitement to vascular action, the feelings are exalted, the pulse rises, and from such action a proportioned waste and absorption of the animal fibre ensues; from waste comes an increased demand for nutrition, which I take to be, according to the laws of the living system, a high excitement. Exercise then carries with it exposure to air, and to light; hilarity, and all the excitement of spirit attendant on change of place; a demand for increased nutrition, and that increased arterial action which secretes new fibre. These ordinary excitements are tonics of the highest order; they are universal, natural, and capable of being continually augmented! while partial excitements to the nervous system through the stomach, assist in supporting those actions, and constitute the class of medical tonics.

The arrangement, then, of tonics is easy, as their operation is obvious. “Tonics are such medicines as produce a moderate and permanent excitement:” First, Medicines operating solely on the stomach, aiding digestion, and thence facilitating nutrition, as vegetables, bitters, and acids:—Second, Tonics, or moderate stimulants, affecting and impregnating the whole system, as iron, and other metals:—Third, Universal and natural excitements, as wine, food, air, exercise, cheerful company, the amusement of places of public resort, mineral waters, riding, and country air and country occupations,

cold bathing, and the cool air, during summer, of the Highlands, or of the sea-coast.

The list, then, of tonic medicines need not be made very burdensome to the memory, nor the research concerning the individual substances very scientific; the chief indeed have been already mentioned.

## MINERAL TONICS.

Ferrum,  
Cuprum,  
Zincum,  
Acidum Sulphuricum,  
—— Nitricum,  
—— Carbonicum.

## VEGETABLE TONICS.

Gentiana,  
Serpentaria,  
Columbo,  
Cinchona,  
Myrrha,  
Capsaria,  
Sinapis,  
Armoracea,  
Rheum Palmatum,

VINUM, EXERCITATIO, BALNEUM FRIGIDUM, FRIGOR MONTIUM, VEL REGIONIS MARITIMI.

To these must be added, almost all those slighter stimulant and pungent medicines, which we use as vehicles in making draughts, infusions, or powders, as CINNAMONUM, PIPERITA, ZINGIBER, CASSIA, CANELLA ALBA, CALAMUS AROMATICUS, SEMEN CARUI, CARDAMOMI, CORIANDRI, MYRISTICUM. Those are almost invariably combined with tonics, to which they contribute little more than form, or a grateful taste. Tonics, then, are again referred to one of those classes; to STEEL and BITTERS, ACIDS and METALS, exciting the stomach;—to MINERAL WATERS, operating on the alimentary canal;—or to Wine, Diet, Exercise, and Cold Bathing, operating on all the sensibilities of the body, and all its active organization.

This class of medicines contributes rather to the preservation than to the restoration of health. These medicines are not a cure for any one disease, because there is no one organic affection, which they are suited to cure; they are given in the wane of all diseases, of fever, dysentery, diarrhoea, chlorosis, &c. It is but to prop up a debilitated, or animate a languid system, that we prescribe this class of drugs; and it is sad to think, how much more frequently we are employed in prescribing bitter powders, and tinctures, with aromatics, which approach so nearly to *placebos*, for the languid and hypochondriac, than medicines of real efficacy in curing disease.

——IRON is perhaps the first of tonic medicines, the most universally used, and the most confidently. It is often used alone, and as frequently combined with all the other tonics, vegetable as well as mineral. The carbonate of iron is the most usual form; it is given in form of pill, powder, or bolus; as a pill, or bolus, made with confection of roses, it is given in doses of six or eight grains three or four times a-day. The bolus is often given with a few grains of ginger, and in this or any form, may be given to the amount of two drachms a-day, but not more, without producing sickness. In powder, carbonate of iron is best combined with an aromatic, or with magnesia: In electuary, often with cinnamon, sugar, and supertartris potassæ, or in bark electuary.

The sulphates and muriates of iron, and the combination of iron with ammonia, are still more active. The FERRUM AMMONIATUM is an irregular chemical compound of undecomposed MURIATE of AMMONIA with MURIATE OF IRON; it is a preparation of which ten grains may be repeated three times a-day. It has been chiefly celebrated in RICKETS, and is given combined with

RHUBARB every morning, with occasional purges interposed, and occasional intermissions of a few days. The SULPHATE OF IRON is a valuable form of the medicine, and is very happily conjoined with neutral salts, given in the morning, as mineral waters, or alone, or with cinnamon, columbo, &c.

————TARTRIS FERRI is another valuable, because a very soluble preparation of iron; it is the Soluble Iron of the older pharmacopœias, which, rubbed down with sugar and oil of peppermint, makes an excellent stomachic. The Tinctura Ferri Acetati, is the liquid form in which iron is most frequently prescribed, thirty drops or less being given in a glass of water three times a-day.

Iron prescribed in any of those forms, immediately occasions foetid eructations, blackens the stools, quickens the pulse, increases the secretions, and in no long time improves the complexion. There can be no fact more certain, nor any proof indeed of the tonic powers of iron more satisfactory than this, that ferruginous mineral waters are dangerous to those who are subject to disorders of the brain, especially to those who are subject to giddiness and slight apoplectic paroxysms, preceded by pulsations of the temporal arteries: In such cases, preparations of iron are as immediately dangerous as external heat, warm baths, or wine; while they are in the same proportion useful to those affected with pure paralysis. Iron and its preparations, then, aggravate apoplexy; occasion headaches and sickness; force the return of habitual hæmorrhages; and are therefore peculiarly dangerous to those who have disorders of the brain, or of the lungs, while they are universally useful in Chlorosis, Amenorrhœa, Rachitis, Scrophula, jaundice, and dropsy.

————CUPRUM, Copper, is a metal known more by its deleterious, than by its medicinal qualities, and too dangerous in my opinion for internal use. Its value,

externally applied, is indisputable; but its exhibition internally, was owing rather to a prejudice or whim of the late Professor Cullen; and it is rather mortifying to those inclined to the use of this poison, that it is chiefly trusted to in an incurable disease, *Epilepsy*! while there is no evidence of its value in any curable disease. The only preparation of copper given internally, is the pill of Ammoniaret of Copper; and that I may not incur the blame of expunging a medicine, obnoxious though it be, (and it is indeed as dangerous and as unavailing as any thing that can be named as a medicine), I shall explain how it is to be used. The pills are merely Ammoniaret of Copper with Crumb of Bread; they weigh three grains, and convey each half a grain of the medicine; one pill is to be given twice a-day at first, viz. a grain daily of the Ammoniaret, increasing the dose gradually till it sicken. This medicine is reported sometimes to have proved a cure for epilepsy.

SUBACETATE OF COPPER, or Verdegrease, is an excellent application to ulcers, especially of the nostrils, lips, and tongue, or to cutaneous sores.

——ZINC is a more harmless, but hardly a more useful tonic. The pure oxide of zinc is given as a tonic in epilepsy, asthma, and other spasmodic diseases; but I am persuaded with very little effect, and not without danger, for sometimes it operates as if it were tainted with arsenic or lead, contaminations which are so very likely, as to forbid our using it long, or in large doses. The oxide of zinc, calcined zinc, or, as it was formerly named, flowers of zinc, is given in doses of six or eight grains, up to the amount of half a drachm or two scruples; and the best form is to rub it down simply with a little sugar.

The sulphate of zinc, which I have already mentioned as a quick emetic, is also, though rarely, used as a

tonic; but its chief value is as an astringent in collyria, astringent washes, and injections for the urethra.

I do not think that we have tonics from the vegetable kingdom as powerful as these.

———*GENTIANA LUTEA*, Gentian.—The roots of gentian are long, tough, yellow within, and brownish without, intensely bitter, with an aromatic flavour. This is the purest and strongest of our bitters; it is used as a stomachic,—as a general tonic, though with power much more limited than that of iron,—and as an anthelmintic. It is chiefly prescribed in cases of mere Dyspepsia, in habitual debilities of the stomach or bowels, and in Bilious disorders; in cases especially of eructation, acidity, and indigestion; and it is especially useful in abating pains of the stomach. Bitters are fashionable, and this, the basis of them all, has become a favourite medicine. We are apt to forget, that wine must be at once the best assistant, as well as the fittest menstruum for stomachic bitters, and that a vinous infusion should be preferred to extract, or any other form. The *TINCTURA GENTIANÆ COMPOSITA* is the most desirable form; it is an infusion of two ounces of gentian in two pounds of spirits, with the addition of orange peel and canella alba. This may be taken in the proportion of a table-spoonful three times a-day, diluted with pure water, or with some distilled water, as *Aqua Pimentæ*, &c.

A similar infusion, but in wine, we very often prescribe as a more familiar medicine to be made by the patient, and taken by wine-glassfuls, in which the virtues of the gentian are usually combined with those of Columbo and of Aromatics.

Watery infusions, too, are very grateful to the stomach, lighter, and in certain circumstances more proper; the addition of a fourth part of spirits to the watery infusion, both strengthens and preserves it: gentian, given

in great quantities, and in bilious habits, operates like aloes on the bowels.

———*ARISTOLOCHIA SERPENTARIA*, like gentian and cumbo, is a yellowish root, with a dark brown envelope. It is a warm pungent aromatic bitter, which, as already observed, is found cordial and anodyne in low fever, and is most happily prescribed in combination with opium, or more particularly with camphor. But as a stomachic, its warm pungent and stimulant power makes it very valuable. It is lighter, more efficacious, and every way preferable to bark, in the debility left by severe or lingering diseases. As a stomachic, it is given in conjunction with iron, magnesia, pimento, &c. either in powders or in draught.

———*CUMBO* is the root of a plant imported from Columbo in the island of Ceylon, and but little known except by its virtues. It is like the other aromatic bitters, a tough wrinkled root, yellow in its pith or central part, brown on its skin or epidermis, slightly aromatic, somewhat acrid, and very intensely bitter. It is, like *serpentaria*, prescribed in fever; but is infinitely more valuable as an astringent and tonic in Cholera. In the sick stage of low fevers it suspends the vomiting, and procures sleep: in dysentery it is reckoned by many a very specific; its active principles are the same with those of bark, its tonic powers infinitely superior. In Cholera, febrile diarrhoea, dysentery, in the vomiting of pregnancy, and in the sickness of fever: In languor, and debility of stomach, it is given like the other medicines of this class, in draughts: when we wish an immediate operation, we give it in this form of draught; but we give it in powder, with magnesia, aromatics, cinnamon, rhubarb, iron, &c. when we wish it to have more permanent effects as a stomachic.

———*CUSPARIÆ CORTEX*, the Angustura Bark,

brought to us from South America, but lately introduced, and commended as a specific in dysentery, is the bark of a tree equally unknown with the former. It is of a greyish-yellow colour, intensely bitter, and with little aroma. It is a warm and efficacious tonic in disorders of the stomach and bowels; is of excellent use in anorexia, flatulence, pain of stomach, and in short in all forms of dyspepsia; and in DIARRHŒA is of peculiar efficacy.

Angustura is given alone, in doses of fifteen grains three or four times a-day, or in combination with carbonate of lime, rhubarb, iron, &c. The best vehicle is a glass of cold water; the most efficacious form, a simple powder: A moderate dose of fifteen grains is found more efficacious than a heavy one. This is a medicine much lighter on the stomach than Peruvian Bark, which, in large doses, is very sickening and oppressive; and let it be remembered, that though Peruvian Bark takes precedence of all others in intermittent fever, angustura, columbo, serpentaria, are all preferable tonics. An infusion of angustura is so feeble, as to be little better than a mere placebo, which is indeed the undisguised, right, honest term for all your "light infusions of bark," &c.

——MYRRHA, Myrrh, is a reddish-yellow odoriferous gum, of unknown plants brought to us from China, and Cochin-China, in the form of big tears or drops. It is produced in Arabia and Abyssinia, and peculiarly prized all over the East, for its uses as a perfume, and in embalming dead bodies. It is a strong and powerfully aromatic bitter gum, which is very perfectly soluble in alcohol, forming a pure transparent tincture, but also in water, whence it melts entirely in the mouth.

Myrrh is a warm stimulant and tonic medicine, which invigorates all the secretions, and especially promotes the



uterine discharge. It is usually given in powder with steel, as formerly mentioned, or in pill, in doses of fifteen or twenty grains three or four times a-day; or a drachm of the tincture may be given either in combination with other stomachic bitters, or with peppermint-water. This is the least unpleasant, the warmest and most cordial of bitters: it is a medicine too little used, except externally for washing sores, or injecting sinuses, or strengthening the gums.

I cannot allow myself to close this Section on Tonics, without mentioning purges as the most valuable. Some no doubt feel as if frequent purges were a sort of poison, the intestines being kept in an irritable condition, and the stomach sickly; but this is far from being the usual effect. If heavy doses of bark, of steel, of columbo, &c. be given in any disease, the interposition of purges is essential; and in all circumstances, a brisk purge, given from time to time, and followed on the evening of the same day with a cup of warm wine, or wine whey, invigorates the appetite, brings on a keen and healthy action of the absorbent and vascular system, and favours any tonic course of medicines. This effect of purges best explains the happy operation of mineral waters, in strengthening languid health.

———AROMATICS, in so far as they are medicinal, are tonics, and are justly ranked under this denomination; yet there is little reason to detain readers of even the most moderate information, with botanical histories, of Peppermint, Ginger, Cassia, and Capella, Clove gillie-flowers, and Oranges. When he finds these aromatics in any receipt, he can hardly be at any loss to divine the intention of them; the chief design must always be, to make the draught more acceptable to the taste or stomach: they are merely vehicles.

## CLASS X.

## OF ASTRINGENTS.

It must appear at the first superficial view, that the class of astringents cannot be very important, and that the word astringency, and astringent, implies a slight and topical effect. But under the Title Astringents, we are called upon to class all those valuable remedies which have an influence in moderating increased discharges,—an influence more important often towards saving the life of a patient, than that even of the medicines adapted to allay nervous pain, or suspend vascular action.—PROFLUVIÆ, INCREASED DISCHARGES, whether hæmorrhages from the internal surfaces of the body, or effusions of serum and of mucous secretion, together with those irritated motions which hurry along the nutritious parts of our food, unconcocted, through the alimentary canal, are among the most dangerous, whether they occasion the nutritious substances to run to waste, through profuse discharge, or prevent nourishment being assimilated or absorbed.

There have been very idle debates about the existence of universal astringents; and an opinion has been propagated, chiefly by the celebrated Dr Cullen, that astringents applied to the stomach or surface, may, by a sort of sympathy, and through the medium of the nerves, have an influence even upon the most remote parts of the system. That an astringent medicine, applied to the stomach, or to the surface, or in any imaginable way, should have the effect, by sympathy, of constringing the exhalent arteries on the surfaces of the throat, of the lungs, or of the womb, is a thing so incredible, that if such a fact were proved, we should be at a loss to conceive how so singular an effect was produced. But in truth, we have no reason, either from

experiment, or from observation in disease, or from analogy, to believe the fact. We must resort to other principles for explaining the influence of medicine, in stopping hæmorrhages and profuse discharges. This, of an astringent power, propagated by sympathy, is widely different indeed from any thing that I should have imagined.

Hæmorrhages and Profluvia, or increased discharges, depend surely upon the mechanism of the part, and are consequences of vascular action excited to an intense degree, in delicate internal surfaces, or in secreting membranes. Profluvia, or fluxes of mucus, of serum, or of mixed and anomalous matters, are the mere consequence of intense arterial action, dilating the extremè arteries; and no one can be at a loss to perceive how and why this happens, who has ever injected the dead body; for while the injection, driven with its colouring matter through the larger vessels, remains in them, and fills them, the finer parts exude from every surface, emanate in small goutts from all the internal surfaces, and if pushed hard, stream out from the nostrils, the surfaces of the throat, of the lungs, of the intestines, of the brain, &c. The phenomena of a common cold explain the mechanism of the animal body; for the patient wakens in the morning before his paroxysms of coughing come on, with the nostrils dry, and the Schneiderian membrane no way swollen nor inflamed; but in five minutes the violence of coughing, arising distinctly from irritation of the larynx, so injects the head with blood, that the very brain is oppressed, the head is confused, the sight obscured, and the serum streams profusely from the nostrils, as water exudes when injected through the carotids.

Hæmorrhages are what inflammation should be in the same circumstances. Inflammation is intense action of vessels in parts where there is no outlet for that effu-

sion, whether serous or bloody, which must ensue, except the cellular substance or solid structure of the part! Hæmorrhage is intense arterial action on surfaces so delicate, that the extreme vessels give way, and blood is poured out into the trachea, the stomach, the rectum, the cavity of the uterus, or whatever organ is affected. Profluvia, or increased discharges, are excited vascular action on those surfaces destined to secrete the useful fluids, but which, when the structure is forced, and the extreme vessels dilated, pour out not a natural or mature secretion, but a thin, serous, pungent fluid, often mixed with blood, as in CATARRH, DYSENTERY, GONORRHŒA, and FLUOR ALBUS. From this induction it is obvious, that the best and the only general astringents, are those which suspend vascular action; and that it is only in hollow tubes, through which we can freely pour what may be called external applications, that we can have the benefit of what are truly Astringents; for there are, as we shall presently explain, many remedies which have this direct effect of astringency upon the animal fibre, as manifestly as upon dead matter, and probably through the same chemical affinities.

It will require no argument, but the spontaneous conviction arising from experience, to confirm this view of the subject; when we recollect how we have learnt from experience to treat those diseases, we perceive that this is the simple truth. It is indeed natural, upon observing the phenomena produced by cold on the living body, viz. its corrugating the scrotum, contracting the skin, expelling the blood from the extreme vessels, causing universal paleness, and arresting hæmorrhages, to ascribe these phenomena to the *astringent* power of cold, and to rank *cold* as the most universal astringent. In like manner, ipecacuanha moderates, in a remarkable degree, uterine hæmorrhages, alvine fluxes,

and pulmonary discharges; and this is denominated a new property! an astringent power! when all the while COLD, IPECACUANHA, BLEEDING, NITRE, ACIDS, OPIUM, all that we prescribe in hæmorrhages and profuse discharges, are merely sedatives, moderating the vascular excitement in the diseased surface, and the sensibilities of the whole frame; and hæmorrhages and profluvia are, upon surfaces, the result of that incited action, which, within the surfaces of the skin, or in the substance of the various organs, would cause exanthemata, erysipelas, swellings from effusion, inflammations, and suppurations.

ASTRINGENT medicines must be strictly defined, "Such as, being immediately applied to vessels either actually forced and burst, or merely dilated, so as to pour forth actual blood, (or a profusion of lymph or serum, or a diseased secretion, often tinted with blood), CONSTRINGE and close them." But in the general relation of medicine to such diseases, it is necessary to take a more liberal and general view, and to class together all medicines, useful in profluvia, general as well as topical.

*1st*, GENERAL REMEDIES in hæmorrhages and profluvia, are such as moderate vascular action; and those especially useful in this order of diseases, are, EMETICS, COLD, MINERAL ACIDS, NITRE; to which must be added, Bleeding, Digitalis, Opiates, and Purges, which are beneficial in hæmorrhages even of the bowels, and bleeding useful in all hæmorrhages: though, of the benefit of this universal remedy, humanity was nearly deprived, and actually so for a time, by the low ridicule, and surly, impudent dogmas of the BRUNONIAN SCHOOL.

*2d*, There is another order of astringents allied with these, in so much as they are beholden more to their effects as sedatives, than to their direct astringent power.

Alvine fluxes proceed as much from continued irritation, and muscular excitement, as from vascular action, or increased secretion; and in these circumstances, earthy medicines, which neutralize the acid, (and are thence named Absorbents), and opiates, which at once allay the sensibility of the surfaces, and subdue muscular contraction, are the best astringents, for so they are named and used, although, like cold and emetics, devoid of any real astringent power. This order includes OPIUM, CARBONAS CALCIS, GUM, MIMOSA NILOTICA, &c.

3d, There is an order of medicines truly and directly astringent, which, being applied to the diseased surface, or hæmorrhagic vessels, constringes them; and this valuable class of astringents is in daily use in all kinds of diseases, both internally, where their astringent powers can act directly, as in Hæmatemesis, or vomiting of blood; in Melæna, or morbus niger; in Cholera morbus, Diarrhœa, and Dysentery; in Menorrhagia, Leucorrhœa, and Gonorrhœa: Also in external disorders, as Ophthalmia, Ulcerations, Sores, Fistulas, Polypi, ulcers of the throat and nostrils, piles, and other disorders of the verge of the anus.

ASTRINGENTS, whether derived from the mineral or vegetable kingdom, owe their power to one of two principles, viz. Acid or Tannin; and these corrugate the parts of living bodies, probably by the same chemical property that operates on the dead, viz. by affecting the animal gelatin. Of acids, the Nitric, Sulphuric, and Muriatic acids, and Alumen;—from the vegetable kingdom, the Acetous and Gallic acids, are powerfully astringent; and these are used chiefly in hæmorrhages.—But of vegetables, the astringency is proportioned either to the prevalence of the tanning principle, or of gallic acid, or their proportions to each other, and to the inert vegetable matter; for both principles of astringency are

combined in almost all vegetable astringents. The vegetables in which these two astringent principles are found most to abound, and in which their existence is announced to us by their taste, and action on the tongue, are, Galls, Oak-Bark, Columbo, Catechu, Simarouba, Serpentaria, Rose Leaves, &c.; there are, indeed, few vegetables entirely void of this property.

Perhaps a slight concluding sketch of the various uses of astringents, in the several orders of external and internal diseases, may have its use in practice, especially to the young and inexperienced.

First, In general hæmorrhages, where we have it not in our power to apply direct astringents, as in hæmorrhages from the lungs, trachea, kidney, &c. we rely chiefly on sedatives and narcotics, as they are described in their respective classes, and especially on COLD, Emetics, BLEEDING, PURGING, ACIDS, as well vegetable as mineral, viz. vinegar, sulphuric acid, nitric, and muriatic, NITRE, SALINE DRAUGHTS, OPIATES, DIGITALIS.

Second, In hæmorrhages from surfaces, which, though internal, can be reached by the direct astringents; in Hæmatemesis, or vomiting of blood from the surface of the stomach; in Melæna, morbus niger, or black purging of scurvy, or of malignant fever, where the blood exudes upon the internal surface of the bowels; in Menorrhagia, or excessive menstruation; in Abortion, and in Child-Bed Flooding; in Epistaxis, or flow of blood from the nostrils; in those dreadful hæmorrhages which accompany Polypus of the nostrils and vagina; the vessels may be constricted, (besides the general remedies just mentioned, of sickening doses of emetics, bleeding, and cold), by giving liberally of dilute sulphuric acid, of alum, of vinegar, &c. joined with infusion of roses, oak-bark, gum kino, &c.; or by injecting dilute acids into the nostrils, vagina, and uterus.

Third, In alvine fluxes, accompanied with pain, fever, and muscular irritation, our course of medicines is directed first to soothe the surfaces, to assuage pain, and gradually to constrict the vessels and glands, which pour out their lymph too profusely.—Here acids can hardly be allowed a place: the first medicines are, Opiates and Absorbents, the second, slighter and merely vegetable astringents, as OAK-BARK, LOGWOOD, CATECHU, GUM-KINO, COLUMBO, SERPENTARIA, CINNAMON, RHUBARB, PERUVIAN BARK, ROSE LEAVES. These are the medicines used in Dyspepsia, Diarrhoea, Dysentery, and Cholera Morbus.

Fourth, A long and valuable order of astringents, is that of medicines which prove slightly stimulating and astringent in the disorders of hollow passages, especially in serous and mucous fluxes; in diseases of the urethra and bladder; in fluor albus, or serous and mucous effusion from the surfaces of the vagina and womb; in sores of the nostrils or throat; in polypi, &c. or in external sores. And here we return to the saline astringents, and chiefly to combinations of the sulphuric and vegetable acids with various metals, or combinations of metallic salts with vegetable astringents; ACETAS PLUMBI, SULPHATES OF ZINC, IRON, and COPPER; VINEGAR, WINE, TEA, INFUSION OF OAK-BARK, ARBUTUS UVA URSI, &c. These are the chief of this class; and the same medicines are applied sometimes in the form of watery solution, sometimes of ointment, sometimes of dry powder, to external ulcers, to eruptive sores, to ophthalmia tarsi, to large, flat, and gleetings ulcers, which are indeed in a condition little different from that of hæmorrhagic surfaces.



## LIST OF ASTRINGENTS.

MINERAL.	VEGETABLE.
Super-Acetas Plumbi, Acidum Sulphuricum, Super-Sulphas Aluminae et Potassae, Sulphas Ferri, ——— Cupri, ——— Zinci, Oxidum Zinci, Carbonas Zinci, ——— Calcis.	Opium, Acetum, Quercus, Gallæ, Catechu, Kino, Arbutus Uva Ursi, Columba, Serpentaria, Simarouba, Cinchona, Rosa Gallica, Hamatoxylon, Rheum Palmatum.

———SUPER-ACETAS PLUMBI. The oxide of lead, super-saturated with the fumes of acetic acid, then dissolved in vinegar, and crystallized, is a white, sweet, astringent salt, drawing together the lips, and affecting the organ of taste with a sensation strongly resembling that communicated by alum. Lead is at once a deadly sedative poison, extremely insidious, affecting the health (in those who work in lead) for years before it produces palsy: Its effects are, emaciation, paleness, a sickly habit, feebleness, loss of appetite, pain of stomach, constipation, frequent colic, and at last palsy.

Super-acetate of lead was used internally for the cure of phthisis; and no doubt it were a strong apology for the cautious use even of this insidious poison, if it had any real influence in a disease so invariably fatal. But the use of such a poison arose from a passion and pride that

vailed some years ago, in prescribing the most deleterious poisons, safely at least, if not successfully. This course of experiments was continued long enough to enlarge the bounds of the materia medica, and to distinguish this particular poison as one for ever to be avoided. I know no man who would now be so fool-hardy or daring, as prescribe the *Tinctura Antiphthisica*, as it was called, or solution of lead.

Externally applied, Acetate of Lead is an invaluable medicine; it is used continually as an astringent and cooling solution, of the strength of a drachm to the twelve ounces, when dissolved in distilled water; a drachm to ten ounces, when common water is used; or, if it is required of greater strength, a spoonful of common vinegar is added to aid the solution.—In the form of solution, it is the astringent most approved in external inflammation, in burns, in cutaneous sores, in ophthalmia; it is also the best injection in fistulas, runnings of the ears, diseases of the nostrils, gonorrhœa in the male sex, and sores and runnings of the vagina.

The *Super-Acetas Plumbi*, or Sugar of Lead, as it is named, is mixed with wax and spermaceti in ointments; but any metallic preparation so involved loses its effect. The pure or white oxide of lead, *Cerussa*, *Oxidum Plumbi Album*, is one of the most precious applications for rebellious sores; and if this dry powder, mixed with carbonate of zinc, were as familiarly used as ointments are, I believe sores would be comparatively of very short duration. This powder I very invariably use for the dry dressing of extensive cutaneous sores, ulcerated buboes, &c.; alternating this drying and astringent powder with fomentation or poultice at night.

———*ACIDUM SULPHURICUM*. The sulphuric acid is made perfect for commerce: its chemical properties are to be learnt in books of chemistry: there is no

occasion for a pharmaceutical history of sulphuric acid.—The styptic properties of all mineral astringents result from their combination with acids, as in the sulphates of Iron, Copper, Zinc, and Argilla; but the acid itself, pure and uncombined, is, especially in hæmorrhages the most useful of all astringents, and can be given in great strength internally, being diluted.—It is useful, though much diluted: When the solution is to be used very strong, it is to be taken, by sucking it up through a glass tube, or through a quill, that it may not set the teeth on edge.

In Hæmatemesis, or vomiting of blood, flowing from the veins and arteries of the stomach; and in Melæna Morbus Niger, the black stool of infectious, or as they are termed, putrid fevers, it is a medicine by which we very often save the patient's life; often I have seen many pints of blood vomited, and the patient reduced to extreme debility, yet the hæmorrhagy instantly stopped, and the patient restored to feeling and strength, by a few doses of sulphuric acid.—In all other Hæmorrhages, as Hæmoptysis, Menorrhagia, &c. when it cannot directly affect the vessels, it is (though always and very properly prescribed) merely cooling and sedative.

The dilute sulphuric acid is the form in which it is most frequently prescribed, in doses of fifteen or twenty drops three or four times a-day. The official preparation formerly termed Elixir of Vitriol, now *ACIDUM SULPHURICUM AROMATICUM*, is a mixture of sulphuric acid with alcohol, poured upon ginger and cinnamon, and digested for two days; the preparation of course partakes of the aromatics, and so far is a stomachic, and by the digestion of the sulphuric acid with alcohol, is allied with the ætherial spirits, a sort of spiritus vitrioli dulcis. And although the dilute sulphuric acid is preferred in hæmorrhages, this is pre-

scribed in dyspeptic complaints, or as a general astringent and tonic, thirty drops being given in a glass of water three times a-day.

———**SUPERSULPHAS ALUMINÆ et Potassæ**, is but another form in which we use this acid; it is an earthy salt; a supersaturated solution of alum, with a small proportion of potass, extremely acid, and painfully pursing up the tongue and lips.—It is less frequently used internally, but as an external astringent is continually prescribed, in injections, gargarisms, collyria, and all astringent solutions. It is most especially useful as a gargle in relaxation of the throat, and still more as a means of suppressing the more dangerous hæmorrhages from the womb.—In hæmorrhages, especially those from the stomach or the bowels, it may be given along with powder of gum-arabic, cinnamon, &c. in doses of twenty grains every hour. Alum has been the basis of all the vaunted secrets for stopping hæmorrhagy: The **PULVIS STYPTICUS** of the pharmacopœia, is four parts of sulphate of alum with one of gum-kino. But I think we may venture to assume such a degree of improvement in surgery, as to hope, that styptic powders will never more be in request.

———**SULPHAS FERRI**. The Green Sulphate of Iron, (green vitriol), is a styptic of another kind: it is not in hæmorrhages, nor in hæmorrhagic diseases, that this medicine is used, but in relaxed conditions of the primæ viæ after severe diarrhœa or dysentery; after dropsy, to restore the tone of the viscera, or after intermitted or low fever. A grain in a boy, or two grains or three in an adult, may be given in a powder, after each dose of bark; or two grains or three may be given every morning along with a gentle dose of neutral salts, operating in the manner of a mineral water.

———The **SULPHAS CUPRI**, which has a very strong,

astringent, metallic taste, is so dangerous, so dreadful an emetic, almost a poison, even in the most minute doses, that I pass it by willingly, under protest, to take notice of that metallic astringent which we prefer to all others, especially for external use.

——SULPHAS ZINCI, WHITE VITRIOL: The emetic property of sulphate of zinc has been mentioned; its use as an internal medicine is indeed very limited. Zinc is not given as an established medicine in debility of stomach, diarrhœa, &c. but Zinc is commended by individuals as a medicine which they have found useful, either in form of oxide or of sulphate, in those agues which, in warm climates, have resisted the usual medicines; and is prescribed sometimes in pills of oxide of zinc, two grains repeated three times a-day, or of solutio sulphatis zinci, conveying four grains three times a-day.

But the unequivocal use of sulphate of zinc, is not so much in external inflammations, as in the diseases of mucous membranes, especially those of the Eye-lids, Urethra, and Vagina; in this sense it is a very precious medicine. The Oxidum Zinci Impurum, the Lapis Tutia, has been long known and valued as a harmless and effectual astringent; in ophthalmia it is the basis of many ointments; in slight ulcerations of the skin, in burns, and in scaldings in the groins, and behind the ears of children, and in tinea capitis, applied dry as a powder, it is of great use: So is the more cleanly preparation, the CARBONAS ZINCI, Lapis Calaminaris, which, from its reddish colour, especially when mixed with oxidum plumbi album, is a cleanly and most valuable preparation in herpetic ulcerations, being of the colour of the skin, and thence little conspicuous.

The solution of sulphas zinci, in various proportions suited to the exigencies of the case, is the most valuable medicine as a collyrium: in gonorrhœa, also, and in fluor

albus, a disease infinitely more frequent and distressing than the modesty of women permits us to know, and which is followed by the most vexatious and harassing of all female complaints, a prolapsus vaginæ and procedentia uteri. Alum, sulphate of zinc, and camphor, are often combined, and with the best effects, as stimulants and powerful astringents.

—————CARBONAS CALCIS.—The Carbonate of Lime, CHALK, or CRABS EYES, viz. the chalky secretion found on each side of the stomach of the crab, is a medicine of great efficacy in disorders of the bowels, accompanied with acidity of stomach, and often arising, especially in children, from the abundance of vegetable acid, which requires to be neutralized.—Chalk, in itself perfectly harmless, is to be given in no limited dose nor form, but in quantity proportioned to the pain, eructation, irregular diarrhœa, and other marks of acidity. In the diarrhœa of infants it is almost the only medicine required, and forms, when suspended with mucilage in common water, and sweetened with syrup, a very pleasing and useful astringent: for children, syrup of poppies, or in other terms, the addition of a few drops of tinctura opii, is conjoined: in the diarrhœa of adults, and in that dysentery in which we have no reason to fear the retention of Scyballæ, or hardened fæces, a julep of chalk, with laudanum, cinnamon, and some aromatic, is very useful. Among the poor, chalk should be given in great quantity:—Their weakly children, feeding on uncooked vegetables, and dying of diarrhœa, require frequent doses of the compound powder of chalk, with opium, or equivalent extemporaneous prescriptions.

—————MIMOSA CATECHU, is not Japan Earth, (Terra Japonica), as formerly named, not any way allied to earthy substances, but the inspissated juice from a Mimosa peculiar to the higher provinces of Bengal. It is suspected to be extracted from a variety of

woods; it is of an earthy appearance, dry and brittle, in small granular masses like half-dried clay: It melts in the mouth; its taste is bitter, with a remaining impression of sweetness and astringency; and from its chemical qualities of striking black with solutions of iron, and forming a precipitate with any gelatinous infusion, it plainly contains both kinds of astringent principle, tannin and gallic acid.—It is warm, cordial, strengthening, and astringent; and though used in hæmorrhages and profluvia, where it can be of no service, as in hæmoptysis and catarrh, &c. it is truly valuable in disorders of the stomach and bowels, especially in long protracted diarrhœa, in dysentery, and in general debility of viscera.

The Electuarium Catechu is not, like the Alexipharmacs of old, an unmeaning jumble of all kinds of spices and stimulants, but a very precious and perfect form for exhibiting this medicine in combination with opium, to increase its efficacy in complaints of the bowels, and of cardamom seeds, cloves, and nutmegs, to warm and stimulate the stomach. But it is not to be forgotten, that in extemporaneous prescriptions, this electuary is to be reinforced by the addition of carbonas calcis and tinctura opii. The CONFECTIO AROMATICA is a preparation of carbonas calcis and opium, that may almost come in competition with the Electuarium Catechu: half a teaspoonful, a scruple or more, of either of these, may be given from hour to hour; or they may be mixed in form of julep, with infusion of roses, and suspended by mucilage.

——KINO resembles the astringent last described in all points. It is, like it, an inspissated extract, from the wood probably of an African plant; like catechu, it blackens solutions of iron, and precipitates the gelatine from a solution of isinglass: It has a brittle texture, an insipid but bitterish taste, terminating in sweetness, and

with manifest and strong astringency: It melts in the saliva, is easily dissolved, makes a transparent dark-brown solution, whether with alcohol or water, and has been always reckoned, and is truly, a powerful astringent.

The astringent power of Kino, combined with the sedative power of opium, forms a medicine of incomparable efficacy in the diarrhoea of debilitated constitutions, in the diarrhoea especially of ill-nursed children, or of the aged and infirm.—The PULVIS KINO COMPOSITUS of the London Pharmacopœia, is a compound of Kino, Cinnamon, and Opium, each scruple conveying one grain of opium. This medicine is esteemed a useful remedy as a general astringent, useful of course in hæmorrhages and uterine discharges: If it be so, it is only as a tonic, as restoring strength to the stomach and bowels; I have found it useful only in diseases of the intestines.

——IPECACUANHA. The power of this medicine in stopping all inordinate actions, especially those of the alimentary canal, is already sufficiently explained. Its use, given in small doses of a grain three times a-day with carbonas calcis, and the invaluable combination of it with opium, or the pulvis ipecacuanhæ compositus, has also been explained. A few grains of this powder, conjoined with aromatics, and given frequently during the day, is one of the most commanding medicines in dysentery.

——RHUBARB, while it is a purge, or laxative rather, is manifestly astringent; its sweetish and astringent taste sufficiently evince that precise quality which we wish to find in a slight stomach astringent, fit to restore the tone of the stomach in adults, and to restrain diarrhoea in children. For the former purpose, it is best taken in powder, in doses of ten or fifteen grains in the morning: doses which, in the adult in tolerable health and



action, do not affect the bowels; or to a child, it is given mixed with *Potio Cretacea*.

———*HÆMATOXYLON CAMPECHIANUM*. The Logwood Tree, as used by the Dyers, is a gentle, not unpleasing, and yet effectual astringent, fit especially to be prescribed in the Lienteric Disease, and lienteric weakness, or defect of digestion, and occasional disorder of the bowels, which often survives acute dysentery. A course of this medicine, is as useful in strengthening the bowels as a course of *serpentaria* or *columbo*. Logwood chips, when chewed, give out that sweetish astringent taste which boys delight in; and when boiled strongly, the juice inspissated, gives an extract full of the virtue of the wood.—A decoction of the wood I think most efficacious; it is made by boiling two ounces of logwood chips in two pounds of water, till it is boiled down to one pound; two thirds, or the whole, may be taken in the day. If the extract is preferred, it may be given soft, to the extent of half a drachm repeated frequently during the day, or in form of a draught.

———*ARBUTUS UVA URSI*, *Folia*. The Whortleberry is a low-growing laurel-like shrub, with an unpleasant bitter taste and manifest astringency; whence it is actually used, especially in Russia, for tanning. As an astringent, especially in uterine hæmorrhages, it was much used on the continent:—De Haen, in lack of more effectual medicines, for the cure of ulceration of the bladder, (a disease for which I fear there is no cure), thought fit to prescribe this as a sole and sovereign remedy, till at last he persuaded himself, and half persuaded others, that it was actually efficacious in this desperate and melancholy disease.—It is always to be recollected, that when we know of no efficacious remedy, we are ready to assent to any, however unavailing! just as our patients, when disappointed of success under the care

of physicians, abandon themselves to quacks. The sanguine hopes of finding this medicine a cure for ulceration of the bladder, and even an anodyne for the pains of the stone, inspired by De Haen's unreserved encomiums, has survived even to the present day. But I believe our profession is now pretty well persuaded of the opinion I have professed, viz. That astringents can hardly have power on any organ or set of vessels to which they are not directly applied; accordingly, pills of Hyoscyamus and Cicuta, mere anodynes and narcotics, are prescribed universally in preference to the pills or powders of Uva Ursi, unless it be that ASTRINGENTS are sometimes assented to as moderating the diarrhoea, or curing the dyspeptic and gouty symptoms which usually accompany nephritic complaints and stone. This is the last of the astringents used internally, the oak or willow are chiefly used as external astringents.

———QUERCUS ROBUR, CORTEX,—the Oak-bark, QUERCUS CERRIS, Galls, the excrescence from the oak, are certainly the most powerful of our astringents.—The former, the Oak-bark, (together with the leaves or the cup of the acorn, used in tanning), powerfully co-operates with Alum Kino, and other astringents used externally; the Gall-Nut is an exudation produced by the punctures of insects: The insect CYNIPS QUERCUS, piercing the bark, or entering the leaves or stalks, becomes involved in the exudation, which assumes a spongy, globular, berry-like form, and, in process of time, the insect eats its way out.—This is a powerful astringent, too powerful to be used internally. The bark-leaves and acorn-cups are used in tanning, the gall-nuts in making ink; and each contains, in great profusion, both the principles of astringency, the Tannin and the Gallic Acid.

OAK-BARK it never is possible to use internally: Its styptic taste is strong, its bitter not so intense: It has

been used as a substitute for the Peruvian bark, and unquestionably cures intermittent fever, with this unavoidable inconvenience, that it constipates the bowels.

It is too difficultly reduced to powder to be given in that form: it is better used in form of decoction, an ounce of the bark-leaves or acorn-cups to a pound of water: If the powder is given, let it be of the acorn-cups; some choose to give half a drachm of this three or four times a-day; or the roasted acorn-cups they give boiled, and mixed like coffee, in doses from one to three drachms, in debility, diarrhœa, fever, or intermittent, as a succedaneum for bark.

Its EXTERNAL USE is in relaxations of parts which can be injected or bathed with a decoction, simple or combined, as in prolapsus ani, prolapsus vaginæ, and fluor albus in females, and in inveterate gleet in the male sex: It is also sometimes used as a gargle, in relaxation of the uvula and tonsils.—Such astringent fomentations or injections may be made in the weaker degree by infusion of the powdered bark, with hot water, shaking or stirring it occasionally, or by suspending a bag of powdered oak-bark in wine. For gleet, a stronger preparation is made by boiling it in wine, and adding alum, a preparation which is also useful in *Procedentia Vaginæ vel Uteri*; and in *Leucorrhœa*, which is most commonly the cause of this wretched, irritating disorder, the *Procedentia* or *Descent of the Womb*, it is equally useful: For *Leucorrhœa*, bark infusion is often usefully combined with lime-water.

——GALL-NUTS. The excrescences formed as nuts around the insect which punctures the bark and leaves of the oak, (*Cynips Quercus*), is the most powerful of vegetable astringents, holding its virtues both from the tanning principle and gallic acid. Its infusion is found to be the most powerful astringent; and the pow-

der of galls, mixed with axunge, is found to be the most efficacious astringent in corrugating the relaxed rectum, and constringing piles; for the same purposes, a watery infusion is very efficacious.

One astringent more, used both externally and internally, must not be omitted,—AQUA CALCIS, Lime Water. It is formed by saturating water with the lime; and the water so saturated must be well corked, to preserve it from imbibing carbonic acid from the atmosphere.—It is transparent, colourless, hot, pungent, and manifestly astringent; it corrugates and shrivels up dead animal matter, and constricts the living fibre. From possessing at once astringent and absorbent, or neutralizing powers, it is peculiarly useful in dyspepsia, diarrhoea, and all debilities of the stomach and intestines. It is used internally, in the quantity of a pound or more a-day, mixed with an equal quantity of milk, in fluor albus, &c. But its best use is as an injection in leucorrhœa, procedentia uteri, prolapsus ani, &c.; and as a wholesome stimulant to ill-conditioned sores and extensive ulcers.

As all astringents are resolved now into external applications, I trust that all possible varieties will be found among the Extemporaneous Prescriptions, and will be intelligible; being,—First, Astringent Lotions;—Second, Collyria;—Third, Gargarisms;—Fourth, Injections;—Fifth, Powders;—Sixth, Ointments.

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day of life mixed with oxygen is found to be the  
 most efficient substance in conveying the vital  
 action, and conveying life; for the same purpose  
 a watery solution is very efficient.  
 One substance may be used both externally and inter-  
 nally, and may be carried by the water. It is  
 It is formed by estimating water with the lime; and the  
 water so estimated must be well exposed to prevent it  
 from absorbing carbonic acid from the atmosphere. It  
 is transparent, colourless, hot pungent, and readily  
 absorbed; it coagulates and shrinks up dead animal  
 matter, and softens the living. It is a powerful  
 purgative, and is used in dyspepsia, flatu-  
 lency, and all diseases of the stomach and intestines. It is  
 used internally in the quantity of a pound or more  
 a-day, mixed with an equal quantity of milk, in that  
 abuse. But its best use is as an injection in leprosy,  
 those, psoriasis, tinea, prurigo, and other cutaneous  
 diseases, and in all cutaneous diseases and eruptions.  
 As all eruptions are resolved now into external ap-  
 plications, I trust that all possible varieties will be found  
 among the Eruptions of the skin, and will be  
 intelligible. I have a strong opinion that the  
 most, Colic, Cholera, Typhoid, Cholera, and  
 those, Fifth Disease, Sixth Disease,

PHARMACOPŒIA

PART SECOND

EXTEMPORANEOUS PRESCRIPTIONS

**PHARMACOPŒIA.**

**PART SECOND.**

PHARMACOPŒIA

PART SECOND

EXTENTIONS OF PRESCRIPTIONS  
PHARMACOPŒIA.

I have now added the notes to all the prescriptions  
of the **PART SECOND**, the purpose  
of extending the medicinal powers and pharmaceutical  
effects of the several remedies, and also the various orders  
and directions, which are necessary and proper to be  
observed in the use of them, and in the management  
of the patient, and in the preparation of the medicines.  
The notes are intended to be a guide to the physician  
and apothecary, and to be read in conjunction with  
the prescriptions, and to be consulted in the  
management of the patient, and in the preparation  
of the medicines, and in the use of them.

OF THE USE OF REMEDIES

The author of the notes is now to be published  
in the year 1790, and is intended to be a  
guide to the physician and apothecary, and to be  
consulted in the management of the patient, and  
in the preparation of the medicines, and in the  
use of them.

# PHARMACOPŒIA.

## PART SECOND.

OF

### EXTEMPORANEOUS PRESCRIPTIONS.

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I MUST now remind my reader, that all the apparatus of the Materia Medica has for its object, the preserving or restoring the healthful actions, and pleasant feelings, natural to the animal frame; and that the various orders and classes of medicine preserve and restore health, chiefly by one or other of these operations,—First, by subduing inordinate action:—Second, by deadening the sensibilities of the animal frame:—Third, by increasing and promoting the necessary evacuations, and natural secretions:—Or, Fourth, by exciting and maintaining, by stimulant and tonic medicines, the perfect action, and healthful feelings, of the whole system.

#### CLASS I.

##### OF SEDATIVES, OR REFRIGERANTS.

THE medicines we are now to describe, are useful sometimes in extreme sensibility or pain, but chiefly in



incited vascular action, whether in parts and particular organs, or in the whole.—In Synocha, or General Inflammatory Fever, so far as such can exist independent of visceral or other local disease :—in Febrile Inflammation, as Erysipelas, Variolæ, Morbilli, and Scarlatina Anginosa :—in Rheumatism, and Rheumatic Fever, or universal affection of the joints :—in Phrenitis, Delirium, Mania, Apoplexy, whether venous or arterial, and in Dropsy of the Brain :—in Hæmorrhages, not excepting Uterine Hæmorrhages, and especially in Abortions :—in Peripneumony, or Inflammation of the Lungs; and in all cases of Peritoneal Inflammation, this class of medicines is useful.

BLEEDING is in truth the most powerful of all sedatives, that by which we can most instantaneously check and command the motions of the system, and allay them to the degree of occasioning instant fainting, and permanent weakness.—By bleeding, we can also prepare for the accession of any threatening and acute disease of the brain, the lungs, the bowels, &c. : it is by repeated bleeding, that we can best save the internal organs and vital functions; and it is according to such danger, that blood is to be permitted to flow in greater quantity, and in a fuller stream.

In Synocha, Rheumatalgia, Cynanche, Erysipelate, &c. mittantur sanguinis uncia duodecim, et repetatur vespere, si opus sit.

In Phrenitide, Delirio, Apoplexia, Mania, mittantur sanguinis uncia octodecim, pleno rivo, et si vehemens sit delirium, usque ad animi deliquium.

Admoveantur temporibus, hirudines duodecim, vel cucurbitulæ cruentæ; et mittantur sanguinis uncia quatuor.

In Pleuritide, Peripneumonia, Catarrho, Hæmoptysi, mittatur sanguis e vena brachii, pleno rivo, donec facilius halitum trahit æger, dum fortiter micant arteriæ, vel dum sputum cruentum fluit.

Cold is, next to bleeding, the most powerful general means of lowering and restraining the action of the system, and in modern times has been used with great confidence, but sometimes with very little discrimination. In Synocha, Cynanche, Morbilli, Scarlatina, Erysipelas, all the innovation we have ventured upon in modern times, is to take off that absurd load of bed-clothes by which the physicians of the old school, and the vulgar of all countries, sought to expel the morbid matter of those diseases, and to admit a stream of fresh cool air to circulate round the sick-bed.

In Phrenitis, Delirium, Apoplexy, Mania, and similar diseases, a more active process is required. The patient is exposed in many of those diseases, according to the discretion of the physician, to extreme cold: The patient is kept naked night and day in mania and fury, while pails of cold water are sluiced over him, sometimes with the happiest effect.

In Phrenitis, Peripneumony, Hæmoptysis, and other Hæmorrhages, cool air only is allowed, but seldom the active application of cold.

In Fever, especially in Synochus, Typhus, Scarlatina, &c. cold is more actively employed:—the best method, according to my opinion and experience, and one which is at once moderate and availing, is laving continually cool vinegar and water, or iced water, upon the face, neck, and bosom, the hands and the arms; paddling with the hands in the cool vinegar and water, or applying it with sponges:—But many prefer (and there are cases which require it) sponging the body all over, or taking the patient up from his bed, and sluicing him with pailfuls of cold water. This process, especially in warm climates, has saved innumerable lives. Cold water is showered from a watering pot, or

splashed upon the hands, face, neck, and whole body, with sponges, or sluiced over the patient by pailfuls; the effect produced by such cold ablutions, is at once pleasing and salutary. But they must be resorted to with these precautions, viz. never in extremely feeble or delicate constitutions; never too long at a time, so as to depress irrecoverably the vital powers; never unless the temperature be above the natural standard; never unless it is steadily above the natural standard; never during the cold stage, nor in the beginning of fever; never in the last stage of the plague, yellow fever, or other low and mortal typhus.

Cold is equally useful in many less important cases. In all cases of local inflammation, or excited vascular action, it is as useful as in fever: Therefore, all our saline or metallic astringents, our solutions of Acetate of Lead, Acetate of Ammonia, Murias Sodæ, &c. are applied cold, and renewed continually, as are also Collyria; injections in Gonorrhœa; cooling embrocations in Phlegmon, Carbuncle, and Erysipelas, in Ulcers, in Tinea Capitis, in cutaneous eruptions and diseases.—In particular inflammations affecting the structure of massive parts, as in a limb universally bruised, in a diseased testicle, or other gland, we produce artificial cold by embrocating with spirits, Camphorated Spirits, Æther, &c.

Next to these in power, stands the depressing influence of Emetics, given in nauseating doses, whence their almost specific power of arresting fever, or, in other terms, subduing vascular action. Emetics are in this allied to narcotics. Emetics first sicken the system, by their operation on the nerves of the stomach, and presently all the animal and vital functions are subdued. Narcotics often stimulate in the first operation, but when they affect the system, so as to subdue the vital motions, they sicken at the same time that they subdue.

This is the operation of antimony in fevers, the effect of which, in causing vomiting, is the least important of its purposes.

An emetic, especially of antimony, followed by an opiate, is a succession of sedative powers, almost irresistible. It stops arterial action, appeases irritation, assuages pain, and procures sleep and perspiration. It is the safest prescription in the early stage of every fever, and often arrests it.

1. R. Pulveris antimonialis grana octo,  
Sacchari puri grana quindecim.  
Fiat pulvis emeticus statim sumendus.
2. R. Tartritis antimonii grana tria,  
Solve in aquæ distillatæ unciis quatuor.  
Fiat solutio, cujus sumat æger quartam partem omnî quadrante hora, donec excitatur vomitus.
3. R. Vini ipecacuanhæ, unciam pro emetico ; vel,
4. Capiat æger Ipecacuanhæ scrupulum pro Emetico ; vel,
5. R. Pulveris ipecacuanhæ grana decem,  
Tartratis Antimonii granum,  
Aquæ menthæ piperitæ,  
Syrupi simplicis añ unciam cum semiss.  
Fiat haustus emeticus, vespere sumendus, et vomitu cessante, sumat æger haustum tepidum vini rubri diluti : hora somni, habeat tincturæ opii guttas triginta, vel haustum anodynum.
6. R. Aquæ Lauri Cinnamoni unciam,  
Syrupi semiunciam,  
Tincturæ opii semidrachmum.  
Fiat haustus anodynus, hora somni sumendus.

7. Capiat pulveris Ipecacuanhæ, scrupulum vespere et hora somni haustum anodynum, cum cyatho seri vinosi.

8. R. Pulveris ipecacuanhæ grana quindecim,  
Tartratis antimonii granum.

Fiat pulvis emeticus statim sumendus, superbibantur aquæ tepidæ cyathi aliquot, et vomitu cessante, habeat haustum vini rubri et aquæ tepidæ.

To support an unceasing nausea and dejection, is still more profitable, and is especially beneficial in the first stage of inflammatory diseases, as Scarlatina, Cynanche Tonsillaris, Rheumatism, Measles, &c. For this purpose antimony is given from hour to hour, sometimes in powder, sometimes in solution, and occasionally combined with all varieties of sedatives and narcotics, as with Nitre, with Camphor, with Opium, with Hyoseyamus, with Aconite, Digitalis, Calomel, &c.

Pulvis Jacobi, James's Powder, the Oxide of Antimony, is often given as a sedative in colds, fevers, and rheumatisms, and continued in small doses from hour to hour, till it causes vomiting, purging, or perspiration, or excites, as it often does, all these secretions at once.

9. R. Pulveris antimonialis grana sedecim,  
Pulveris Lauri Cinnamoni,  
Sacchari puri. āā ʒi.

Tere simul, et divide in doses quatuor: sumat æger unam tertiâ quâque horâ.

10. R. Tartratis antimonii, gr. ii.  
Sacchari, ʒi. m. et divide in partes equales quatuor, quarum capiat æger unam omni bihorio.

11. R. Vini tartratis antimonii,  
Tinctura opii āā ʒii.  
Aquæ lauri cinnamoni ʒviss.  
Syrupi simplicis ʒiss.

Fiat mistura diaphoretico anodyna, cujus sumat æger unciam unam, secundâ quâque horâ.

Antimony is best combined in fever, or in inflammatory diseases, with saline sedatives, with saline draught, and laudanum.

12. R. Carbonatis potass. ʒii.  
Acidi citrici q. s. ad saturationem,  
Aquæ lauri cinnamoni ʒvi.  
Syrupi curi aurantii ʒi.  
Tartratis antimonii gr. ii.

Fiat mistura: capiat æger cochlearia duo magna, secundâ quâque horâ.

Or with nitre.

13. R. Nitratis potassæ ʒii.  
Aquæ lauri cinnamoni,  
—— fontis, āā ʒiii.  
Syrupi dianthi caryophylli ʒi.  
Tartratis antimonii gr. ii.

Fiat mistura, cochlearia magna duo, quâque horâ secundâ.

Or with acetis ammoniæ.

14. R. Aquæ acetitis ammoniæ ʒiii.  
Aquæ lauri cinnamoni,  
—— fontis, āā ʒiv.  
Vini tartratis antimonii ʒii.

Fiat mistura, sumat æger cochlearia duo, quater in die.

Or as in typhus, with camphor or with opium.

15. R. Camphoræ ℥ss.  
 Ætheris sulphurici cum alcoholo ℥iii.  
 Aquæ lauri cinnamoni ℥iv.  
 ——— fontis ℥iii.  
 Syrupi dianthi caryophylli ℥i.  
 Vini tartratis antimonii ℥iii.

Fiat mistura, cujus sumat æger unciam quater in die.

16. R. Pulveris antimonialis grana tria.  
 Camphoræ grana quatuor.  
 Conservæ rosæ gallicæ grana sex.

Fiat bolus, ter in die repetendus.

This form of antimony is always a sedative, but with a change of properties proportioned to the dose. From three to six grains of James's Powder prove diaphoretic; ten grains prove purgative, and beyond ten grains it proves emetic, still lowering the pulse, sickening the patient more and more, and producing diaphoresis.

17. R. Pulveris Jacobi vel antimonialis grana quinque.  
 Opii granum.

Conservæ rosæ q. s. ut fiat bolus, ter quaterve in die sumendus.

18. R. Tartratis antimonii gr. ii.  
 Aquæ rosæ centifoliæ.  
 ——— fontis, āā ℥iii.  
 Syrupi caryophyllæ ℥ss.  
 Tincturæ opii camphoratæ ℥ii.

Fiat mistura: Sumat æger unciam secundâ vel tertîâ quâque horâ.

19. ℞. Aquæ camphoratæ ʒi.  
Vini antimonialis ʒi.  
Tincturæ opii ʒss.  
Aquæ lauri cinnamoni ʒss.

Haustus diaphoreticus, hora somni sumendus.

Or the same sedative and diaphoretic medicines may be given at going to bed in form of pill.

20. ℞. Oxidi antimonii grana octo.  
Opii granum.  
Confectionis rosæ gallicæ grana quinque.

Fiat bolus, hora somni sumendus, ex cyatho seri lactis vinosi.

21. ℞. Pulveris oxidi antimonialis vulgo Pulveris Jacobi grana quatuor.  
Pulveris ipecacuanhæ compositus grana decem.

Fiat pulvis opiatus hora somni ex syrupo deglutiendus.

In extreme pain of rheumatism, and especially of rheumatic fever, when every stroke of the arterial system throbs through every joint, and the heat of the bed aggravates the pains to a distracting degree, the antimony has happy effects if combined with digitalis.

22. ℞. Pulveris digitalis purpureæ.  
Opii, āā granum.  
Oxidi antimonii gr. iv.  
Sacchari puri.  
Pulveris cort. lauri cinnamoni, āā gr. x.

Fiat pulvis, quater in die sumendus.



Or it is combined with a still more dangerous and powerful narcotic, the Aconite.

23. R. Aconiti napelli foliorum exsiccatorum.

Antimonii sulphureti, āā granum.

Carbonatis magnesiæ grana decem.

M. ut fiat pulvis, omni bihorio sumendus.

It is a fact which forces itself upon our observation, and is indeed well worthy of notice, that the most powerful and irresistible sedatives of the vegetable tribe, are those which, while they lower the pulse, at once sicken and purge. There is nothing, then, more natural, than so to combine medicines, as to imitate this natural operation. The combination of antimony and calomel is especially effectual; either in more active doses it is useful in fever; or in more minute doses, and given daily, for a long space of time, it is an effectual alterative in eruptive diseases, *i. e.* a sedative, which abates the circulation universally, and that of the skin more especially.

24. R. Oxidi antimonii gr. iv.

Submuriatis hydrargyri gr. vi.

Sacchari puri gr. x.

Fiat pulvis purgans, mane sumendus, et meridie vel vespere repetendus.

Next to the depressing power of emetics, is that of purging medicines; and it is one of the prime virtues of antimony, not merely to sicken the stomach, but to affect the whole course of the alimentary canal, and so poison or depress the system, empty the stomach and bowels, and procure a new and increased secretion from their surfaces; whence it proves very effectual in lowering the pulse in febrile and inflammatory diseases, and es-

pecially in exanthematic diseases: and one point of management is often of no slight importance, viz. to give small doses at distant intervals, so as to sicken a little, and purge a great deal, and leave the patient, after all, perspiring.

25. R. Tartritis antimonii gr. ii.

Solve in aquæ distillatæ  $\bar{z}$ viii.

Fiat solutio, cujus sumat æger cochlearia duo ampla quâque semihorâ, donec vel vomitus, vel alvi dejectio, leniter excitentur.

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In the process of allaying incited vascular action, whether inflammatory or febrile, SALINE PURGES stand next in order to sickening medicines.

26. R. Phosphatis sodæ,  $\bar{z}$ i.

Solvendum in jusculi Bovini libra, and mane sumendæ.

27. R. Tartritis potassæ et sodæ unciam, solve in

Aquæ fontis  $\bar{z}$ viii.

—— cinnamomi  $\bar{z}$ ii.

Syrupi simpl.  $\bar{z}$ i.

Sit solutio tribus vicibus sumenda.

28. R. Sulphatis sodæ, drachmas sex.

Sacchari purificati,

Supertartritis potassæ, utriusque drachmas duas.

Aquæ fervidæ, uncias duodecim.

Fiat solutio purgans, partitis vicibus sumenda.

29. R. Sulphatis sodæ unciam,

Aquæ uncias octo.

Syrupi unciam.

Fiat solutio cathartica tribus vicibus sumenda, donec copiose dejiciatur alvus.

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The cooling Neutral Salts are next in order as sedatives: They are given in febrile and inflammatory disorders, from hour to hour, throughout the whole day, and night too, while the patient is not asleep: they lower the pulse, cool the skin, clear the head, gently loosen the bowels, and produce perspiration, or tendency to perspiration; and they are, in fever, the medium by which we convey frequent doses of camphor, of sulphuric æther, of nitric æther, of tartrate of antimony, and other sedative or sudorific medicines, according to the exigencies of the case.

Saline effervescent draughts have all those effects, besides composing the stomach, and preventing retching, by evolving carbonic acid gas.

30. R. Subcarbonatis potassæ scrupulum.

Aquæ lauri cinnamomi drachmas duas.

— distillatæ drachmas octo.

Syrupi citri aurantii ℥ii.

Fiat haustus, cum cochleare magno acidi citri medicæ, in statu effervescentiæ sumendus, et quarta quaque hora repetendus.

Or with ammonia instead of potass.

31. R. Subcarbonatis potassæ ℥i.

Solve in aquæ fontis ℥i.

32. R. Acidi citrici ℥ss.

Syrupi, aquæ, āā ℥ii.

Solutione carbonatis potassæ prius sumptâ, haustus e

succo citri, illico porrigendus est; ut in ventriculo evolvatur acidum carbonicum.

33. R. Ammoniaë drachmum,  
 Acidi citrici cochlearia tria magna  $\bar{z}$ iss. vel  
 $\bar{z}$ iss. vel q. s. ad saturationem Ammoniaë;  
 Aquæ lauri cinnamomi.  
 ——— fontis  $\bar{a}\bar{a}$  uncias duas.  
 Syrupi simplicis  $\bar{z}$ ss.

Fiat mistura salina, cujus cochlearia tria, vel unciam unam cum dimidio, quaque hora sumenda.

Or with the addition of tartrate of antimony.

34. R. Subcarbonatis potassæ  $\bar{z}$ i.  
 Acidi citrici recentis  $\bar{z}$ iss.  
 vel q. s.  
 Aquæ rosæ centifoliæ  $\bar{z}$ ii.  
 ——— fontis  $\bar{z}$ iv.  
 Syrupi citri aurantii  $\bar{z}$ ss.  
 Tartritis antimonii gr. ii.

Fiat mistura, cujus capiat æger cochlearia tria, secunda quaque hora.

35. R. Nitratis potassæ  $\bar{z}$ iss.  
 Oxymellis (viz. mellis et aceti)  $\bar{z}$ i.  
 Aquæ  $\bar{z}$ viii. misce.

Dentur cochlearia tria ampla, tertia vel quarta quaque hora.

#### Nitre Draught.

36. R. Nitratis potassæ  $\bar{z}$ iss. solve in  
 Aquæ camphoratæ  $\bar{z}$ iv.  
 ——— lauri cinnamomi  $\bar{z}$ ii.  
 Syrupi citris aurantii  $\bar{z}$ i.  
 Spirit. æther. nitrici  $\bar{z}$ iii.

Fiat mistura, cujus sumat æger cochlearia tria magna, sæpius in die.

37. R. Emulsionis Arabicæ lbii.  
Nitratis potassæ ℥ii.

Capiat æger pro potu communi.

38. R. Nitratis potassæ ℥iss.

Solve in seri lactis lbii. pro potu communi, in Febris, Hydrope, Gonorrhœa, Nephritide, &c.

39. R. Nitratis potassæ drachmam.  
Solve in aquæ rosæ centifoliæ libra.  
Syrupi simplicis unciâ unâ.  
Tincturæ opii ℥i.

Fiat mistura, cujus sumat æger cochlearia tria quaque hora.

Or the saline and nitric draughts are often conjoined.

40. R. Carbonatis potassæ ℥ss.  
Acidi citrici, q. s. ad saturationem.  
Nitratis potassæ ℥i.  
Aquæ fontis ℥iss.  
Syrupi simplicis ℥iii.

Fiat haustus tertia quaque hora sumendus.

Or with a slight tincture of an emetic.

41. R. Subcarbonatis potassæ ℥i.  
Succi citri medici, q. s. ad saturationem potassæ.  
Nitratis potassæ gr. viii.  
Aquæ cinnamomi.  
— fontis āā ℥i.  
Syrupi simpl. ℥iii.  
Pulveris ipecacuanhæ gr. ii.

Misce ut fiat haustus, ter in die sumendus.

Or with Spiritus Mindereri, either instead of nitre, or along with it.

42. R. Nitratis potassæ ʒi.  
 Aquæ acetitis ammoniæ.  
 — lauri cinnamomi  
 — puræ āā ʒi.  
 Syrupi simplicis ʒss.

Fiat mistura, cujus sumat æger cochlearia tria magna, quater in die.

43. R. Nitratis potassæ drachmam.  
 Aquæ lauri cinnamomi uncias tres.  
 Solve, et adde,  
 Aceti sescuntiam.

Sumat æger unciam tertia vel quarta quavis hora.

44. R. Aquæ acetatis ammoniæ ʒss.  
 Aquæ distillatæ ʒx.  
 Syrupi citri aurantii ʒii.  
 Nitratis potassæ gr. viii.  
 Vini tartratis antim. (Pharm. Edin.) ʒss.

Fiat haustus, omni quadrihorio sumendus.

Or with laudanum, antimony, or camphor.

45. R. Aquæ acetatis ammoniæ ʒiii.  
 — lauri cinnamomi ʒi.  
 Syrupi amomi zingiberi ʒii.  
 Tincturæ opii gr. xxxv.

Misce ut fiat haustus, hora somni sumendus.

46. R. Corticis lauri cinnamomi pulveris gr. vi.  
 Sacchari purificati gr. xv.  
 Nitratis potassæ gr. viii.

Fiat pulvis, quater in die repetendus.

47. R. Pulveris ipecacuanhæ gr. viii.  
 ——— antimonialis ℥ii.  
 ——— Nitratis potassæ ℥ii.  
 Sacchari purificati āā ℥ii.

Misceantur terendo, ut fiat pulvis, in partes 6 dividendas; sumat æger partem unam ter in die.

48. R. Camphoræ ℥ss.  
 Nitratis potassæ ℥i.  
 Sacchari ℥ii.

Tere camphoram cum alcoholis paxillo, dein misce ut fiat pulvis, in partes sex æquales dividendus; sumat æger partem unam ter in die, superbibendo Cyathum Emulsionis Amygdali.

Perhaps there is reason to say, that in the more intense inflammatory diseases, especially in Hydrocephalus, in Peripneumony, in Peritonitis, in acute Rheumatism, and in Hæmorrhages, the sedative power of Digitalis is less valued than it should be, and not used according to its rank and efficacy. In combination with saline sedatives, with Camphor, or with Nitre, it abates vascular action, appeases pain, and reduces the swelling of the joints in Rheumatism, and in the Inflamed Gout of young and vigorous subjects. In a few hours the experiment is effectually and safely made, whether it will or will not abate the suffering! If it compose the spirits, which opium will not do, and procure ease and sleep, and slacken the throbbing of the pulse, all is well.

49. R. Nitratis potassæ ℥ii.  
 Tincturæ Digitalis ℥ii.  
 Aquæ cinnamoni ℥iii.  
 ——— rosæ ℥ii.  
 Syrupi simplicis ℥i.

Fiat mistura, cujus cochlearia duo adhibenda sunt, ter in die.

50. R. Pulveris ipecacuanhæ gr. vi.  
 Mucilaginis gum arab. vel tragacanthæ ℥x.  
 Misturæ camphoratae ℥xii.  
 Syrupi ℥ii.  
 Tincturæ digitalis gtt. xv.

Fiat haustus sextis horio sumendus.

51. R. Aquæ acetatis ammoniæ.  
 ——— Cinnamoni, āā ℥ss.  
 Tincturæ digitalis gtt. xx.  
 Syrupi simplicis ℥ii.

Misce ut fiat haustus, quarta quaque hora sumendus.

The medicine which we should, in case of dropsy, prescribe as a diuretic, has often, in hæmorrhage from the lungs, or in violent inflammatory disease, the happiest effects as a sedative.

52. R. Nitratis potassæ grana sex.  
 Supertartratis potassæ.  
 Sacchari purificati, āā grana decem.  
 Pulveris digitalis purp. granum.

Fiat pulvis, bis terve in die repetendus.

And the same happy effects sometimes result from combining Henbane with antimony and nitre; for henbane and fox-glove are often precious anodynes in cases where opiates could not be endured.



53. R. Pulveris foliorum Hyoscyami nigri grana octo.

Pulveris Jacobi semidrachmam.

Supertartritis potassæ.

Sacchari purissimi, āā drachmam.

Tere simul optime, et divide pulverem in chartulas decem, habeat unam bis vel ter in die.

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The cooling draughts, or diaphoretic draughts as they are termed, or powders of Nitre, Camphor, Acetate of Ammonia, &c. hitherto prescribed, are useful in fever; those latter prescriptions are more proper in acute inflammatory diseases, and in dangerous hæmorrhages. But in all diseases of intense arterial action, whether simple fever or visceral inflammation, sedative draughts and COOLING DRINKS are required; draughts and drinks acidulated with Nitric Acid, Vinegar, Supertartrite of Potass, Nitre, &c. are required.

54. R. Lactis vaccini recentis.

Aquæ fontanæ utriusque libram.

Mistis et ebullientibus adde.

Aceti unciam.

Aufer coagulum, dos, libra.

55. R. Lactis vaccini recentis libram.

Supersulphatis aluminæ et potassæ drachmam.

Coque paulisper, et aufer coagulum, dos, unciæ duæ, bis terve in die.

56. R. Acidi Nitrici ʒi.

Syrupi ʒi.

Aquæ distillatæ ʒxii.

Habeat pro potu ordinario.

57. R. Emulsionis amygdali.  
Nitratis potassæ ℥i.

Sumat cyathum modicum omni trihorio.

58. R. Nitratis potassæ ℥ii. solve in  
Decocti hordei lbii.

Ut fiat potus; vel,

59. R. Nitratis potassæ ℥ii.  
Aceti.

Syrupi, āā ℥ii.  
Aquæ distillatæ ℥xii.

Potio quotidie bibenda.

60. R. Acidi sulphurici diluti ℥i.  
Syrupi rosæ ℥ii.  
Aquæ distillatæ ℥xiv.

Misce pro potu quotidiano.

61. R. Acidi oximuriatici ℥ss.  
Syrupi Aurantii ℥ii.  
Aquæ distillatæ ℥xiii.

Fiat potio quotidie sumenda, partitis vicibus.

62. R. Decocti hordei lbii.  
Acidi sulphurici diluti drachmam.  
Mellis despumati semiunciam.

Fiat potio.

63. R. Super-tartritis potassæ ℥ss.  
Mellis despumati ℥ii. solve in  
Aquæ fervidæ lbii; adde,  
Vini Maderiensis cyathum.

But in low and lingering fever, Nitric or Sulphuric Æther is added to the cooling drink.

64. R. Supertartritis potassæ ℥ii.  
 Aquæ fontis lbii.  
 Syrupi simplicis ℥ii.  
 Ætheri sulphurici cum alcoholo ℥ii.

Misce pro potu.

One aid more in lowering the tone of the vascular system must be suggested, viz. a Glyster, corresponding in design and effect with these saline and acid drinks, and mixtures.

65. R. Pulp. tamarindiorum ℥ss.  
 Supertartritis potassæ ℥ii.  
 Aquæ bulientis ℥v. : colatur, adde  
 Aquæ cinnamoni ℥i.  
 Tartratis antimonii gr. i.

Sumat cochlearia quatuor, et repetatur dos post horas duas, nisi alvus prius respondeat.

66. R. Decocti hordei vel avenæ selibram.  
 Aceti uncias tres.

Misce ut fiat enema aceticum.

This glyster is often used in sudden Apoplexy, in Delirium, and in Phrenitis Hydrocephalica; and it is especially useful in those cases, where a person is found lying insensible from excess in the use of ardent spirits; from having unfortunately mistaken laudanum for any other medicine; or from being poisoned by any narcotic drug.

After these saline juleps, and acid drinks, are to be enumerated, the many domestic mixtures of similar efficacy, among which are principally to be mentioned, a drink of Nitre, Vinegar, Honey, and Water.—Imperial, viz. a solution of cream of tartar, and sugar, in water:—Vinegar, water, and sugar:—Vinegar whey, lemonade, apple tea, cyder, black-currant-jelly in water, cooling fruits, especially grapes, gooseberries, strawberries, apples, pomegranates, melons; and in hot countries the water melon, or pumkin: Ices and iced waters.

#### EXTERNAL SEDATIVES.

It is in fevers and inflammations that the medicines just enumerated are used. They are powerfully assisted, when the disease or its cause is local, by the application externally of slightly astringent and cooling solutions. When the disorder is in the brain, such solutions are poured over the head; when in the testicle, the part is splashed with it: In an inflamed inguinal gland; or in ulceration of the throat, or inflammation of the eyes, running from the urethra, or in women from the vagina, the same astringents are applied in form of collyria, gargles, or injections. Still, such applications are useful merely by moderating the incited vascular action; and amongst them all, none is preferable to vinegar, none more easily procured.

In all affections of the brain; in all general bruises of the limbs, with extravasation of blood; in sprains, in inflammations of the glands or skin, in form of buboe or phlegmon; in swellings of the testicle, and all similar diseases, cold vinegar and water are to be incessantly poured over the part affected; and a poultice, or cold mess of bread, linseed, oat-meal, &c. with vinegar, is to be applied, and moistened anew from time to time.

67. R. Farinæ vel seminis lini, vel  
Micarum panis quantum vis.  
Aceti quantum satis,

Ut fiat CATAPLASMA acetatum, frigidum applicandum,  
et quando siccum, vel calidum factum fuisset, reno-  
vandum.

68. R. Acetatis plumbi ℥i.  
Acidi acetati diluti ℥i.  
Aquæ ℥v.

Fiat solutio resolvens, linteum hocce liquore frigido ma-  
defactum, applicetur partibus affectis, et sæpius reno-  
vetur in contusionibus, contortionibus articulorum, in-  
flammatione cutis, mammarum, oculorum, urethræ,  
vaginæ, vesicæ urinariæ, in adustis, et in ulceribus.

69. R. Micæ panis, quantum vis.  
Solutionibus acetatis plumbi supra,  
Prescripti quantum satis,

Ut in cataplasma madescant.

Nitre, which produces so singular a sense of coolness  
on the tongue, is often used as a sedative gargle for Cy-  
nanche tonsillaris, and Aphthæ.

70. R. Nitratis potassæ ℥ii.  
Aquæ rosæ.  
—— fontis, āā ℥iv.  
Syrupi simpl. ℥iiss.  
Aceti ℥ii.

Misce pro gargarismate.

Or Borax, which resembles nitre in taste, and in the  
cold impression it leaves on the tongue, is used in its  
stead.

71. R. Sub-boratis sodæ ℥ii.

Aquæ rosæ ℥iii.

Syrupi aceti ℥iss.

Misce pro gargarismate.

72. R. Sub-boratis sodæ ℥iss.

Aquæ ferventis ℥v.

Mellis rosæ ℥i.

Misce pro gargarismate.

The malic acid, strengthened by a small proportion of vinegar, or of sulphuric acid, is found to be an excellent cooling application in inflammatory and acute ophthalmia.

73. R. Pomorum dulcium quantum vis.

Coque ex aqua, et exprime per linteum; dein adde, ad unciam pulpæ, guttas viginti acidi sulphurici, vel acidi acetici puri drachmam, pro cataplasmate ophthalmico.

Or with camphor.

74. R. Pulpæ pomorum ℥ii.

Camphoræ gr. x.

Acidi acetici impuri ℥iii.

Misce, ut fiat cataplasma ophthalmicum.

Æther, Alcohol, and Vinegar, Camphorated Spirits, &c. are very precious applications in bruises, sprains, and inflammatory diseases, in which they operate as sedatives, producing a degree of coolness much greater than that of the coldest solution, or even of ice. Their stimulant effect is procured by gentle friction, or by permanent application; their cooling effects, by simply pouring them over the inflamed part, and suffering them

to evaporate, and helping them to do so, by breathing and blowing upon the part. In intense headaches, cephalalgia, and cephalæa; in nervous affections from the pressure of tumors; in swelling of the testicle or inguinal glands; in rheumatism, &c. the cold produced by the evaporation of æther, or the slower effect of camphorated spirits, is of great avail.

76. R. Ætheris sulphurici ℥ii.

Admoveatur fronti, vel temporibus, vel aliæ parti dolenti, linteum madidum æthere: calore, evaporatione ætheris, subducto, levatur dolor,

77. R. Ætheris sulphurici alcoholizati ℥ss.

Aceti ℥ii.

Aquæ camphoratae ℥xii.

Fiat lotio.

These are to be applied to the shaven scalp in Hydrocephalus, Phrenitis, Delirium Ferox, and in Apoplexy; or the head may be sponged with cold vinegar and water.

78. R. Camphoræ ℥i.

Aceti ℥ii.

Aquæ distillatæ lbiss.

Fiat lotio frigida.

## CLASS II.

### OF NARCOTICS AND ANTISPASMODICS.

First in rank for allaying arterial action, and saving the lungs, the brain, the abdominal viscera, from in-

flammation in active hæmorrhages, especially hæmorrhages from the lungs, and for relieving the joints, in rheumatic disorders, stands *Digitalis*. Of all preparations, the *Infusio Digitalis* is the safest.

79. R. Fol. digitalis purpureæ ℥ii.  
Aquæ bulientis lbiss.

Post horas duas cola, et adde,

Spiritus ætheris nitrosi ℥i.

Misce, capiat cochlearia larga duo quarta quaque hora.

Or tincture, or spirituous infusion.

80. R. Pulveris fol. digitalis purpureæ ℥i.  
Alcoholis,  
Aquæ fontis āā ℥ii.

Infunde, et post horas viginti quatuor cola : sumat æger guttas viginti bis terve die.

81. R. Infus. rosæ Gallicæ ℥iss.  
Tincturæ digitalis gtt. xviii.  
———— opii gtt. xv.

Fiat haustus, sexta quaque hora sumendus.

82. R. Tincturæ digitalis gtt. xxv.  
Acidi sulphurici diluti gtt. xv.  
Aquæ cinnamomi ℥xii.  
Syrupi amomi zingiberi ℥ii.

Fiat haustus, sexta quaque hora sumendus.

Such draughts are to be used in *Hæmoptysis*, viz. with *Sulphuric Acid* and *Opium*,



83. R. Infus. rosæ Gallicæ ꝑjss.  
 Acidi sulphurici diluti.  
 Tincturæ opii āā gtt. xv.  
 Syrupi dianthi caryophyli ꝑii.

Fiat haustus, quater in die adhibendus.

84. R. Camphoræ gr. iv.  
 Pulveris fol. digitalis gr. i.  
 Sacchari purificati ꝑi.

Tere simul addendo alcoholis paucillum, et dein adde  
 Aquæ lauri cinnamomi ꝑi. ut fiat haustus, ter in die  
 sumendus.

85. R. Pulveris fol. digitalis purpureæ gr. i.  
 ——— Jacobi gr. v.  
 Conserv. rosæ q. s.

Ut fiat bolus, quarta vel sexta quaque hora sumendus.

Such a bolus, or corresponding draught, is of especial  
 service in acute Rheumatism.

86. R. Nitratis potassæ gr. vi.  
 Pulveris digitalis purpureæ gr. i.  
 Supertartratis potassæ.  
 Sacchari puriss. āā gr. x.

Tere simul ut fiat pulvis, quarta quaque hora sumendus.

87. R. Pulveris digitalis purpureæ gr. v.  
 Extracti hyoseyami nigri ꝑi.  
 Pulveris antimonialis gr. xii.  
 Mucilaginis q. s.

Ut fiat massa, formanda in pilulas sex. Sumat æger pi-  
 lulam quarta quavis hora.

When Digitalis is prescribed in the phrenitic stage of

Hydrocephalus, it is usually in a boy of five or six years of age, to whom it may be given in the following form.

88. ℞. Nitrat̄is potass̄æ gr. vi.  
 Tinctur̄æ digitalis purpureæ gtt. viii.  
 Aquæ distillat̄æ ℥viii.  
 Syrupi citri aurantii ℥ii.

Fiat haustus, tertia quaque hora adhibendus.

In Mania, or Inflammation of the Brain, in the adult, Hyoscyamus may be given in much larger doses.

89. ℞. Camphor̄æ gr. xii.  
 Alcoholis pauxillum.  
 Aquæ cinnamomi.  
 ——— fontis āā ℥i.  
 Syrupi citri aurantii ℥ii.  
 Tinctur̄æ digitalis purpureæ ℥i.

Fiat haustus anodynus, mane et vespere adhibendus.

90. ℞. Camphor̄æ gr. xii.  
 Pulveris digitalis purpureæ.  
 Hyoscyami nigri āā gr. iii.  
 Sacchari purificati ℥i.

Fiat pulvis, bis in die sumendus.

The lesser anodynes of camphor and opium, such as are usually prescribed, sometimes in doses so gentle, as to prove merely cordial in low fevers, sometimes in larger to procure sleep, shall be noticed presently.

We continue to speak now of deep and powerful anodynes, such as are fit to be given in gradually increasing doses, to those tortured with pain; or all at once in the more terrible disorders of Insanity, Phrenzy, Hydrocephalus, Convulsions, &c.: and such powerful

anodynes are most naturally prescribed in form of pills, for they are the extracts of Opium, of Hyoscyamus, of Conium Maculatum, &c. Opium is more familiarly used in Colds, in Fevers, in Inflammations of the Bowels, as an anodyne, or as an astringent; but in conjunction with the more powerful narcotics, as Conium, &c. it is very useful for still more important purposes.

91. R. Opii.

Extracti hyoscyami nigri āā gr. iii.

Fiant pilulæ duæ, sexta quaque hora sumendæ.

92. R. Extracti hyoscyami grana decem.

—— glycyrrhiz. ℥ii.

Misce ut fiat massa dividenda in pilulas decem; sumatur una vel altera nocte manequæ, et meridie si opus sit.

Such anodyne pills are frequently given in painful nervous affections, in cancerous cases, and in ulceration of the bladder: and while they serve as anodynes, they do not bring with them the stupifying headach which opium occasions, and may be gradually increased, till the patient takes with benefit ten grains, *i. e.* the whole mass, in the course of the day. But in Mania, half the mass may be given at a dose, and that not gradually, but rapidly increased, till the irritation is subdued. Opium is frequently given in Mania and Hydrophobia, in repeated doses of one scruple each! sometimes to the amount of half a drachm, or two scruples, and with the happiest effects, after emetics.

Hemlock, the favourite medicine of Stork, is given, as Hyoscyamus is, more frequently in extract, and often along with Hemlock, not unfrequently in substance.

93. R. Pulveris foliorum siccatorum conii maculati ℥i.

Fiat massa ope mucilaginis, in pilulas viginti formanda; initio sumat æger unam, (viz. grana tria conii), nocte manequæ, postea duas bis in die, ascendens gradatim ad semidrachmam, viz. pilulas tres ter in die.

94. R. Extracti conii maculati ℥ss.  
 ——— hyoscyami nigri ℥i.

Fiat massa, dividenda in pilulas viginti; sumat æger initio duas, postea tres, ter in die.

95. R. Extracti hyoscyami nigri.  
 ——— conii maculati āā gr. iii.

Fiat pilulæ sex, quaque hora sumendæ.

96. R. Camphoræ.  
 Extracti hyoscyami nigri āā gr. v.  
 Pulveris ipecacuanhæ gr. i.

Fiat pilulæ duæ, sexta quaque hora sumendæ.

97. R. Extracti atropæ belladonæ gr. ii.  
 Sacchari purificati gr. vi.

Fiat pulvis, sexta quaque hora sumendus.

98. R. Extracti aconiti napelli gr. i.  
 Pulveris ipecacuanhæ cum opio gr. v.  
 Conservæ rosæ q. s.

Fiat bolus, quarta, quinta, vel sexta quaque hora sumendus.

99. R. Foliorum napelli aconiti ℥i.  
 Alcoholis diluti ℥viii.

Digere per dies septem, et cola dosis guttæ tres, ad viginti vel triginta, in Arthritide, Rheumatismo, &c.

These are used as narcotics, in circumstances where

opium sickens and excites. But still it is to be remembered, that these, especially Cicuta, are used, not with the design of repressing excited action, but merely of suspending the sensibility of the nervous system: They are used in painful diseases, in Gout, Rheumatism, Tic Doloureux, Cancer, Disorders of the Urinary Bladder, Rectum, &c. Opium also is used in the larger doses, to lull pain, and to operate as an anodyne; but never with the design of repressing vascular action, which it rather excites, and by that procures Diaphoresis. Opium draughts of fifty, seventy, or a hundred drops, or boluses containing two, three, or four grains, are so useful in subduing pain, that it is the most familiar medicine, and common resource, of those afflicted with lingering diseases. But that effect of opium which requires artful management, and may be truly called medicinal, viz. which contributes to the cure of disease, is its STIMULANT property! As a cordial and diaphoretic in Fevers, it is used in many various forms; almost always in draughts, that its operation may be immediate; conjoined with aromatics, that it may prove grateful to the stomach; aided by Camphor, or Sulphuric Æther, or Spiritus Ætheris Nitrosi, or Antimony, or Calomel.

Camphor, with vinegar, often proves in itself a useful febrifuge, or a convenient form for combinations with Opium or Antimony: The Acetum Camphoratum is designed for such uses.

100. R. Camphoræ drachmam.

Alcoholis scrupulum.

Gummi mimosæ niloticæ pulv.

Sacchari purificati utriusque unciam.

Acidi acetici diluti sesquilibram.

Sumatur unciam sæpe in die, phiala fortiter agitata.

The most simple of all forms of opiate, is the draught, given merely to compose and abate irritation.

101. R. Pulveris lauri cinnamoni gr. xv.  
 Syrupi citri aurantii ℥ii.  
 Aquæ rosæ centifoliæ ℥xii.  
 Tincturæ opii gtt. xxx. ad l. vel xc.

Fiat haustus, hora somni sumendus.

102. R. Pulveris aromaticæ ℥i.  
 Aquæ lauri cinnamoni ℥iss.  
 Tincturæ opii gtt. xxxv.

Fiat haustus.

103. R. Tincturæ opii.  
 ——— hyoseyami nigri, āā gtt. xx.  
 Aquæ rosæ centifoliæ ℥x.  
 Syrupi simpl. ℥ii.

Fiat haustus anodynus, in rheumatismo, podagrâ, dolore abdominali, catarrho, inflammatione dolorosâ testis, vesicæ, urethræ, glandularum, conglobatarum, &c.

104. R. Tincturæ opii.  
 ——— digitalis purpur. āā gtt. xx.  
 Aquæ lauri cinnamoni.  
 ——— fontis, āā ℥v.  
 Syrupi citri aurantii ℥ii.

Misce, ut fiat haustus anodynus.

From draughts and boluses of the most moderate power, and suited to relieve the slighter irritation, we advance gradually through those combinations which we prescribe in slight hysterical affections, to those which we venture to give in hydrophobia and tetanus. Hysterical disorders must be delicately dealt with, they

are connected with irregular menstruation and very irritable constitutions; the slightest error converts them into paroxysms of great suffering, and their continuance draws on lingering indispositions, which ruin the health: Hysterical habits bear none but very gentle medicines, little proportioned to the apparent suffering.

105. R. Tincturæ opii gtt. xv.  
 Spiritus ætheris nitrosi ℥i.  
 Aquæ lauri cinnamoni ℥i.  
 Syrupi ℥ii.

Misce, ut fiat haustus.

106. R. Moschi.  
 Pulveris lauri cinnamoni, āā ℥ss.  
 Sacchari purificati ℥iss.  
 Mucilaginis gum. mim. nil. ℥ii. tere simul,  
 dein adde,  
 Aquæ fontis ℥iss.

Ut fiat haustus, ter in die sumendus.

Musk is a cordial medicine; if it be genuine, and have any effect, it is, like wine, to stimulate and exhilarate.

107. R. Castorei ℥i.  
 Camphoræ ℥ss.  
 Tincturæ opii ℥i.  
 Mucilaginis gum. mim. nil.  
 Syrupi citri aurantii, āā ℥ss.  
 Aquæ fontis ℥v.

Fiat mistura, sumat æger cochlearia duo magna, secunda quaque hora, vel ter in die, in morbis nervorum, in singultu, hysteria, febre petechiali, cynanche maligna, &c.

108. R. Aquæ ammoniæ.  
 Tincturæ opii, āā gtt. x.  
 Aquæ menthæ piperitæ ʒi.  
 Syrupi simplicis ʒii.

Fiat haustus, ter quaterve in die sumendus.

109. R. Tincturæ valerianæ ammoniatæ.  
 Spiritus ætheris nitrici āā ʒii.  
 Aquæ menthæ piperitæ ʒvi.

Fiat mistura, cujus adhibeantur cochlearia tria magna, altera quaque hora.

110. R. Ætheris sulphurici.  
 Tincturæ opii āā ʒii.  
 Spiritus lavendulæ compositus ʒss. m.

Sumat æger in cyatho aquæ, cochlearium minimum, ter in die, in ventriculi dolore spasmodico, in arthritide atonica, vel uti dicitur retrocedente.

It is my opinion, from experience and my own feelings, that opium is infinitely less powerful in proportion to laudanum, than is usually estimated, viz. a grain to twenty drops. The effects are not of the same sudden exhilarating kind. This soothing cordial effect, of which we avail ourselves so much in low fever and in nervous diseases, is quite lost, when opium is given instead of the tincture. But there are circumstances in which opium may be preferable: And in the more dangerous diseases, as Hydrophobia, Tetanus, Mania, and Epilepsy, where we venture on very high doses of opium and camphor, they are perhaps best given in substance: Even in hysteria and lesser nervous disorders, we prescribe thus.



111. ℞. Camphoræ gr. viii.  
 Moschi gr. vi.  
 Opii gr. ii.

Fiat pulvis ex syrupo sumendus.

112. ℞. Camphoræ grana quindecem.  
 Opii grana duo.  
 Alcohol. pauxillum.  
 Confectionis aromaticæ semidrachmam.

Fiat massa mollis, in pilulas tres dividenda, una statim sumenda, altera pro re natâ.

113. ℞. Camphoræ grana decem.  
 Opii grana sex.  
 Conservæ rosæ q. s. ut

Fiat bolus, statim deglutiendus in hydrophobia, et secundâ quâque horâ, vel,

114. ℞. Submuriatis hydrargyrî ℥ii.  
 Opii.  
 Camphoræ āā ℥i.

Mucilaginis q. s. ut fiat massa mollis, dividenda in pilulas quatuor, omni semihora deglutiendas, vel sæpius quo sæviores sunt spasmi et horror.

But the cordial and diaphoretic effects of opium, of which we avail ourselves in slight fever, rheumatism, exanthemata, sore throat, and especially in typhus, are produced only by gentle doses and judicious combinations; combining the opium with saline draughts, when we would have it operate as a sedative or gentle diaphoretic,—but with camphor, æther, and serpentaria, when we would support the vital powers. Those medicines, bark excepted, which we should term FEBRIFUGES, are all included in the following series of prescriptions.

115. R. Carbonatis ammoniæ gr. xv.  
 Acidi citrici q. s.  
 Aquæ lauri cinnamomi ℥i.  
 Syrupi citri aurantii ℥ii.  
 Tincturæ opii gtt. xxx.

Fiat haustus, quarta vel sexta quaque hora sumendus.

116. R. Misturæ camphoratae, Phar. Lond. (cujus  
 libra drachmam camphoræ continet), ℥viii.  
 Syrupi lauri aurantii ℥ss.  
 Tincturæ opii ℥i.

Fiat mistura cardiaca, in febre typhoide nocte dieque ad-  
 hibenda, trium vel quatuor horarum intervallo; sit do-  
 sis cochlearia tria magna, adhibeatur dum delirat æger.

117. R. Misturæ camphoratae ℥x.  
 Syrupi ℥ii.  
 Tincturæ opii gtt. xii.  
 Ætheris sulphurici gtt. xxx.

Fiat haustus, quarta quaque hora adhibendus.

118. R. Aquæ menthæ piperitæ ℥iv.  
 ——— fontis ℥ii.  
 Syrupi dianthi caryophilli ℥i.  
 Spiritus ætheris nitrici ℥ss.  
 Tincturæ opii gtt. lxxx.

Fiat mistura, cujus sumat æger cochlearia duo magna  
 tertia quaque hora.

119. R. Liquoris acetatis ammoniæ,  
 Aquæ lauri cinnamomi, āā ℥ii.  
 ——— fontis ℥iii.  
 Syrupi citri aurantii ℥i.  
 Ætheris sulphurici ℥iii.  
 Tincturæ opii gtt. lx.

Fiat mistura.

120. R. Carbonatis potassæ ℥i.  
Misturæ camphoræ ℥xii.  
Syrupi citri aurantii ℥ii.  
Tincturæ opii gtt. v.

Fiat haustus, in hora sumendus, in statu effervescentiæ,  
cum cochleari magno acidi citri medici.

121. R. Camphoræ semidrachmam.  
Alcoholis pauxillum.  
Amygdalas dulces dicorticatas sex.  
Sacchari purissimi drachmas tres. Contere,  
et adde,  
Aquæ menthæ piperitæ.  
—— fontis uncias quatuor.  
Tincturæ opii guttas quadraginta.

Fiat mistura, cujus sit dosis cochlearia tria magna.

122. R. Camphoræ grana quatuor.  
Moschi grana sex.  
Opii granum.  
Syrupi amomi zingiberi q. s.

Ut fiat bolus, ter in die adhibendus.

123. R. Opii granum.  
Pulveris antimonialis grana quatuor.  
Conserv. rosæ q. s.

Ut fiat bolus, ter in die sumendus, superbibendo cochlearia magna tria sequentis misturæ :

124. R. Infusi rosæ gallicæ libram.  
Syrupi simpl. ℥ii.  
Acidi sulphurici diluti ℥ii.  
Vel ℥iiss.

125. R. Opii grana duo.  
 Submuriatis hydrargyri grana sex.  
 Pulveris Jacobi grana octo.  
 Conservæ rosæ q. s.

Ut fiat bolus, hora decubitus sumendus, superbibendo  
 cyathum vini diluti calidi.

126. R. Pulveris antimonialis grana tria.  
 Carbonatis ammoniæ grana quatuor.  
 Pulveris ipecacuanhæ cum opio grana sex.  
 Conservæ rosæ q. s.

Fiat bolus, quarta quaque hora sumendus, superbibendo  
 emulsionis camphoratæ cochlearia tria.

Emulsio Camphorata, is the emulsion prescribed No.  
 121. without the laudanum, and with pure water in-  
 stead of peppermint-water.

127. R. Pulveris Aristol. serpentariæ gr. xii.  
 Camphoræ gr. vi.  
 Alcoholis pauxillum.  
 Mucilag. gum. mim. niloticæ.  
 Syrupi citri aurantii āā ʒii.  
 Aquæ cinnamomi ʒi.

Fiat haustus, ter in die sumendus.

Such cordial draughts are particularly useful in low  
 fever, with delirium; but in Synocha, simple and gentle  
 medicines are more availing.

128. R. Aquæ acetatis ammoniæ.  
 Misturæ camphoratæ āā ʒiii.  
 Tartratis antimonii gr. i.  
 Syrupi dianthi caryophylli ʒi.

M. ut fiat mistura, cujus sumantur cochlearia duo ampla  
 intervallo semihoræ; vel,

129. R. Carbonatis ammoniæ gr. vi.  
 Aquæ ammoniæ acetatis.  
 Aquæ lauri cinnamomi āā ʒi.  
 Syrupi citri medici ʒiii.

Haustus, secunda vel tertia quaque hora adhibendus.

In fever I find it often preferable to make the pleasantest of all effervescent cordials, from domestic articles: Mixing a spoonful of fine sugar, with two spoonfuls of lemon juice, and a glass of Madeira; pouring upon this an earthen bottle of simple aerated water, (the aqua acidi carbonici), makes a delicious refreshing draught.

#### OF ANTISPASMODICS.

There is no class of diseases in which we reason so little, and practise so empirically, as in those termed Nervous or Convulsive.—The causes which produce slighter hysterical convulsions, are so trivial, and those which occasion epilepsy, hydrophobia, tetanus, and other formidable convulsions, are so abstruse, that we often prescribe a round of unavailing medicines. There are such infinite varieties of spasmodic affections, not only thus agitating the whole muscular system, but affecting particular organs and functions, that in enumerating the prescriptions, it is necessary to recollect the variety of uses to which they may be turned.

The following medicines are prescribed.

1st, In hysteria we give the milder medicines, as Castor, Valerian, &c. and the smaller doses of Opium and Camphor. 2d, In universal convulsions, as epilepsy, child-bed convulsions, tetanus, trismus, and hydrophobia, we give the most powerful doses of mercury, opium, camphor, &c. 3d, In GASTRODYNIA, and Cramp of the Stomach, we give opium, essential oils, and large doses

of laudanum, with hot spirits, mulled wine, &c. *4th*, In Asthma, or Spasm of the Glottis, we prescribe ipecacuanha, opium, camphor, and powerful doses of cether. *5th*, In Hooping-Cough, Pertussis, we give ipecacuanha, cicuta, hyoscyamus, and opium. *6th*, In Colic, or Spasm of the Intestinal Canal, we conjoin purges, with warm, stimulating, antispasmodic medicines. *7th*, In suppression of Urine, or Spasm of the Sphincter Vesicæ, we prescribe opium, and opiate glysters; and from whatever cause the strangury proceeds, especially if from the application of blisters, or the imprudent use of cantharides, we give camphor. These remedies I shall not very studiously arrange according to their order; it will be useful to the young Physician to see their several properties thus recounted; he must think, select, and vary them for himself.

130. R. Moschi ℥ss.

Camphoræ gr. vi.

Conservæ rosæ q. s.

Ut fiat bolus, bis vel ter in die sumendus.

131. R. Castorei ℥i.

Carbonatis ammoniæ ℥ss.

Conservæ rosæ q. s.

Ut fiat bolus, ter quaque hora sumendus.

132. R. Assafœtidæ ℥ii.

Aquæ ferventis ℥viii.

Misce, et adde

Tincturæ opii ℥ss.

Tincturæ valerianæ sylvestris ℥ss.

Fiat mistura, cujus sumat æger cochlearia duo magna, quater in die.

133. Sumat ætheris sulphurici ; vel,  
 Aquæ ammoniæ ; vel,  
 Tincturæ opii camphoratae ; vel,  
 Alcoholis ammoniati.  
 Aromatici ℥i. ad ℥ii. ex aqua.

134. B. Assafætida ℥ii.  
 Camphoræ ℥i.  
 Alcoholis pauxillum.  
 Aquæ fontis ℥iv.

Misce ut fiat enema antihystericum.

Injiciatur vespere, Tincturæ opii ℥i. in  
 aquæ tepidæ ℥iv.

135. B. Tincturæ valerianæ volatilis ℥ss.  
 ———— lavendul. comp. ℥ii,  
 Ætheris sulphurici ℥iii.  
 Aquæ ℥vi.

Fiat mistura, cujus capiantur cochlearia duo sæpe in die.

136. B. Alcoholis camphorati ℥i.  
 Ætheris sulphurici ℥ss.

Fiat embrocatio, quo illinatur regionem hypogastrica,

137. B. Moschi.  
 Sacchari āā ℥ii.  
 Vitelli unius ovis, tere simul, et adde, aquæ  
 tepidæ ℥iv.  
 Tincturæ hyoscyami nigri ℥ss.

Misce pro enemate.

138. B. Pulveris valerianæ sylvestris ℥ss.  
 Pulveris aromatici ℥ii.  
 ———— capsici ℥i.

M. et divide in partes æquales sex, quarum una, quarta

quaque hora sumenda, in suffocatione, cephalæa, hemicrania, clavi hysterica.

139. R. Aceti  $\bar{z}$ vi.

Alcoholis  $\bar{z}$ i.

Spirit. lavendulæ ar.  $\bar{z}$ ss.

Fiat mistura, cujus sumat æger cochlearia magna tria, bis in hora, vel sæpius, in singultu hysterico.

140. R. Muriatis ammoniæ et ferri.

Pulveris amom. zingiberi  $\bar{a}\bar{a}$  gr. viii.

Mucilaginis q. s.

Ut fiat bolus, bis die sumendus.

When we prescribe for universal convulsions, Hydrophobia, Tetanus, &c. we have recourse to camphor, opium, mercury, and hyoscyamus; and to sickening emetics: and we give these in doses limited by no consideration, but that of subduing the disease, or producing direct signs of danger.

141. R. Submuriatis hydrargyri  $\bar{z}$ i.

Opii  $\bar{z}$ ss.

Mucilaginis tragacanthæ q. s.

Ut fiat massa, dividenda in pilula sex; sumat æger unam omni semihora, in trismo, tetano, mania, hydrophobia; vel,

142. R. Extracti hyoscyami  $\bar{\theta}$ ii.

Opii  $\bar{z}$ ss.

Fiat massa formanda in pilulas octo, singulis horis sumendas, donec pulsationes arteriarum sufflaminantur, et reducantur ad quadraginta in minuti spatium: tunc stupore affecta, æger desinat pilulas sumere, atque etiam viribus narcoticis oppugnare debeat, haustibus acidi aceti diluti, vel aquæ acidi carbonici.



143. R. Extracti digitalis.  
 ——— opii.  
 Tartratis antimonii āā gr. ii.

144. R. Extracti digitalis,—opii.  
 Tartratis antimonii āā gr. ii.  
 Submuriatis hydrargyri gr. vi.  
 Mucilaginis tragacanthæ q. s.

Ut fiant pilulæ, duæ quaque hora adhibendæ.

145. R. Camphoræ ꝑiiss.  
 Nitratis potassæ ꝑi.  
 Extracti gentianæ luteæ q. s.

Ut fiat massa, dividend. in pilulas duodecim, quarum sumat phreniticus duas, tertia quaque hora, et hora somni sumat quatuor; sed caute et gradatim semper adhibendum est hoc remedium: si adveniunt syncope anxietates, nausea et convulsiones, instanter desinere oportet, et vice camphoræ, parvas doses opii exhibere, cum potû acidî acetici exhibendæ.

In Puerperal Convulsions, we succeed best by very profuse bleeding, and powerful doses of camphor and of opium.

In those desperate conditions of Mania, Hydrophobia, &c. and in universal convulsions, such as occur in warm climates, the physician will be directed in his frequent visits, or by reports brought him from hour to hour, how far to proceed, what to hope, when to desist.

In the less fatal but ruinous disorder of epilepsy, we are accustomed to prescribe more trivial medicines in less efficient doses: one reason perhaps, of our ill success. The powders of Valerian and Camphor, the pills of Oxide of Zinc, and Ammoniaret of Copper, should be supported by copious bleedings and frequent purges.

146. R. Subsulphatis cupri et ammoniæ grana se-  
decim.

Succi spissati hyoscyami.

Conii maculati āā semidrachmam.

Micæ panis q. s.

Ut fiat massa, in pilulas triginta duas dividenda; su-  
mat æger pilulam bis terve in die, sensim augendo  
dosin, si ventriculus ferat.

147. R. Sulphatis ferri ʒi.

Extracti gentianæ q. s.

Ut fiat massa, in pilulas viginti dividenda; sumat æger  
initio pilulam mane, vespere pilulas duas; postea su-  
mat duas mane et vespere, gradatim dosin augens.

Next to the sulphates of iron, are the sulphates and  
oxides of zinc.

148. R. Sulphatis zinci gr. iss.

Pulveris radice glycyrrhizæ glabræ.

Cinnamomi āā gr. vi.

Fiat pulvis, ter in die repetendus.

149. R. Sulphatis zinci gr. i.

Opii gr. ss.

Extracti gentianæ luteæ gr. iii.

Fiat pilula, ter in die sumenda.

150. R. Oxidi zinci ʒi.

Sacchari puriss. ʒii.

Pulveris lauri cinnamomi.

———— capsici āā gr. vi.

Tere simul, et divide in pulveres duodecim, quarum su-  
mat æger unam tertia quaque hora, in epilepsia,  
serophula, asthmate, &c.

151. R. Oxidi zinci gr. vi.  
Succi inspissati glycyrrhizæ gr. iv.  
Olei menth. piperitæ gtt. i.

Fiant pilulæ duæ, ter in die sumendæ.

152. R. Nucis vomicæ contusæ ℥i.  
Aquæ ferventis lbi.

Macera per horam, dein cola; hujus infusionis sumantur pro haustu ter in die, drachmas duodecim, cum tincturæ cardamomi drachmis duabus; vel,

153. R. Pulveris nucis vomicæ.  
————— moschatae āā gr. ii.  
Conservæ rosæ q. satis.

Ut fiat pilula, ter quotidie deglutienda.

154. R. Solutionis arsenicæ guttas sex.  
Aquæ lauri cinnamomi ℥i.  
Syrupi citri aurantii ℥ii.

Fiat haustus, ter in die sumendus, in epilepsia, rheumatismo, febre intermittente.

In Constipation and Colic, arising from inaction or spasm of the great intestine, opium, and other antispasmodics, are judiciously combined with small portions of drastic purges, as calomel, with opium and colocynth.

155. R. Submuriatis hydrargyri.  
Extracti colocynthidis āā gr. viii.  
Opii granum.  
Olei menth. piperitæ gtt. iv.

Fiat massa dividenda in pilulas duas, tertia quaque hora sumendas.—In such cases opiates are antispasmodics, and (though in other circumstances they might operate as narcotics) aid the operation of purges.

156. Habeat eo tempore pro enemate, tincturæ opii  $\mathfrak{z}$ i.;  
vel, opii grana quatuor ex aquæ hordei, vel mucilaginis  
 $\mathfrak{z}$ iv. et illinatur regio umbilici, embrocatione anodyna.

157. R. Vitelli ovi unius.  
Olei terebinthinæ  $\mathfrak{z}$ ii.  
Tincturæ opii  $\mathfrak{z}$ ss.

Pro embrocatione.

158. R. Tincturæ rhæi amaræ.  
—— opii gtt. xxxv.

Haustus hora decubitus sumendus, resolvens leviores  
gradus spasmi colici, et sine dolore alvum movens.

159. R. Aquæ lauri cinnamomi  $\mathfrak{z}$ iv.  
Syrupi citri aurantii  $\mathfrak{z}$ i.  
Olei menthæ pulegii gtt. x.  
Spirit. ammoniæ foetidæ  $\mathfrak{z}$ i.

Sumat æger cochlearia duo magna, tertia quaque hora.

160. R. Pulveris baccæ capsici indici gr. iii.  
Opium gr. ss.  
Olei menthæ pulegii gtt. ii.

Fiat pilula, sexta quaque hora sumenda.

161. R. Submuriatis hydrargyri gr. viii.  
Pulveris lauri cinnamomi.  
Sacchari purificati  $\bar{a}\bar{a}$  gr. vi.  
Olei menthæ piperitis gtt. iv.

Fiat pulvis, statim sumendus.

162. R. Olei ricini  $\mathfrak{z}$ ss. vitelli ovis pauxillum.  
Aquæ menthæ piperitis  $\mathfrak{z}$ i.  
Syrupi citri aurantii  $\mathfrak{z}$ iii.  
Tincturæ opii gtt. xx.

Fiat haustus, sexta hora repetendus.

163. R. Pulveris aromatici.

Sacchari purificati āā ʒiv.

Tincturæ convolvuli jalapi ʒii.

Aquæ menthæ piperitæ ʒiv.

Olei menthæ pulegii gtt. x.

Fiat mistura, cujus sumat æger unciam, (viz. cochlearia duo magna), quarta quaque hora, vel urgente dolore.

164. R. Unguenti hydrargyri ʒiss.

Opii.

Camphoræ āā ʒii.

Alcoholis pauxillum.

Olei terebinthinæ ʒii.

Misce ut fiat embrocatio.

Such embrocations, combined with internal medicines, I find very useful in cases of imminent danger.

In gastrodynia, not arising from inflammation, but from indigestion, acidity, and spasm; when sudden pain runs up along the œsophagus to the throat, strikes directly across the region of the stomach, and doubles up the patient, as if he had got a blow in the pit of the stomach; we give opium and œther by spoonfuls, accompanying each draught with spirits or hot Madeira; and follow up these by absorbent anodyne draughts, to neutralize the acid and appease the pain.

165. R. Tincturæ opii ʒiv.

———lavendulæ ʒss.

Aquæ menthæ piperitæ ʒvi.

Syrupi citri aurantii ʒi.

Fiat mistura, cujus sumat æger initio cochlearia quatuor, postea duo, quater vel sæpius in hora.

166. R. Subcarbonatis ammoniæ gr. iv.  
 Opii gr. ii.  
 Conservæ rosæ gr. vi.

Ut fiat bolus vel pilulæ molles duo, statim sumendæ, et secundum gradum doloris repetendæ, comitante semper subcarbonata, congrua quantitate aquæ.

167. R. Carbonatis calcis ℥ii.  
 Pulvis rhæi palmati ℥i.  
 Mucilaginis g. mimosæ niloticæ.  
 Syrupi citri aurantii.  
 Aquæ lauri cinnamomi āā ℥ii.  
 Tincturæ opii ℥ss.

Fiat haustus, statim sumendus, et repetendus quater in die.

Applicentur lintea, tinctura opii madida, ad leniendam dolorem ventriculi.

168. R. Magnesiæ ℥ii.  
 Pulveris rhæi palmati ℥i.  
 Aquæ menthæ piperitæ.  
 Mucilag. g. mim. niloticæ.  
 Syrupi āā ℥ii.  
 Tincturæ opii ℥i.

Misce, et sumat æger cochlearia tria magna, quater in die.

Spasm of the neck of the bladder, requires external perhaps still more than internal medicines.

169. R. Camphoræ gr. viii.  
 Alcoholis pauxillum.  
 Opii gr. ii.  
 Conservæ rosæ q. s.

Ut fiat bolus, statim sumendus. Habeat statim enema anodynum, et fotum calidum.

170. ℞. Seminis anethi.

Anthemidis nobilis āā ʒi.

Coque ex aquæ lbiss. ad ʒx.

Adde tincturæ opii ʒi.

Pro enemate.

171. ℞. Decocti communis lbiii.

Muriatis sodæ.

———— ammoniæ āā ʒiii.

Alcoholis ʒv.

Tincturæ opii ʒi.

Fiat fomentatio, inferiori parte abdominis applicanda, pro horæ spatio, et post fomentum illinatur regio pubis, sequente embrocatione :

172. ℞. Tincturæ opii.

Olei camphorati āā ʒss.

173. ℞. Spirit. ætheris nitros. ʒi.

Tincturæ lavendul. ʒss.

———— opii ʒii.

Sumat æger ʒi. tertia quaque hora, superbibens emulsionis camphoratæ cyathum.

At si aliter solatium nequit afferi, utendum est cereolo chirurgico, Gallice Bougie semper Algali Araborum antèponendo : Intromissum cereolum et in angustam urethræ partem impactum, maneat paululum, et ubi retrahitur, fluet urina, initio guttatim, postea pleno rivo.

Medicines, which relax spasm in one part or organ, have some influence in every other : Thence Opium, Camphor, Æther, &c. which alleviate spasms of the mus-

cular parts, relieve spasms of the neck of the bladder, of the glottis, of the biliary ducts, &c. Yet each of these require peculiar forms, or doses of antispasmodics, and none perhaps are more difficult to remedy than spasms of the glottis, such as occasion asthma, pertussis, &c.

IPECACUANHA, a powerful sedative, affects particularly the opening of the larynx.

174. R. Pulveris ipecacuanhæ gr. iv.  
Sumatur diluculo quotidie in Asthmate.

Or, as it is prescribed by Dr Pearson :

175. R. Aquæ puræ ℥i.  
Syrupi simpl. ℥iii.  
Sodæ sub-carbonatis gr. xxiv.  
Vini ipecacuanhæ ℥i.  
Tincturæ opii gtt. iv.

Sumat infans sextam partem, quarta vel sexta quaque hora, in tussi convulsivo.

Or antimony :

176. R. Tartritis antimonii gr. iii.  
Aquæ ℥i.  
Syrupi aurantii ℥ii. m.

Sometimes tartrate of antimony is applied, along with other stimulant medicines, to the scrobiculus cordis.

177. R. Tartratis antimonii ℥i.  
Tincturæ opii ℥ii.  
———— meloë vesicatoriæ ℥ss. Vel,

178. R. Linimenti saponis cum opio ℥iss.  
Aquæ ammoniæ ℥iv.

Misce pro embrocatione.



EXTERNAL APPLICATIONS FROM THE CLASS OF  
NARCOTIC MEDICINES.

MANY of those complaints, in which Narcotics and Anodynes are prescribed, and almost all those in which Narcotics are permanently given, require baths, fomentations, or poultices of Narcotics. We rarely indeed hope for any thing beyond present ease; it is as anodynes only that we use such decoctions, and poultices, in diseases too dreadful to allow any hope of cure. In the more desperate cases of rheumatism, we use such anodyne applications; in venereal nodes, and wide-spreading ulcerations of the skin, and glands; in schirrhous diseases of the testicle, or mamma; in open ulcerations of a cancerous nature, on the penis, testicle, or eye; in cancerous ulcers of the bladder, of the womb and vagina, of the rectum, or the verge of the rectum.

Cicuta and Digitalis, for all the more desperate and painful diseases, are most resorted to. That form of application most natural to the untaught and vulgar, though least used, is assuredly the best, viz. to take the fresh leaves of the hemlock, bruise them with the back of a spoon, till the juice exude, and apply them to the sore. This I can assure the tyro, that hemlock and fox-glove thus applied to unseemly cutaneous eruptions, scabby and ulcerated skin, has admirable effects. But if it must be used in a more scientific form, this is the best.

174. R. Foliarum recentium conii maculati, sili-  
bram; vel,  
Pulveris foliorum siccatorum uncias tres.

Aquæ libras duas cum semisse; coque ad libras duas,  
vel durante semihor

This is the fomentation which we apply hot, morning and evening, for half an hour or more at each time, in the worst venereal nodes; in rebellious sores in the groins or on the penis; in open cancer of the mamma, or rather of the axilla, for the disease has reached the axilla, and the whole arm is tumid, before we come to this last resource for ease and rest. It serves also as an injection for the cancerous womb, or rectum.

I never suffer the decoction of cicuta to be strained; and when the operation of fomenting is concluded, cover the face of the sore with a bruised leaf. Such anodyne fomentations, alternated with caustics, will sometimes cure sores apparently desperate. The caustic is applied with a camel's hair pencil, every morning, or every second morning, boldly and perseveringly. The caustic, when it runs down over sound parts, is to be soaked up with a sponge, dipped in warm milk, and kept ready in the hand. The sore, after cauterizing, is sometimes left dry, and powdered with carbonas zinci. The fomentation is to be applied again in the afternoon and evening. This is the best process of the more successful quacks.

The hemlock poultice is made of this fomentation, thickened with flour, or linseed meal, to which should be joined a proportion of the dry powder.

180. R. Decocti conii maculati lbi.

Pulveris conii ʒi.

———— seminum lini usitatissimi q. s.

Ut formetur cataplasma, sine interventione lintei applicanda, post fomentum; vel,

181. R. Fol. conii maculati exsiccati.

Medullæ panis ʒā partes æquales.

Aquæ q. s.

Ut coquantur simul, in massam mollem pro cataplasmate.

A narcotic still more useful in active inflammations, and one which I more frequently use in cutaneous ulcerations, is the fomentation and poultice of fox-glove.

182. R. Pulveris foliorum digitalis purpureæ uncias tres.

Coque in aquæ libris duobus ad unam, pro fotu, admisce q. s. vel pulveris lini, vel medullæ panis, ut fiat cataplasma anodynum.

183. R. Farinæ avenæ sativæ selibram.

Foliorum recentium conii maculati rite contusorum uncias duas.

Aceti q. s. Coque parumper et adde, Muriatis ammoniæ semiunciam.

Ut fiat cataplasma anodynum resolvens.

Among anodyne medicines, rather than anodyne applications, we must rank as a very important one indeed, the anodyne glyster, which remarkably aids the operation of internal anodynes, and often supplies their place most happily, when perpetual vomiting would prevent anodyne draughts from being retained.

184. R. Aquæ, vel lactis tepidæ uncias quatuor.

Tincturæ opii  $\bar{z}$ i. ad  $\bar{z}$ iii.

Fiat enema anodynum.

This is properly another manner of exhibiting opium; but that which I am now to speak of, if not an external, is at least a topical application, and a very precious one.

185. R. Amyli ℥ii. solve in  
 Aquæ ferventis ℥vi.  
 Extracti cicutæ gr. iv.

Fomentatio anodyna tepide in vesicam urinariam injicienda, ope catheteris ; vel,

186. R. Lactis tepidi ℥vi.  
 Tincturæ opii ℥i.

Injectio in irritabilitate vesicæ ; vel,

187. R. Acetatis plumbi ℥ss.  
 Aquæ rosæ.  
 ——— distillatæ āā ℥iii.  
 Tincturæ opii ℥iss.

M. ut fiat injectio.

188. R. Extracti hyoseyami nigri ℥i.  
 Camphoræ gr. xii.  
 Opii ℥i. ; misce ope alcoholis pauxillum.

Ut fiat pulpa anodyna, ulceribus cutis applicanda, ope penicilli.

189. R. Pulveris foliorum hyoseyami nigri ℥ii,  
 Succii conii maculati ℥i.  
 Adipis suillæ ℥ss.

190. R. Adipis suillæ ℥i.  
 Opii ℥ii.

Fiat unguentum.

191. R. Opii ℥ii.  
 Camphoræ ℥ss.  
 Adipis suillæ ℥vi.

Misce, ut fiat unguentum.

192. R. Camphoræ  $\bar{z}$ ss.  
Olei oleæ Europææ  $\bar{z}$ ii.

Misce, fiat embrocatio; vel,

193. R. Extracti hyoscyami  $\bar{z}$ iii.  
Pulveris foliorum conii maculati  $\bar{z}$ ii.  
Camphoræ  $\bar{z}$ ii.  
Olei terebinth. q. s.

Ut fiat massa mollis leni frictione applicanda, tumoribus strumosis glandularum conglobatarum cervicis, et maxillæ; intumescens glandulis thyroidis; tumoribus hydropicis articularum; ulceribus cancris præcipue narium, genarum, &c.

EMPLASTRUM OPII.

TINCTURA OPII, &c.

OLEUM CAMPHORATUM, &c.

TINCTURA SAPONIS CUM OPIO,

And other pharmaceutical preparations, are the more familiar anodyne applications. The camphorated poultice is especially useful; it is made by pouring over the common emollient poultice, a quantity of the camphorated oil, mixing it up with the poultice, and still adding more oil, to cover well the surface of the poultice, which should be applied hot. Or the hemlock, or henbane poultices, may be covered with strong camphorated oil.

#### RETROSPECTIVE AND GENERAL VIEW OF THE CLASS OF NARCOTIC MEDICINES.

I lament at every step, the difficulty of giving a clear, rational, and simple view of the several properties of medicines; and the disappointment I feel arises from these qualities having their relations to the complicated me-

chanism of the animal body. Yet I trust the young physician will find his talent of appropriating remedies to diseases, improved, by the arrangement I have made, and will, in the course of practice, improve these arrangements, or substitute a system of his own, so as to be able to distinguish the various dangers of disordered and violent action, and how to subdue them. He will infer from the observations interspersed with these prescriptions, that narcotics and antispasmodics hold a distinguished place among the remedies calculated to regulate and moderate both the actions of the vascular, and the feelings of the nervous or sentient part of the animal system: and he will perceive, although no such arrangement is absolutely set down, that the several narcotic remedies are destined to almost specific purposes, or peculiar disorders.

1st, That *Digitalis*, variously combined with sedatives, and with other narcotics, to enforce its operation on the animal system, is useful in inflammatory actions, and in the diseases of the more precious organs, which it saves by moderating the intensity of action, as in Delirium, Insanity and Fury, Hydrocephalus, Phthisis, Rheumatism, and Dropsy, arising from disease in the abdominal viscera.

2d, That *Hyoscyamus*, *Conium Maculatum*, and *Opium*, narcotics of the highest class, are used in those dismal cases, where painful actions, diseased bladder, (e. g.), are to be moderated, and diseases quite incurable are to be assuaged. It is in Glandular swellings, Tumors, diseases of the Bladder and Rectum, Venereal pains, and cancerous sores; in *Tic doloieux*, and other intolerable pains, that such narcotics are prescribed: with the recollection still, that these are also pre-eminently serviceable in reinforcing the powers of other narcotics, or in modifying the effects of other remedies.

It must not be forgotten, that all intense actions arise from increased sensibility, that pain is itself a cause of increased action, and is by nature appointed as an indication of danger and disorder.

3d, Opium is a medicine of such moderate power, and with qualities combined so kindly, as to afford us familiar remedies for all common disorders, and an easy solace in painful diseases. This is the medicine that requires the most varied combination to bring out its medicinal powers. Its uses are infinite: To promote sleep in diseases so slight, as to be little remote from the healthy condition: As a cordial and anodyne in febrile diseases, at once supporting the strength, and abating the intensity of arterial action: In all disorders of the alimentary canal, especially in cramp of the stomach, holera morbus, diarrhœa, dysentery: In restraining mucous discharges, as in cough, gonorrhœa, and fluor albus; or discharges of blood, as hæmatemesis and hæmoptysis, menorrhagia, abortion, child-bed flooding. Whether it is useful as a narcotic in such diseases, or should rather be arranged with astringents, I know not, I care not, it is a question of very trivial importance in any practical view.

4th, Antispasmodics are the same powerful remedies used to abate, not vascular action, or painful sensations, but muscular contractions, and especially contractions of the sphincter muscles. The same narcotics are used as antispasmodic in trismus, epilepsia, hysteria, and hydrophobia; but conjoined with remedies peculiarly adapted to each individual case; as œther, ammonia, and ipecacuanha, in asthma; tartras antimonii, and ipecacuanha, along with cicuta, for hooping-cough: valerian and mosch, for hysteria; camphor, for affections of the urinary passages.

How much the EXTERNAL use of NARCOTIC MEDI-

CINES aids their internal operation, in inflammation, ulcerations, and cancer, gout, rheumatism, and other diseases, is too little thought of.

### EMETICS.

194. R. Vini ipecacuanhæ unciam.

Pro emetico.

195. R. Pulveris ipecacuanhæ ℥i.

Pro emetico.

196. R. Pulveris ipecacuanhæ ℥i.

Tartris antimonii gr. i.

Misce ut fiat pulvis emeticus.

197. R. Tartritis antimonii gr. iv. ; solve in

Aquæ distillatæ ℥iv.

Fiat solutio, cujus sumat æger cochlearia magna duo quater in hora pro emetico :—sed si pro cathartico, vel ad perspirationem excitandam, habeat cochleare bis in hora.

198. R. Pulveris ipecacuanhæ ℥iss.

Supertartratis potassæ ℥i.

Aquæ ferventis ℥iii.

Macera per horam, dein cola, et adde syrupi ℥ss.

Sumat æger cochlearium amplum omni semihora, donec evomuerit, in diarrhœa, dysenteria, &c.

199. R. Sulphatis zinci ℥iss.

Conservæ rosæ q. s.

Ut fiat bolus, contra venenum adhibendum : superbibatur statim, aquæ tepidæ cyathum, et post singulas vomitiones, haustus infusionis anthemidis.



To children labouring under the hooping-cough, or suffocating with croup, we give two drachms or more of tinctura ipecacuanhæ, from time to time, or three grains of the powder of ipecacuanha; and still more commonly do we prescribe sickening doses.

200. R. Vini ipecacuanhæ  $\bar{z}$ ss.  
Oxymellis scillæ  $\bar{z}$ iii.

Capiat cochleare minimum omni hora; vel,

201. R. Tincturæ scillæ  $\bar{z}$ iss.  
Oxymellis scillæ Pharm. Lond.  $\bar{z}$ v.  
Aquæ distillatæ  $\bar{z}$ iss.

Misce, capiat cochleare minimum omni hora.

202. R. Liquoris tartratis antimonii  $\bar{z}$ ii.  
Aquæ distillatæ  $\bar{z}$ iss.  
Oxymellis scillæ  $\bar{z}$ ss.

Sumat cochleare minimum subinde, ad nauseam vel vomitum promovendum.

#### OF PURGES, LAXATIVES, AND ANTHELMINTICS.

##### FIRST,—SALINE PURGES.

203. R. Sulphatis sodæ  $\bar{z}$ i.

In aqua, mane sumendus.

204. R. Tartratis sodæ et potassæ  $\bar{z}$ vi.  
Aquæ  $\bar{z}$ xii.

Fiat solutio, mane sumenda.

205. R. Tartratis sodæ et potassæ  $\bar{z}$ i.

In jusculi bovini libra soluta, partitis vicibus sorbenda.

206. R. Phosphatis sodæ  $\bar{z}i$ . ad  $\bar{z}iss$ .

Sumatur mane, in jusculo bovino, partitis vicibus.

207. R. Sulphatis sodæ  $\bar{z}vi$ .

Solve in aquæ menthæ piperitis  $\bar{z}iv$ .

Fiat haustus purgans, duabus vicibus sumendus.

208. R. Tartritis potassæ et sodæ  $\bar{z}i$ ,

Mannæ  $\bar{z}ii$ .

Aquæ ferventis  $\bar{z}vi$ .

Aquæ lauri cinnamomi  $\bar{z}ii$ .

Syrupi citri aurantii  $\bar{z}i$ .

Fiat haustus purgans, partitis vicibus sumendus.

209. R. Supertartritis potassæ  $\bar{z}iii$ .

Mannæ  $\bar{z}ss$ .

Aquæ ferventis  $\bar{z}vi$ .

Ut fiat solutio purgans, mane sumat dimidium, et post  
duas horas altera pars.

210. R. Tartritis potassæ  $\bar{z}vi$ .

Mannæ  $\bar{z}ii$ . solve in

Aquæ ferventis  $\bar{z}iii$ . adde

— cinnamomi  $\bar{z}iii$ .

Ut fiat solutio cathartica, duabus vicibus sumenda.

These gentle saline purges require to be sharpened by the addition of jalap, senna, or some other resinous purge; and sometimes to be made acceptable to the stomach, by the addition of some warm medicine.

211. R. Tartratis sodæ semiunciam.

Foliorum cassiæ sennæ drachmas duas.

Extracti glycyrrhizæ glabræ drachmam.

Aquæ ferventis uncias duodecim.

Fiat infusum, quatuor vicibus sumendum.

212. R. Sulphatis magnesiæ drachmas sex.  
 Infusi cassiæ sennæ uncias duodecim.  
 Syrupi aurantii unciam.

Fiat haustus purgans, mane sumendus.

213. R. Sulphatis magnesiæ drachmas sex.  
 Supertartritis potassæ drachmas duas.  
 Infusi cassiæ sennæ uncias duas.  
 Aquæ cinnamomi ꝑvi.

Solutio cathartica, duabus vicibus primo mane sumenda.

214. R. Sulphatis magnesiæ ꝑi.  
 Aquæ menthæ piperitis ꝑvi.  
 Tincturæ convolvul. jalapæ ꝑii.

Sumantur cochlearia tria magna in horis, donec alvus rite respondeat.

215. R. Sulphatis magnesiæ ꝑss.  
 Infusi cassiæ sennæ ꝑii.  
 Tincturæ sennæ.  
 Syrupi zingiberi āā ꝑii.

Fiat haustus purgans.

216. R. Sulphatis magnesiæ ꝑii. solve in  
 Infusi sennæ ꝑi.

Fiat haustus, altera quaque hora sumendus, donec alvus soluta fuerit.

217. R. Tartritis potassæ ꝑss.  
 Mannæ ꝑii.  
 Aquæ ferventis ꝑiii.  
 Tincturæ jalapæ ꝑss.  
 Aquæ menthæ piperitis ꝑiii.

Misce pro solutione cathartica, dimidium pro dosi.

218. R. Tartritis potassæ et sodæ ℥vi. solve in  
 Aquæ menthæ piperitis.  
 — cinnamomi āā ℥iii.  
 Syrupi zingiberi ℥i.  
 Ætheris sulphurici.  
 Tincturæ lavendulæ āā ℥ii.

Sumantur cochlearia tria, bis in hora, donec alvus responderit.

219. R. Sulphatis magnesiæ unciam.  
 Infusi sennæ uncias quinque.  
 Syrupi zingiberi unciam semisse.

Fiat mistura, cujus sumantur cochlearia duo bis in hora, donec alvus responderit.

220. R. Phosphatis sodæ ℥i.  
 Infusi sennæ ℥iv.  
 Tincturæ sennæ ℥ii.  
 Syrupi zingiberi ℥i.

Fiat mistura, cujus capiat æger partem tertiam, donec alvus rite respondeat, bis in hora.

There are many kinds of bad health, especially a tendency to inflammatory, cutaneous, eruptive diseases, or affections of the alimentary canal itself, which require that saline purges be repeated daily. These are usually prescribed in form of powders, which the patient, dissolving in a glass of cold water, takes every morning, as he would a draught of any mineral purging water.

221. R. Super-sulphatis potassæ ℥ii.  
 Supertartritis potassæ ℥iv.  
 Sulphatis ferri ℥ss.

Tere simul diligenter, et divide in partes duodecim

æquales, quarum sumatur una primo mane quotidie,  
in aquæ cyatho soluta.

222. R. Sulphatis magnesiæ drachmas tres.  
Supertartritis potassæ drachmam unam.

Misce, sumantur omni mane in aquæ unciis sex vel  
octo.

223. R. Super-sulphatis potassæ drachmam.  
Pulvis rhæi palmati grana quindecim.

Fiat pulvis, quotidie mane sumendus.

SECOND,—SUBMURIAS HYDRARGYRI, AND RESINOUS  
PURGES.

224. R. Pulveris jalapæ compositis ℥ii.

Fiat pulvis catharticus, primo mane sumendus.

225. R. Pulveris jalapæ compositis unciam.

Divide in doses sex, sumat æger pulverem, altera quaque  
hora.

226. R. Pulveris jalapæ compositis unciam.

Sumatur cochlearium parvulum ter in die.

227. R. Pulveris jalapæ compositis drachmas duas,  
in pulveres tres divisas.

Sumat æger unam statim, vespere sumat alteram, et ter-  
tiam primo mane, si lente, vel non omnino respon-  
derit alvus.

228. R. Pulveris jalapæ compositis drachmas duas,  
in doses tres divisas.

Sumat unam altera quaque hora.

229. R. Pulveris jalapæ ℥i.  
 Sacchari rubri ℥ii.  
 Pulveris aromaticæ ℥i.

Tere simul, ut pulvis catharticus, in doses sex dividenda :  
 adhibeatur pulvis donec dejiciatur alvus, ad trium ho-  
 rarum intervallum.

230. R. Pulvis jalapæ scrupulum.  
 Supertartritis potassæ drachmam.

Fiat pulvis ex syrupo sumendus.

231. R. Submuriatis hydrargyri grana octo.  
 Sacchari purificati ℥i.  
 Pulveris corticis cinnamomi gr. x.

Fiat pulvis purgans, mane sumendus : Si opus sit, inji-  
 ciatur enematis domestici libra.

232. R. Submuriatis hydrargyri grana duodecim.  
 Sacchari drachmam.

Tere intime, et divide in doses quatuor, mane singulis  
 horis sumendas.

233. R. Submuriatis hydrargyri drachmam dimi-  
 diam.  
 Sacchari albi drachmam.

Optime terantur, et in pulveris æquales sex dividantur ;  
 sumat æger pulverem singulis horis usque ad quintam,  
 nisi alvus prius dejiciatur.

234. R. Submuriatis hydrargyri scrupulos duos.  
 Sacchari puri drachmam.

Tere intime, et divide in doses duodecim ; sumat unam  
 altera quaque hora.

235. R. Submuriatis hydrargyri grana sex.  
 Pulveris convolvulæ jalapæ scrupulum.  
 Sacchari puri gr. xv.  
 Olei cinnamomi gtt. iii.

Fiat pulvis catharticus.

236. R. Submuriatis hydrargyri gr. xv.  
 Pulveris baccæ capsicæ gr. vi.  
 Sacchari ʒi.  
 Olei carui gtt. iv.

Misce, et divide in doses tres, tertiis horis sumendas, ad trium horarum intervallum.

237. R. Submuriatis hydrargyri grana duodecim.  
 Pulveris jalapæ semidrachmam.

Simul terentur, et dividantur in doses quatuor æquales, quarum sumatur una interpositis tribus horis.

238. R. Subcarbonatis hydrargyri grana quindecim.  
 Pulveris convolvulæ jalapæ scrupulum.

Fiat massa mollis, in duos bolos dividenda, quorum sumat unum statim, post tres horas habeat alterum; alvo redditâ, sumat vespere haustum anodynum.

239. R. Submuriatis hydrargyri grana octo.  
 Pulveris jalapæ scrupulum.  
 Olei pulegi guttas quatuor.  
 Mucilaginis gum. mimosæ niloticæ,

quantum satis sit, ut fiant pilulæ sex; tres vespere, tres summo mane sumendæ.

240. R. Submuriatis hydrargyri grana decem.  
 Conservæ rosæ grana decem, vel q. s.

Ut fiat bolus, statim sumendus: Superbibatur, infusî sennæ uncias duas.

241. R. Submuriatis hydrargyri gr. vii.  
 Pulveris rhæi palmati gr. x.  
 Mucilaginis gum. mim. niloticæ, q. s.

Ut fiat bolus catharticus.

These are the medicines by which we procure, not only evacuation of the bowels, but the sedative effect of those medicines, and that profuse secretion from their internal surfaces, which is useful to the restoration or preservation of health. The purges we have prescribed are of themselves availing, and are gentle in their operation; but when they fail in their ordinary operation, and we begin to be anxious about procuring evacuation, and wish to ensure it, we prescribe an additional cup of some purging infusion, as of senna, or of rhubarb, but chiefly of senna.

242. R. Foliorum cassiæ sennæ sescunciam.  
 Semen anisi semiunciam.  
 Supertartratis potassæ drachmas duas.  
 Aquæ libram.

Supertartratem potassæ, in aqua coque, postea liquorem adhuc ferventem, sennæ seminibus affunde: Sumat æger uncias duas vel tres, pro prima dosi, dein vero quavis hora unciatim, donec alvus semel iterumque ducta fuerit.

243. R. Foliorum cassiæ sennæ drachmas tres.  
 Supertartratis potassæ.  
 Extracti glycyrrhizæ glabræ singulorum  
 drachmam unam.

Infunde per horæ spatium, in aquæ fervidæ unciis duodecim: Sumatur infusi colatæ partem quartam secunda quaque hora, ad promovendam operationem pulveris cathartici. Vel,



Sumatur vespere bolus catharticus, submuriatis hydrargyri: mane, sumatur altera quaque hora, nisi prius respondeat alvus, cyathum infusæ sennæ. Vel,

244. R. Pulpæ tamarindorum semiunciam.

Foliorum cassiæ sennæ  $\bar{z}$ ii.

Aquæ ferventis  $\bar{z}$ x.; infunde et cola, dein adde,

Syrupi aurantii  $\bar{z}$ iss.

Fiat infusum, ejus sumantur unciaë duæ secunda quaque hora.

245. R. Pulpæ tamarindorum unciam.

Seminum coryandri.

Sacchari purissimi.

Foliorum cassiæ sennæ  $\bar{a}\bar{a}$   $\bar{z}$ ii.

Aquæ bullientis uncias sex; cola, et adde,

Aquæ lauri cinnamomi  $\bar{z}$ ii.

Sumantur cochlearia quatuor, et repetantur donec respondeat alvus.

But when we become more anxious to restore the action of the intestines, than to procure evacuation; when we fear, lest dangerous constipation terminate in dangerous colic, and yet do not choose to have recourse to drastic purges, (milder purges are indeed the most availing in those circumstances), we choose the following:

246. R. Olei ricini  $\bar{z}$ i.

Mucilag. g. m. niloticæ.

Syrupi zingiberi  $\bar{a}\bar{a}$   $\bar{z}$ ss.

Aquæ menthæ piperitæ  $\bar{z}$ i.

Sit pro haustu cathartico.

247. R. Olei ricini  $\bar{z}$ ii.  
 Mucilag. g. m. niloticæ  $\bar{z}$ ss.  
 Syrupi zingiberi.  
 Aquæ lauri cinnamomi  $\bar{a}\bar{a}$   $\bar{z}$ i.  
 Olei menthæ piperitæ gtt. x.

Fiat mistura cathartica, cujus sumat æger dimidiam primo mane, alteram partem, si opus erit, post horas tres quatuorve.

248. R. Olei ricini.  
 Syrupi zingiberi.  
 Aquæ lauri cinnamomi spirituos.  $\bar{a}\bar{a}$   $\bar{z}$ i.

Haustus mane sumendus, superbibens infusi sennæ uncias duas, omni bihorio.

249. R. Olei ricini  $\bar{z}$ ii.  
 Mucilaginis g. mimosæ niloticæ  $\bar{z}$ i.  
 Aquæ cinnamomi  $\bar{z}$ i.  
 Tincturæ convolvuli jalapæ  $\bar{z}$ ss. ; misce.

Sumat dimidium pro dosi.

250. R. Tincturæ jalapæ drachmas sex ad unciam.  
 Aquæ menthæ piperitæ.  
 Syrupi zingiberi  $\bar{a}\bar{a}$  semiunciam.

Fiat haustus, statim sumendus.

251. R. Tincturæ convolvuli jalapæ  $\bar{z}$ i.  
 Syrupi drachmas sex.

Fiat haustus, mane et vespere sumendus: haustui vespertino instillentur, tincturæ opii guttæ viginti.

252. R. Tincturæ convolvuli jalapæ uncias duas.  
 Syrupi simplicis unciam.  
 Aquæ uncias duas.

Sumat æger singulis horis cochlearia duo.

253. R. Tincturæ convolvuli jalapæ.  
Syrupi simplicis āā uncias tres.

Sumatur cochleare magnum singulis horis.

254. R. Tincturæ convolvuli jalapæ.  
Aquæ fontanæ.  
Syrupi utrinque unciam.

Fiat haustus catharticus, primo mane sumendus.

255. R. Infusi cassiæ sennæ uncias decem.  
Tincturæ convolvuli jalapæ uncias duas.  
Extracti glycyrrhizi glabri drachmam.

Fiat infusio, cujus sumantur unciaë duæ singulis horis.

256. R. Pulveris convolvuli jalapæ drachmam.  
Carbonatis magnesiæ drachmas duas.  
Mucilaginis gummæ mimosæ niloticæ.  
Syrupi zingiberi āā semiunciam.  
Probe mistis affunde, aquæ uncias quinque.

Misturâ agitâtâ, sumatur uncia, secunda vel tertia quaque hora.

257. R. Tincturæ convolvuli jalapæ ʒii.  
Sacchari purissimi ʒss.  
Aquæ ʒiv.

Sumat æger cochlearia duo ad trium horarum intervallo.

258. R. Tincturæ cassiæ sennæ ʒi.  
Vini aloetici ʒii.  
Aquæ menthæ piperitæ ʒiii.  
Syrupi zingiberi ʒi.

Misce; sumantur cochlearia quatuor, vel unciaë duæ, secunda quaque hora.

But when we become extremely anxious to move the

bowels, as in constipation, colic, and ileus, we use more drastic purges; and lest the sickly stomach should reject them, we give them in the more compendious form of pills; and in proportion as we seem to fail, and the circumstances of the patient become critical; when the pains and tortures of colic increase, and the bowels are still no way affected by our medicines, we combine the various cathartics, the calomel, aloes, jalap, gamboge, and colocynth in large doses; and give draught after draught, and pill after pill, till we procure evacuations; aiding their operations, both by copious draughts of senna, and by irritating at the same time the lower part of the bowels with stimulant injections.

Among the first, most acceptable, and often the most effectual of these, is an electuary, composed of the powders of senna and jalap with cream of tartar.

259. R. Supertartritis potassæ ʒi.

Pulveris convolv. jalapæ ʒii.

Zingiberi ʒi.

Confectionis aurantii, q. s.

Ut fiat electuarius, cujus sumat æger cochleare medium, ter quaterve singulis horis, donec alvus copiose respondeat.

260. R. Electuar. cassiæ sennæ ʒiiss.

Pulveris convolv. jalap. ʒiii.

Supertartritis potassæ ʒss.

Syrupi zingiberi quantum satis.

Ut fiat electuarius, cujus sumantur initio cochlearia magna quatuor, dein cochlearia duo secunda quaque hora, donec rite purgetur alvus.

261. R. Supertartritis potassæ ʒi.  
 Pulveris foliorum cassiæ sennæ.  
 Pulveris convolvuli jalapæ āā ʒii.  
 Confectionis aurantii ʒss.

Fiat electuarium, cujus sumantur initio cochlearia minima tria, postea cochlearia duo, singulis horis, donec alvus soluta fuerit.

### THIRD,—OF RESINOUS AND DRASTIC PURGES.

It is to be recollected, that gamboge, elaterium, and calomel, are preferable as hydragogues : that aloes, colocynth, scammony, and calomel, are preferred in obstructions of the alimentary canal : and finally, that I prescribe them here in the succession in which they are marked down, in the preliminary view I have given of the materia medica. Almost each of the following prescriptions is equally applicable to the following important purposes.

1st, To move the bowels in cases of dangerous constipation, colic, and ileus ; and with this view, opium is introduced into several of the forms of prescription, to appease the spasm, and prepare the intestines for resuming their natural action.

2d, To aid in clearing the biliary ducts, in which operation, the addition of opium is not a little useful.

3d, In procuring very profuse secretion from the surfaces of the intestines, in dropsy, for example.

262. R. Gambogiæ gr. v.  
 Supertartritis potassæ ʒi.  
 Sacchari puriss. gr. x. m ; terito simul,  
 Ut fiat pulvis, ter in die repetendus.

263. R. Gambogiæ gr. iii.  
 Pulveris jalapæ compositæ ℥ss.  
 Sacchari albi ℥i.  
 M. ut fiat pulvis catharticus.
264. R. Gambogiæ gr. iv.  
 Submuriatis hydrargyri gr. vi.  
 Sacchari.  
 Pulveris aromatici āā ℥i.  
 Fiat pulvis.
265. R. Gambogiæ scrupulum unum,  
 Saponis grana quindecim.  
 Mucilaginis G. M. Niloticæ quantum satis,  
 Ut fiant pilulæ sex granorum; sumat æger duas singulis  
 horis.
266. R. Gambogiæ gr. v.  
 Supertartratis potassæ ℥i.; terito bene et adde  
 Tincturæ jalapæ ℥ss.  
 Syrupæ āā ℥ii.  
 Aquæ rosæ āā ℥ii.  
 M. ut fiat haustus catharticus.
267. R. Gambogiæ gr. iii.; terito bene cum,  
 Tincturæ sennæ compos. ℥ss.; adde,  
 ————— jalapæ ℥ii.  
 Syrupi zingiberi ℥iii.  
 Miscere pro haustu cathartico.
268. R. Gummi gambogiæ gr. xv.  
 Supertartratis potassæ.  
 Sacchari purificati.  
 Pulveris cinnamomi āā ℥i. terito simul op-  
 time, dein adde,  
 Syrupi zingiberi.  
 Aquæ menthæ piperitæ āā ℥iii.

Ut fiat mistura cathartica, ejus sumatur tertia pars singulis horis.

269. R. Gambogiæ gr. iii. ; terito cum  
Tincturæ sennæ  $\bar{z}$ i.  
Syrupi simplicis  $\bar{z}$ i.

Fiat haustus purgans.

It is to be observed, that aloes, from operating on the lower intestines chiefly, is slow of operation, may be taken over night, the effect being expected in the morning, and ensured then by an additional pill; that aloes is thence used more as a laxative, than as a purge; but combined with calomel, colocynth, scammony, &c. to quicken its operation, it is a most powerful medicine, and holds its place in almost all the various combinations of these more drastic purgatives.

270. R. Convolvuli scammoniaë gr. xii.  
Pulveris convolvuli jalapæ.  
Supertartritis potassæ.  
Sacchari puri  $\bar{a}\bar{a}$   $\bar{\theta}$ i.  
Pulveris zingiberi gr. x.

Fiat pulvis catharticus, partitis vicibus sumendus.

271. R. Convolvuli scammoniaë gr. xii.  
Submuriatis hydrargyri gr. vi.  
Supertartritis potassæ  $\bar{z}$ ss.  
Pulveris zingiberi gr. v.

Fiat pulvis catharticus.

272. R. Convolvuli scammoniaë.  
Pulveris convolvuli jalapæ  $\bar{a}\bar{a}$  gr. xv.  
Pulveris aromaticæ gr. x.

Fiat pulvis purgans.

273. R. Extracti colocynthidis compositi ℥i.

Submuriatis hydrargyri gr. xii.

Fiat massa in pilulas duodecim æquales dividenda, quarum sumat æger duas secunda quaque hora, donec alvus bis terve respondeat; superbibendo cochlearia tria magna infusi sennæ.

274. R. Extracti colocynthidis gr. xv.

Submuriatis hydrargyri gr. iv.

Gambogiæ gr. vi.

Olei carui gtt. ii.

Mucilaginis acaciæ q. s.

Ut fiant pilulæ viii. quarum sumantur statim tres, et singulis sequentibus horis duæ.

275. R. Extracti colocynthidis ℥i.

Opii gr. i.

Fiat massa, et divide in pilulas quatuor; sint pro dosi, et post aliquot horas, sumatur infusionis senna, (adjecta tincturæ sennæ quartam partem), cochlearia duo magna, singulis vel alternis horis usque dum dejectionum satis fuerit.

276. R. Colocynthidis grana quinque.

Supertartritis potassæ.

Convolvuli scammon. āā ℥ss.

Aloes gr. xii.; tere simul et adde,

Olei menthæ piperitæ gr. vi.

Mucilaginis gummæ tragacanthæ q. satis, ad formandam massam, dividendam in pilulas octo, quarum sumat æger quatuor statim, et postea pilulas duas singulis horis, donec solvetur alvus.

The mass, of pilulæ aloes cum colocynthide, is composed of scammony, aloes, and colocynth, in such pro-



portions, that half a drachm of the compound mass, divided into five grain pills, makes six pills, containing five grains of colocynth, ten of aloes, and ten of scammony. These, like the other compound resinous pills, are equally used as hydragogues, and for resolving dangerous obstructions of the intestines.

277. R. Pilulas aloeticas duodecim.

Sumantur tres secunda quaque hora, donec rite respondeat alvus.

278. R. Pilulæ aloes cum colocynthide sex.

Singuli pendent gr. v.

Sumat æger duas, secunda quaque hora, superbibens post meridiem, cyathum infusionis sennæ, si opus erit.

279. R. Extracti colocynthidis grana quindecim.

Submuriatis hydrargyri gr. vi.

Mucilaginis q. s.

Ut fiant pilulæ iv. pro dosin.

280. R. Extracti colocynthidis compositi.

Supertartratis potassæ āā ℥i. ; tere bene simul, et adde,

Emulsionis Arabicæ ℥iii.

Pro haustu cathartico.

281. R. Extracti colocynthidis compositi.

——— jalapæ āā ℥i.

Gambogiæ gr. x.

Olei juniperi gr. iv.

Mucilaginis q. s. ut fiant pilulæ duodecim, quarum capiantur tres singulis horis, donec alvus ter quaterve respondeat.

282. R. Pilularum aloeticarum cum coloquintide,  
numero quindecim.

Sumantur pilulæ tres singulis horis, donec dejiciatur al-  
vus; et pilulis sumptis, injiciatur per anum, decocti  
communis libram, pro enemate, ni alvus plene soluta  
fuerit.

283. R. Gummi aloes drachmam.

Submuriatis hydrargyri.

Saponis singulorum scrupulum.

Mucil. g. m. nil. quantum satis, ut fiat massa, quam di-  
vide in pilulas viginti æquales, quarum sumat duas  
altera quaque hora.

284. R. Extracti elaterii, Ph. Lond. gr. vi.

Opii gr. ii.

Supertartratis potassæ.

Sacchari purificati āā ʒii.

Tere simul diligenter, et divide in pulveres decem æ-  
quales, quorum sumat hydropicus unam singulis ho-  
ris, donec supervenerit catharsis.

285. R. Hellebori nigri.

Tartratis potassæ āā ʒii.

Foliorum cassiæ sennæ ʒiv.

Decoque cum aquæ puræ libra, ad colaturæ uncias de-  
cem adde, Syrupi zingiberi ʒi.; exhibeantur coch-  
learia duo aut tria, sexta quaque hora, vel ter in die.

This is a medicine at once powerfully cathartic, and  
powerfully sedative, i. e. allaying spasm, and lowering  
the pulse; it was a chief medicine with the ancients for  
the cure of mania.

286. R. Aloes gr. xv.

Submuriatis hydrargyri.

Pulveris aromatici āā gr. x.

Mucilaginis q. s. ut fiat massa, dividenda in pilulas octo ;  
sumantur duæ singulis horis, donec alvus soluta fuerit.

#### OF LAXATIVES.

Laxatives are not merely smaller doses, nor different forms of these drugs, but medicines rarely used as cathartics ; rhubarb for example, magnesia, manna, senna in powder, sulphur, &c. medicines which are so little cathartic, as to be prescribed even in dysentery.

The Compound Rhubarb Pills, are the laxative most frequently used in debility, or torpor of the alimentary canal : They combine the properties of aloes a stimulant, rhubarb an astringent, and oil of peppermint a warm stomachic ; and these properties are such as to prove stomachic, and laxative, and peculiarly useful in dyspepsia, in hypochondriasis, and in uterine complaints.

287. R. Pilulas rhæi compositas duodecim.

Sumantur quatuor mane vel vespere, vel bis in die si opus erit.

288. R. Pulveris rhæi palmati ʒiv.

Supertartritis potassæ.

Pulveris cinnamomi āā ʒii.

Aquæ ferventis ʒii.

Macera per duodecim horas, cola, et adde alcoholis diluti ʒss.

Hujus infusi sumantur cochlearia duo magna, ter in die.

289. R. Pilulas aloeticas duodecim.

Sumantur duæ altera quaque hora, donec rite respondeat alvus, vel tres mane et vespere.

290. R. Pilulas aloeticas triginta.

Sumantur pro re nata tres vel quatuor vespere.

291. R. Carbonatis magnesiæ  $\zeta$ ss.

Supertartratis potassæ.

Sacchari utriusque  $\text{ʒ}$ ii.

Pulveris fruct. capsici indici gr. iv.

Fiat pulvis, omni mane sumendus.

292. R. Carbonatis magnesiæ.

Pulveris rhæi palmati utriusque  $\text{ʒ}$ i.

Fiant pulveres tales duodecim ; sumatur una altera quaque hora, in aquæ menthæ uncia cum semisse, donec fluat alvus.

293. R. Pulveris rhæi palmati.

———— aromatici  $\text{āā}$   $\text{ʒ}$ i.

Fiat pulverem, quotidie mane sumendum.

294. R. Pulveris rhæi palmati  $\zeta$ ss.

Supertartratis potassæ  $\zeta$ i.

Fiat pulvis, quotidie mane sumendus.

295. R. Pulveris rhæi palmati  $\text{ʒ}$ i.

Submuriatis hydrargyri gr. iii.

Pulvis aperiens, in quovis crasso vehiculo, mane sumendus.

296. R. Pulveris rhæi palmati  $\zeta$ i.

Carbonatis magnesiæ  $\zeta$ ss.

Tincturæ cassiæ sennæ.

Syrupi zingiber.  $\text{āā}$   $\zeta$ i.

Infusi cassiæ sennæ  $\zeta$ vi.

Fiat mistura, cujus sumat æger cochlearia tria magna, altera quaque hora, donec alvus purgatur.

297. R. Tartratis potassæ ʒi.

Pulveris rhæi palmati ʒi.

Infusi cassiæ sennæ ʒi.

Syrupi aurantii.

Tincturæ amomi nepentis āā ʒii.

Fiat haustus aperiens.

298. R. Tartratis potassæ drachmam.

Pulveris rhæi palmati scrupulum.

Pulvis aperiens, ex syrupo sumendus.

299. R. Pulveris rhæi palmati ʒss.

Sulphatis potassæ cum sulphuræ ʒi.

Pulveris zingiber. gr. v.

Fiat pulvis aperiens, pro re nata sumendus.

300. R. Pulveris rhæi palmati ʒi.

———— lauri cinnamomi compositi gr. x.

Signa pulvis e syrupo mane sumendus.

For gouty and debilitated stomachs, there is no laxative pill preferable to the following.

301. R. Subcarbonatis sodæ exsiccata.

Saponis veneti.

Pulveris columbæ āā ʒi.

Aloes gr. vi.

Fiat massa, dividenda in pilulas octodecim, quarum surmantur tres, mane et vespere.

302. R. Pilulæ aloes cum myrrha gr. vi.

Pulveris fructus capsici indici gr. iii.

Fiant pilulæ duæ.

303. R. Pulveris aloes compositi gr. x.  
Olei anethi fœniculi gtt. iv.

Fiant pilulæ duæ.

304. R. Pulveris convolvuli jalapæ.  
Sacchari puris āā unciam.  
Pulveris fructus capsici indici ℥i.  
———— lauri cinnamomi ℥ii.

Fiat pulvis, in doses quindecim dividenda: sumatur  
quotidie pulverem e cyatho aquæ.

305. R. Mannæ ℥iss.  
Supertartratis potassæ ℥ss.  
Syrup. rosæ q. s.

Ut fiat electuarium; detur singulis horis, donec alvus re-  
sponderit.

306. R. Electuarii cassiæ sennæ ℥ii.

Sumat æger portionem ad instar nucis moschatae pro  
dosi primo mane, vel mane et vespere.

The Electuary of Senna, the Lenitive Electuary of the old school, is the only form almost, (the powder being rarely used), in which we give senna leaves, and stalks, in substance. The purgative virtue of this electuary, it derives from the senna leaves; their sickening and griping effect is counteracted by adding to the powdered senna one half their bulk of coriander seeds; and they are concocted into the form of electuary, by the help of pulps of figs, tamarinds, and prunes. But it is an electuary so unpleasant to many, from its heavy mawkish taste, and griping effects, that its place will be well supplied by such an extemporaneous prescription as the following.

307. R. Supertartratis potassæ ʒi.  
 Pulveris convolvuli jalapæ ʒss.  
 Confectionis citri aurantii ʒss. vel q. s.

Ut fiat electuarium: sumantur pro dosi cochlearium, vel cochlearia parvula duo, mane vel vespere.

308. R. Pulpæ tamarindi indici ʒiss.  
 Pulveris rhæi palmati ʒii.  
 Supertartratis potassæ ʒiv.  
 Syrupi zingiber. q. s.

Ut fiat electuarium.

Dosis, [cochlearium parvum unum, vel alterum, pro re nata.

309. R. Sulphuris ʒi.  
 Supertartratis potassæ ʒiii.  
 Pulveris convolvuli jalapæ ʒi.  
 Mellis despumati q. s.

Ut fiat electuarium; vel,

310. R. Sulphuris ʒiv.  
 Supertartratis potassæ ʒi.  
 Syrupi zingiber. q. s.

Ut fiat electuarium, sit pro dosi cochlearium parvulum, vel medium, nocte maneque.

This is perhaps the laxative which operates the most gently and quickly, moving without irritating the bowels.

Many prefer in dangerous costiveness, and incipient colic, the oleum ricini.

311. R. Olei ricini ʒvi.  
 Tincturæ sennæ ʒii.

Fiat haustus aperiens, repetendus si opus erit, trium horarum intervallo.

The tinctures of aloes, and of rhubarb, and hellebore, we prescribe with the same intentions, an ounce for a draught, in the morning, or at going to bed; diluted as occasion may require, with an equal proportion of peppermint, or of penny-royal water. But these I esteem useful rather as emmenagogues, or stomachics, and have ranked them as such.

### ENEMATA.

Glysters are the best laxatives, the most unoffending, and least debilitating, and by far the surest in their operation, and are preferable in all cases of fever, extreme debility of any kind, and in those who have been long bed-ridden. But glysters, conjoined with powerful cathartics, the former exciting the rectum, while the latter stimulate the bowels, are among the most effectual means of removing dangerous obstructions. Nor is it indeed safe to excite the intestines in ileus and hernia, without being at pains to procure a corresponding action in the lower part of the intestinal canal.

312. R. Muriatis sodæ drachmas tres, vel cochlearium magnum.

Solve in decoctura avenæ; vel,

Infusi lini usitatissimi; vel,

Infusi anthemidis nobilis libram; adde,

Olei Europæi ℥i. vel cochlearia duo.

Sit pro enema aperiens.

313. R. Infusi cassiæ sennæ diluti libram.

Sulphatis magnesiæ, vel sodæ unciam.

Saponis sebacæi semiunciam.

Olei Europæi ℥i.



Glyster catharticus, vespere injiciendus, ad promovendam operationem pulveris, vel pilularum coloquintidis, gambogiæ, &c.

314. ℞. Infusi cassiæ sennæ lbi.  
Sulphatis sodæ ʒi.  
Olei ricini ʒiiss.

Fiat enema.

315. ℞. Aloes socotorinæ ʒii.  
Vitelli ovis q. s. ad solvendum.  
Decocti avenæ sativæ, (gruel); vel,  
Lactis vaccini lbi.

Fiat enema purgans, vespere injiciendum.

316. ℞. Extracti colocynthidis ʒi.  
Aquæ ferventis lbi.

Macera per horam, et cola; sit pro enemate.

317. ℞. Muriatis sodæ cochlearia duo.  
Aceti uncias duas.  
Infusi anthemidis nobilis ʒviii.

Fiat enema.

318. ℞. Resinæ pini laricis semiunciam in vitello ovi solutæ.  
Decocti hordei, (barley water), lbi.  
Olei Europæi, vel lini usitatissimi, ʒiiss.

Fiat enema terebinthinatum, sed quando de colica periculoso, de enteritide, vel hernia incarcerata, agendum est, addantur tincturæ opii guttæ sexaginta ad centum.

319. ℞. Infusi nicotianæ tabaci ʒi.; infunde,  
Aquæ ferventis libra, per quadrantem horæ.

## OF ANTHELMINTICS.

1st, Of such medicines as poison and destroy worms.

2d, Of such as loosen and discharge them.

320. R. Pulveris stanni unciam, divide in doses duodecim.

Sumatur unam quotidie mane in quovis crasso vehiculo, sacchari residuo, confectione aurantii, &c.

321. R. Pulveris stanni  $\bar{z}$ iii.  
Confectionis rosæ gallicæ  $\bar{z}$ iii.  
Syrupi q. s. ut fiat electuarium.

Sumatur cochlearium magnum, tempore matutino.

322. R. Pulveris stanni  $\bar{z}$ i.  
Electuarii cassiæ sennæ  $\bar{z}$ iii.  
Syrupi zingiber. q. s.

Ut fiat electuarium molle, cujus sumantur cochlearia duo minima quotidie.

323. R. Seminis artemisiæ santonici  $\bar{z}$ ss.; divide in doses decem.

Sumatur una quotidie mane, vel mane et vespere.

324. R. Pulveris stanni.  
———— seminis artemisiæ santonici āā gr.  
xv.

Fiat pulvis quotidie sumendus, in quovis crasso vehiculo.

325. R. Seminis artemisiæ santonici  $\bar{\theta}$ i.  
Sulphatis ferri gr. ii.

Fiat pulvis, quotidie mane sumendus.

326. R. Gambogiæ grana octo.  
Submuriatis hydrargyri grana quinque.

Fiat bolus, mane sumendus.

327. R. Dolichi prurientis legum. pubis ℥ss.  
Syrupi cujusvis q. s.

Ut fiat electuarium; dentur pro dosi cochlearia tria quotidie mane, usque ad tertiam vicem.

328. R. Pulveris stanni ℥i.  
———— radicis polipodii filicis maris ℥vi.  
———— convolvuli jalapæ.  
Sulphatis sodæ āā ℥i.  
Mellis despumati q. s.

Ut fiat electuarium: sumat æger cochlearium parvulum, secunda quaque hora, per dies tres; postea, purgatur alvus usu radicis jalapæ, scammoniæ, vel gambogiæ.

329. R. Pulveris convolvuli jalapæ.  
———— sulphatis sodæ āā ℥ii.  
———— convolvuli scammoniæ ℥i.  
Gambogiæ gr. x.

Fiat cum melle electuarium: sumat æger cochlearium parvum quater in die, et si opus sit, enema catharticum; contra teniam, vel cucurbitinam.

330. R. Radicis polipodii contriti filicis maris drachmas duas.

Sumatur primo diluculo in cyatho aquæ menthæ piperitæ; elapsis duabus horis, sumatur bolus catharticus submuriatis hydrargyri, granis quinque, gambogiæ semiscrupulo.

331. R. Corticis geoffrææ inermis pulverizati ℥i.  
Aquæ libras duas; coque leni igne, ad libram, et cola.

Sint pro dosi, cochlearia quatuor.

Sea salt is sometimes given as a poison for worms, coloured, that the vulgar, of whatever rank they be, may not contemn so trivial a remedy.

332. R. Muriatis sodæ ℥ii.  
Cocci cacti ℥ii.

Fiat pulvis, cujus detur drachma, dimidium tempore matutino.

The ascarides nestling lower, viz. in the rectum, are to be destroyed only by oil, or poisons, as camphor, bitters, &c.

333. R. Camphoræ ℥ii.  
Olei Europeæ ℥iv.

Enema, hora somni injiciendum, tertia quaque nocte.

This glyster, or one of oil unimpregnated, appeases the irritation and itching proceeding from the biting of the ascarides, suffocates them, and they pass in the morning-stool dead.

334. R. Olei Europeæ ℥i.  
Aquæ calcis ℥iii.

Fiat injectio contra ascarides.

335. R. Aquæ calcis lbi.

Fiat enema, omni nocte injiciendum.

336. R. Foliarum rutæ graveolentis.

———— juniperi sabinæ.

———— artemisiæ absinthii āā ℥iii.; co-  
que ex

Aquæ puræ libra, ad uncias decem.

Ut fiat enema.

337. R. Aloes socotorinæ ℥ii. solve in  
Decocti avenæ sativæ ℥x.

Pro enemate anthelmintico.

OF DIAPHORETICS AND SUDORIFICS.

These two orders of medicines differ, as I have explained, not merely in degree, but in quality. It is not that diaphoretics merely produce a gently perspirable state of the skin, while sudorifics cause profuse sweating; but, that the former are medicines of a refrigerant nature, viz. antimony, acetas ammoniæ, citras potassæ, camphor, ammonia, and other medicines, which may be given in acute fever, and in inflammatory disease; while the latter are hot, stimulant drugs, as opium, guaiacum, sassafras, aconite, fit chiefly for chronic diseases, accompanied with severe pain. The former class, viz. the saline sudorifics, are those which we have almost wholly anticipated, under the head of Febrifuge Draughts, gentle diaphoretics, useful in suspending fever, keeping the head clear, and temporising through the early stages of the disease, till that period arrive in which wine and cordials may be safely given; while the latter, we reserved for this chapter: and as they are chiefly prescribed in severe rheumatism, in syphilis, gout, and painful nervous diseases, it seems natural not to refer my reader wholly to the other sections of this work, but to prescribe along with these sudorifics, such anodynes and external applications as are found efficacious, together with them, in alleviating pain, forming as it were one process of cure. The same sudorifics are also prescribed as alterative, aided by the outward application of sedatives, in cutaneous and ulcerous diseases.

The saline diaphoretics, then, combined with small proportions of opium, camphor, or tartrate of antimony, or with ipecacuanha, are those best adapted to continued fever, and exanthematous diseases.

338. R. Aquæ acetatis ammoniæ.  
 ——— cinnamomi āā ʒiv.  
 Syrupi ʒss.  
 Ætheris sulphurici cum alcoholi ʒss.  
 Tincturæ opii gtt. xl.

Fiat mistura diaphoretica, cujus sumatur cyathum vinosum ter in die.

339. R. Subcarbonatis ammoniæ ʒi.  
 Acidi citri medici ʒiss. ; vel q. s.  
 Aquæ lauri cinnamomi ʒiv.  
 Mistur. camphoratae ʒiii.  
 Syrupi citri medici ʒi.  
 Spiritus ætheris nitrosi ʒss.

Sumantur ter quaterve in die tria cochlearia, vel cyathus.

340. R. Aquæ acetatis ammoniæ.  
 ——— lauri cinnamomi āā ʒiii.  
 Vini antimonialis ʒiiss.  
 Tincturæ opii gtt. xl.  
 Syrupi simplicis ʒi.

Sumantur cochlearia tria quater in die.

341. R. Aquæ acetatis ammoniæ.  
 ——— lauri cinnamomi āā ʒi.  
 Vini antimonialis ʒi.  
 Tincturæ opii gtt. xxx.

Haustus diaphoreticus hora somni sumendus, superbibens seri vinosi cyathum amplum.

342. ℞. Pulveris antimonialis gr. iv.  
 Conservæ rosæ q. s.

Ut fiat bolus, tertia quaque hora sumendus.

343. ℞. Nitratis potassæ.  
 Sacchari puriss. āā gr. xii.  
 Oxydi antimonii gr. vi.  
 Opii gr. ss. m.

Fiat pulvis, ter in die sumendus.

These solutions, or powders, convey diaphoretic doses suitable to the middle stage of fevers, or febrile disorders, as catarrhs and colds, slight rheumatism, cynanche scarlatina, &c. But to procure a profuse and entire perspiration! to anticipate the cold stage of an intermittent fever, to cure rheumatism, or alleviate the pains of nodes, or venereal diseases! requires a different process.

344. ℞. Pulveris ipecacuanhæ cum opio ʒi.  
 Fiat bolus, noctu porrigendus.

This is a form of sudorific which hardly admits of being followed by a warm draught; for if much fluid is drunk after a dose of Dover's powder, it is apt to cause great sickness: Such a dose is peculiarly adapted to prevent the approaching paroxysm of intermittent, or for rheumatism, which requires stimulant and acrid medicines, but by no means for cutaneous diseases: Far from inducing a slight diaphoresis, and easy state of the skin, it is in particular habits followed by intolerable itching, even to pain, and that accompanied with deadly sickness. Antimony and calomel, with a little opium, are the best diaphoretics in cutaneous diseases.

345. R. Aquæ acetatis ammoniæ ʒi.  
 Tincturæ opii.  
 Vini antimonialis āā gtt. xxx.  
 Syrupi zingiber. ʒii.

Haustus diaphoreticus.

346. R. Antimonii tartarizati gr. vi.  
 Opii gr. ix.  
 Confectionis rosæ ʒss.

Contunde simul, et divide in pilulas, No. 20.; sumatur pilula hora somni.

347. R. Opii gr. i.  
 Oxydi antimonii gr. iv.  
 Confectionis rosæ gr. iv.

Fiat pilula, quarta quaque hora sumenda, cum haustu salino.

348. R. Opii granum.  
 Submuriatis hydrargyri gr. ii.  
 Oxydi antimonii gr. vi.  
 Sacchari.  
 Pulveris aromatici āā gr. x.

Fiat pulvis, mane et vespere sumendus.

349. R. Tartritis antimonii grana octo.  
 Submuriatis hydrargyri.  
 Camphoræ in pulverem ope alcoholis pau-  
 illi reductæ āā semidrachmam.  
 Opii grana quindecim.

Fiat massa ope mucilaginis, et divide in pilulas viginti-quinque, quarum sumat æger duas bis in die, in rheumatismo, et in doloribus syphiliticis.



350. R. Pulveris ipecacuanhæ et opii gr. viii.  
Sacchari rubri gr. x.

Fiat pulvis, sexta quaque hora sumendus in pauxillo mel-  
lis, superbibendo haustum communem salinum.

351. R. Pulveris fol. exsiccatorum aconiti gr. xii.  
Aloes socotorinæ gr. xv.  
Oxydi antimonii ℥ss.  
Extracti glycyrrhizæ glabræ ℥ii.

Fiat massa, dividenda in pilulas duodecim: sumatur  
una sexta quaque hora.

352. R. Guaiaci ℥ss.  
Subcarbonatis ammoniæ gr. v.

Conterito ut fiat pulvis, in melle noctu sumendus.

353. R. Guaiaci drachmam.  
Oxydi antimonii granum.  
Supertartratis potassæ ℥ii.; misce,

Ut fiat pulvis; divide in partes æquales quatuor. Suma-  
tur pars una mane, meridie, et vespere: habeat æger  
hora somni haustum anodynum, cum cyatho seri vi-  
nosi tepido.

354. R. Guaiaci ℥i.  
Tartratis antimonii.  
Opii āā gr. i.  
Syrupi q. s.

Ut fiat bolus, bis in die sumendus.

355. R. Guaiaci grana decem.  
Pulveris ipecacuanhæ cum opio grana quin-  
que.  
Confect. rosæ q. s.

Ut fiat bolus, ter in die sumendus.

356. R. Guaiaci  $\zeta$ ss.  
 Gummi mimosæ niloticæ.  
 Sacchari puri  $\text{āā}$   $\zeta$ i.  
 Subcarbonatis ammoniæ gr. x.  
 Tincturæ opii gtt. xxx.

Haustus, hora somni sumendus.

In sciatica, and severe lumbago; in the cruel pains of chronic rheumatism, with swollen and contorted joints; in the dead and heavy pains of syphilis, throbbing when the patient gets warm in bed, and depriving him of half his sleep, more acrid diuretics are required, combined with powerful narcotics, and aided by stimulant embrocations.

357. R. Olei terebinthin.  
 Spiritus ætheris nitrosi p. æ.

Sumat æger cochlearium minimum ter in die, in quovis vehiculo idoneo.

258. R. Olei terebinthini guttas triginta.  
 Tincturæ opii guttas quindecim.  
 Spirit. ætheris nitrici drachmam.  
 Ovis unius vitellum.  
 Aquæ lauri cinnamomi  $\zeta$ iss.

Misce pro haustu, ter in die sumendo.

359. R. Guaiaci.  
 Gummi mimos. niloticæ pulverizatæ.  
 Sacchari  $\text{āā}$   $\zeta$ ss.  
 Olei terebinthini  $\zeta$ i. ; tere simul et adde,  
 Aquæ pulegi  $\zeta$ viii.  
 Syrupi zingiberis  $\zeta$ i.

Fiat mistura, cujus sumat æger cochlearia duo ter in die, in cyatho decocti hordei.

360. R. Balsami pini laricis ℥ss. in vitello ovis soluto.  
 Aquæ menth. piperitæ.  
 Mucilaginis gummæ niloticæ āā ℥vii  
 Syrupi zingiberis ℥ii.

Fiat haustus, ter in die sumendus.

361. R. Oxydi antimonii gr. iv.  
 Submuriatis hydrargyri gr. ii.  
 Extracti conii maculati gr. iv.

Fiat pilula, ter in die sumenda.

362. R. Extracti hyoscyami nigri gr. v.

Fiat pilula, quarta quaque hora sumenda.

363. R. Extracti aconiti napelli gr. i.  
 Supertartratis potassæ ℥i.  
 Sacchari ℥ss.

Fiat pulvis, ter in die sumendus.

364. R. Pulveris seminis sinapis albi ℥ss.  
 Acetis ℥i.

Fiat embrocatio.

365. R. Olei terebinthin.  
 ——— Europeæ āā ℥i.  
 Aquæ ammoniæ.  
 Tincturæ opii āā ℥ss.

Fiat linimentum, quo sæpe illinantur artus dolentes;  
 vel, illinantur cum unguento hydrargyri camphorati.

As an alterative in eruptive, or a diaphoretic in rheumatic or syphilitic diseases, the decoction of sassafras, guaiacum, and sarsaparilla, or of all of them conjointly, is much used, and is especially useful when joined with a mercurial course.

366. ℞. Scobis ligni guaiaci officinalis ʒi.  
 Radicis sassafras.

———— sarsaparillæ āā ʒss.

Aquæ ferventis libras tres.

Decoque ad bilibrā, et sub finem coctionis adde, radicis glycyrrhizæ glabræ ʒii. dein cola. Sumatur partitis vicibus, in die.

367. ℞. Scobis ligni guaiaci officinalis ʒiss.

Radicis arctii lapæ (bardana.)

Stipitum solani dulcamaræ.

Uvæ passæ minoris āā ʒss. cola.

Coque ex aquæ libras quatuor, ad tres; sumatur bilibra in die, partitis vicibus.

368. ℞. Pulveris seminum sinapis nigræ unciam; tendo.

Affunde lactis vaccinæ recentis libram; adde,

Vini rhenani q. s.

Ut fiat coquendo coagulum, et dein cola; habeat æger semilibram.

#### OF DIURETICS.

Supertartrate of potass, cream of tartar, one of the most familiar medicines, and thence the least regarded, is yet the most powerful of diuretics, when long continued, duly supported, and combined with others: and with this advantage it has, that while it is very availing, it is pleasing to the taste, useful in promoting the secretion from the bowels, harmless, and equally proper in the most simple case of gonorrhœa, or nephri-

tis, and in the most desperate state of dropsy, with diseased liver.

369. R. Nitratis potassæ ℥ii.  
Supertartratis potassæ.  
Pulveris gummi mimosæ niloticæ āā ℥ss.

Misce, fiat pulvis in partes duodecim æquales dividendus :  
sumatur pulvis quater in die, in aqua.

370. R. Nitratis potassæ ℥ii. solve in libris duabus.  
Emulsionis camphoratae.

Sumatur cyathus ter quaterve in die.

271. R. Carbonatis potassæ ℥iii.  
Aceti q. s. ad saturationem.  
Aquæ lauri cinnamomi.  
Emulsionis arabicæ āā ℥viii.

Sumatur ad libitum.

372. R. Acetitis potassæ ℥ii.  
Aquæ lauri cinnamomi ℥viii.  
Tincturæ lavendulæ spicæ ℥ii.  
Spirit. ætheris nitros. ℥i.

Sumantur cochlearia duo magna quater in die.

373. R. Supertartratis potassæ ℥i.  
Sacchari rubri ℥ss.

Divide in chartulas sex : Sumat chartulam in cyatho  
aquæ solutam, tertia quaque hora.

374. R. Supertartratis potassæ ℥iss.  
Pulveris convolvuli jalapæ ℥iii.

Divide in doses decem ; adhibeatur una tertia quaque  
hora, donec adsit vel catharsis vel urinæ profluvium.

375. R. Supertartratis potassæ  $\bar{z}$ ss. ; solvé in  
Aquæ libram.

Sumatur mane partitis vicibus.

376. R. Supertartratis potassæ  $\bar{z}$ i.  
Gambogiæ gr. xii.  
Sacchari anizati  $\bar{z}$ iii.

Tere simul, et divide in chartulas sex : Adhibeatur una  
quater in die, superbibens seri lactis, vel emulsionis  
nitrosæ cyathum.

377. R. Spiritus ætheris nitrici  $\bar{z}$ i.  
Syrupi aurantii  $\bar{z}$ ii.  
Tincturæ lavendulæ spicæ  $\bar{z}$ ss.

Sumatur cochlearium magnum in aqua, vel infusione  
theæ, &c.

378. R. Carbonatis sodæ exsiccatae  $\bar{z}$ i.  
Saponis duri  $\bar{\theta}$ iv.  
Syrupi zingiber. q. s.

Ut fiat massa, dividenda in pilulas, (No. 30.) Sumantur  
tres, ter in die.

379. R. Aquæ super-carbonatis sodæ vel potassæ lbii.  
In die sumendus, variis haustibus.

380. R. Aquæ kali (Ph. Lond.)  $\bar{z}$ ss.  
Tincturæ opii  $\bar{z}$ i. m.

Adhibeatur semidrachma vel guttæ triginta ter in die,  
in cyatho jusculi bovini vel aquæ pullinæ, et augeatur  
dosis gradatim in calculo vesicæ.

381. R. Pulveris digitalis purpureæ gr. ii.  
Submuriatis hydrargyri gr. i.  
Pilulæ scillæ gr. vi.

Fiat bolus, ter in die sumendus.

382. R. Tincturæ digitalis purpureæ ℥ss.  
 Spirit. ætheris nitrosi ℥i.  
 Aquæ lauri cinnamomi ℥vi.  
 Syrupi zingiber. ℥ss.

Fiat mistura, cujus sumantur cochlearia duo magna,  
 quater in die.

383. R. Pulveris fol. digitalis purpureæ ℥i.  
 Aquæ bullientis lbss.  
 Post horas duas cola, et adde,  
 Spiritus ætheris nitrosi ℥i.

Adhibeantur cochlearia duo magna, ter in die.

384. R. Pulveris digitalis purpureæ gr. iss.  
 Supertartratis potassæ ℥i.  
 Sacchari gr. x.; tere simul.

Fiat pulvis, mane et vespere sumendus, vel ter in die.

385. R. Pulv. scillæ maritimæ exsiccatae gr. iii.  
 Opii gr. ss.  
 Supertartratis potassæ.  
 Sacchari.  
 Pulveris lauri cinnamomi āā gr. x.

Misce ut fiat pulvis, ter in die adhibendus.

386. R. Pulveris scillæ maritimæ exsiccatae gr. xii.  
 Submuriatis hydrargyri gr. vi.  
 Saponis ℥i.

Fiat massa, et divide in pilulas sex; sumantur duo, ter  
 in die.

387. R. Pulveris scillæ maritimæ exsiccatae gr. ii.  
 Zingiber. gr. x.  
 Olei communis juniperi gr. v.  
 Conserv. aurantii q. s.

Ut fiat bolus, ter in die sumendus.

388. R. Pulveris scillæ maritimæ exsiccatae gr. viii.  
 ————— corticis lauri cinnamomi ℥i.  
 Submuriatis hydrargyri gr. vi.

Tere simul diligenter, et divide in pulveres sex, quarum  
 sumatur unus ter in die.

389. R. Pulveris scillæ maritimæ exsiccatae ℥i.  
 Nitratis potassæ ℥ii.  
 Supertartratis potassæ.  
 Sacchari āā ℥ss.  
 Pulveris zingiber. ℥ii.

Divide in pulveres duodecim, et adhibeatur unus ter qua-  
 terve in die, superbibenti cyathum seri lactis acetosi.

390. R. Pulveris scillæ maritimæ exsiccatae ℥i.  
 Pulveris convolvuli jalapæ ℥iss.  
 Supertartratis potassæ ℥ss.

Fiat pulvis in doses duodecim dividendus; sumatur unus  
 ter in die.

391. R. Pulveris scillæ maritimæ exsiccatae gr. iii.  
 Nitratis potassæ.  
 Pulveris gum. mimosæ niloticæ āā ℥i.

Sumatur mane quotidie.

392. R. Haust. acidum carbonicum evolvens ℥ii.  
 Acetitis scillæ maritimæ ℥ii.

Fiat haustus, bis vel ter in die sumendus.

393. R. Oxymellis scillæ maritimæ ℥ss.  
 Aquæ cinnamomi ℥iv.  
 Syrupi citri medici ℥i.  
 Spirit. ætheris nitrosi ℥i.

Fiat mistura diuretica, cujus sumantur cochlearia duo



secunda quaque hora; adhibeantur simul emulsionis nitrici libræ duæ quotidie, additione cochlearii magni tincturæ scillæ in singulo cyatho emulsionis.

394. R. Tincturæ scillæ maritimæ ℥iii.  
Carbonatis potassæ ℥ii.  
Aquæ lauri cinnamomi ℥vi.  
Syrupi zingiber.  
Spiritus cinnamomi āā ℥i.

Fiat mistura, sumantur cochlearia duo magna, quater in die, vel sæpius.

395. R. Aceti colchici antimonii ℥ss.  
Syrupi aurantii ℥i.  
Spiritus ætheris nitrici ℥ii.

Sumatur cochleare medium, tertia quaque hora, in quovis vehiculo idoneo.

396. R. Extracti elaterii gr. iv.  
Sacchari puriss. ℥i. tere simul diligenter, dein adde,  
Supertartratis potassæ ℥i.

Fiat pulvis, in chartulas duodecim dividendus, adhibeatur una ter quaterve in die.

397. R. Oxymellis colchici.  
Syrupi aurantii āā ℥i.

Sumat æger cochlearium parvum quater in die in cyatho aquæ, seri lactis, vel emulsionis nitrici.

398. R. Tincturæ lyttæ gtt. xxx.  
Spiritus ætheris nitrici ℥i.  
Misturæ camphoratae ℥xii.  
Syrupi zingiber. ℥ii.

Fiat haustus, ter in die sumendus.

399. R. Tincturæ lyttæ.

———— digitalis purpureæ āā ʒss.

Syrupi zingiber.

Spiritus ætheris nitrici āā ʒi. m.

Sumantur cochlearia parva duo in aqua.

400. R. Olei terebinthinæ gtt. xxx.

—— oleæ Europææ ʒii.

Sacchari rubri ʒii.

Vitelli ovis q. s. terantur simul, dein adde,

Mucilaginis gum. mim. niloticæ.

Syrupi aurantii āā ʒiii.

Aquæ menth. piperitæ ʒi.

Fiat haustus, ter in die adhibendus.

401. R. Olei terebinthinæ ʒii.

—— oleæ Europææ ʒii.

Fiat embrocatio, quo illinatur abdomen mane et vespere.

Such medicines are more useful in gleet, and fluxus albus, than in diseases of the kidney, or in want of secretion ; so are the following.

402. R. Olei terebinthinæ ʒi.

Pulveris glycyrrhizæ q. s.

Ut fiant pilulæ triginta : sumantur tres ter in die, vel quater.

403. R. Pulveris lyttæ granum.

Camphoræ pauxillo alcoholis solutæ, grana quinque.

Conservæ rosæ ʒi.

Fiat bolus, bis in die sumendus.

404. R. Tincturæ hellebori nigri ʒi.  
 ——— lyttæ ʒss.

Sumatur cochleare parvum, cum uncia aquæ cujuslibet aromaticæ.

405. R. Camphoræ ʒi.  
 Sacchari puriss. ʒiii.  
 Vitelli ovis pauxillum; tere simul diligenter, et adde,  
 Mucilag. g. mimosæ niloticæ.  
 Tincturæ lyttæ āā ʒss.  
 Ætheris sulphurici cum alcohol. ʒiii.  
 Balsam copaivæ ʒi.  
 Aquæ menth. piperitæ ʒvi.

Sumatur cochlearium magnum ter in die, gradatim augins dosin ad duo.

406. R. Olei terebinthinæ ʒi.  
 Submuriatis hydrargyri ʒss.  
 Pulveris rhæi palmati q. s.

Ut fiat massa, dividenda in pilulas sexaginta: sumantur tres, ter quaterve in die.

In suppression of urine, along with the diuretics, and with anodyne glysters of a hundred drops of laudanum, and anodyne embrocations, an antispasmodic and anodyne bolus should be given.

407. R. Camphoræ gr. viii.  
 Opii gr. iss.  
 Submuriatis hydrargyri gr. x. vel xii.  
 Alcoholis pauxillum.  
 Conserv. rosæ q. s.

Ut fiat bolus.

408. R. Pulveris arbut. uvæ ursi ℥ss.

Opii gr. ss.

Olei terebinthinæ q. s.

Ut fiat bolus, ter quaterve die sumendus.

OF EXPECTORANTS, DEMULCENTS, AND PECTORAL  
ANODYNES.

My reader will perceive by this complicated, and not very correct title, that it is my intention here, as in other subdivisions of my subject, to represent a whole department of practice; to prescribe not merely those more powerful and stimulating drugs by which we imagine that expectoration, or in other terms, the secretions of the trachea, may be promoted, but also the demulcents, the oily and mucilaginous draughts, and the slighter anodynes, by which the severities of a bad cold, or rheum, may be alleviated, and the antispasmodics, by which the severe paroxysms of whooping-cough, may be rendered less dangerous. In arranging these, I shall advance from the more familiar, to the most important and the most doubtful remedies. The morning dose of ipecacuan, prescribed by Aikenside in asthma, has already been mentioned; and the use of emetics in the whooping-cough of children, and in the catarrh of adults. After an emetic, with which we usually begin the cure of a severe cold, and those cathartics which we prescribe in all such inflammatory diseases, especially in spasmodic cases, we give gentle opiates, camphorated emulsions, nitrous juleps, and oily draughts; and it may be observed once for all, that in recent, slight colds, we give purges, nitrous draughts, and oily linctus; in severe colds with incessant coughing, opiate and paregoric draughts; in true peripneumony, nitre, camphor, and digitalis; but

opium we give rarely, and with a sparing hand. In phthisis we give digitalis: in chronic catarrh, opium, camphor, ammoniacum, myrrh, and squills: in asthma, ether: in hooping-cough, cicuta.

409. R. Pulveris ipecacuanhæ compos. ℥i.

Syrupi aurantii q. s.

Ut fiat massa; divide in pilulas quinque: sumantur quatuor in die.

410. R. Mucilaginis gummi mimosæ niloticæ.

Aquæ lauri cinnamomi āā ℥iii.

Syrupi tolutani ℥i.

Tincturæ opii ammoniatæ ℥iiss.

Fiat mistura, cujus sumantur cochlearia duo magna secunda quaque hora, vel sæpius.

411. R. Cetacæi.

Camphoræ ℥ii.

Vitelli ovis q. s. ad solutionem.

Aquæ menthæ piperitæ ℥v.

Syrupi ℥i.

Tincturæ tolutanæ ℥ss.

Tincturæ opii ℥i.

Fiat mistura, cujus sumat æger cochlearia duo magna, sæpe in die.

412. R. Nitratis potassæ ℥i. solve in

Aquæ lauri cinnamomi ℥iv.

Mucilaginis g. mimosæ niloticæ.

Syrupi tolutani āā ℥i.

Tincturæ opii ℥i.

Tartritis antimonii gr. iss.

Sumatur cyathus parvus ter in die, vel quater, sæpius urgente tusse.

413. R. Oxymellis scillæ.  
Mucilaginis gum. mimosæ niloticæ.  
Syrupi zingiberis āā ʒi.

Fiat linctus, sæpe in die sumendus, cochleariis parvulis.

414. R. Nitratis potassæ ʒi. solve in  
Aquæ hordei ʒviii.  
Oxymellis scillæ ʒi.

Sumantur cochlearia tria ampla, sæpe in die.

415. R. Pulveris scillæ exsiccatae ʒi.  
Gummi resinæ ammoniaci.  
Extracti glycyrrhizæ glabræ āā ʒi.  
Conii maculati gr. x.

Subige in massam diligenter, et divide in pilulas viginti-  
quatuor; sumat æger pilulas duas mane, meridie, et  
vespere.

416. R. Aquæ ammoniæ ʒii.  
Olei oleæ Europeæ ʒiss.  
Sacchari puriss. ʒiii.  
Olei menth. piperitæ gr. viii.  
Aquæ fontis.  
—— lauri cinnamomi.  
Mucilaginis gum. mimosæ niloticæ āā ʒii.  
Tincturæ opii gtt. xl.

Misce, ut fiat emulsio; sumantur cochlearia duo, secun-  
da quaque hora.

417. R. Olei oleæ Europeæ ʒi.  
Aquæ ammoniæ ʒi.  
Mucilag. g. mimosæ niloticæ.  
Aquæ menth. piperitæ āā ʒiii.  
Syrupi tolutani ʒi. m.

Emulsio, cujus sumatur cochlearium sæpe, urgente tusse.

418. ℞. Mellis.

Mucil. gum. mimos. nilot.

Olei oleæ Europææ āā ʒii.

Tincturæ opii ʒi.

Misce diligenter, ut fiat linctus, cochlearium sæpe in die sumendum.

419. ℞. Gummi mimos. nilot. scrupulum.

Sacchari drachmam.

Camphoræ pulveratæ, aliquot alcoholis guttas.

Simul tritis, adde,

Aquæ fervidæ unciam.

Tinct. opii guttas triginta.

Ut fiat haustus, cubituro adhibendus.

420. ℞. Gummi mimosæ niloticæ pulverisatæ.

Sacchari puriss. āā ʒii.

Olei oleæ Europææ ʒss. misce, et adde

Aquæ ferventis ʒi.

Ætheris sulphurici ʒi.

Fiat haustus, hora decubitus sumendus.

421. ℞. Gummi resinæ ammoniac. gr. x. diffunde in

Aquæ ferventis ʒi. adde

Tincturæ opii ammoniatæ ʒss.

Vini antimonialis ʒss.

Fiat haustus, ter in die sumendus.

422. ℞. Gummi resinæ ammoniac. drachmas tres.

Subcarbonatis potassæ ʒi.

Tincturæ opii camphoratæ ʒii.

Aquæ menth. piperitæ ʒviii.

Oxymellis scillæ ʒi.

Fiat mistura, cujus sumantur cochlearia duo magna, ter in die vel sæpius.

423. R. Gummi resinæ ammoniac.

———— myrrhæ āā ʒi.

Aquæ ferventis ʒvi. ; tere simul et adde,

Misturæ camphoræ ʒii.

Spiritus ætheris nitros. ʒss.

Tincturæ digitalis purpureæ ʒi.

Sumantur cochlearia duo vel tres, tertia quaque hora.

424. R. Gummi ammoniaci ʒi.

Camphoræ ʒi.

Oxydi antimonii gr. vi.

Tere simul diligenter, cum pauxillo alcoholis, ut fiat massa, dividenda in pilulas duodecim. Sumantur pilulæ duæ, tertia quaque hora.

425. R. Radicis scillæ maritimæ siccatae.

Gummi resinæ ammoniaci.

Pulveris zingiberis āā ʒi.

Olei terebinthinæ q. s.

Subige in massam, et divide in pilulas quadraginta ; sumantur tres ad quinque ter in die.

426. R. Gummi resinæ myrrhæ ʒii.

Pulveris aromaticæ ʒi.

Sacchari rubri ʒss.

Opii gr. viii.

Tere simul diligenter, et divide in partes quatuordecim æquales ; sumatur pars una ter in die.

This is a medicine universally useful in chronic and mucous cough, or winter colds, especially in the relaxed, feeble, or aged ; but it is in the same proportion dangerous to those affected with true phthisis pulmonalis, or with pneumonia.

For those prescriptions of digitalis, ether, and cicuta,



by which we subdue vascular action, or spasm in whooping-cough, and asthma, see the sections on sedatives and antispasmodics. Such a draught as follows, is given with much benefit in whooping-cough.

427. R. Vini antimonalis guttas decem.

Extracti conii maculati gr. ii.

Aquæ pulegi ℥xii.

Syrupi papaveris somniferi ℥ii.

Haustus, ter in die sumendus.

The combination of digitalis or of aconite, in the same form with the antimony, is very potent in subduing spasm, or vascular action, either in dangerous pneumonia, or pertussis; or in severe rheumatism, or syphilitic pains of the bones.

428. R. Vini antimonalis ℥iss.

Extracti hyoscyami nigri gr. iss.

Tincturæ opii gr. xx.

Aquæ menthæ piperitæ ℥xii.

Syrupi zingiberis ℥iii.

Fiat haustus, hora decubitus sumendus.

#### OF EMMENAGOGUES.

OF those medicines which promote the flow of the menses, it would be difficult to affirm that any were specifically emmenagogue: but whatever medicines are prescribed with that design, may be named so. Among those aloes, and opium, rightly managed and alternated, are perhaps the most precious. If I were to mark any leading distinction, to guide the young physician in practice, it would be into medicines, *first*, di-

rectly stimulating the uterine system; *second*, such as operate by strengthening and exciting the whole frame: Among the former, I should enumerate as principal, savine, cantharides, aloes, hydrargyrus; among the latter, iron, myrrh, madder. But by this I mean not to make a very absolute distinction betwixt stimulant and strengthening medicines; but rather to indicate the order in which I choose to make the prescriptions which I next offer to the reader.

Sabina may be given alone or triturated (for it means no more) with sulphate of potass, or qualified by the addition of ginger, or combined with iron, or with mercury.

429. R. Pulveris juniperi sabinæ.  
 ——— aromaticæ.

Carbonatis magnesiæ āā ℥iss.

Divide in partes æquales quatuordecim: Sumatur una bis in die.

430. R. Pulveris foliorum juniperi sabinæ ℥ii.  
 Carbonatis ferri ℥i.  
 Pulveris aromaticæ ℥ii.

Misce, et divide in partes duodecim: sumatur una bis in die.

431. R. Pulveris juniperi sabinæ.  
 ——— zingiber.  
 ——— myrrhæ āā gr. x.  
 Sulphatis potassæ ℥ss.

Fiat pulvis, bis in die sumendus.

432. R. Pulveris juniperi sabinæ.  
 ——— myrrhæ āā gr. x.  
 Aloes socotorinæ gr. iii.  
 Pulveris aromatici ℥ss.

Fiat pulvis, manę et vespere sumendus.

433. R. Tincturæ lyttæ ℥iss.  
 ——— hellebori nigri ℥iss.

Misce, sumatur cochleare parvum bis vel ter in die, in aqua tepida.

434. R. Tincturæ aloes ℥iss.  
 ——— lyttæ ℥i.

Sumantur cochlearia duo bis in die.

435. R. Tincturæ hellebori nigri ℥i.

Sumat æger cochleare parvum bis in die, in aqua tepida.

436. R. Tincturæ aloes ℥ii.  
 ——— hellebori nigri ℥i.

Sumantur cochlearia tria, bis in die, cum aqua menthæ piperitæ.

437. R. Gummi resinæ myrrhæ ℥iii.  
 Pulveris zingiberis ℥i.  
 Sulphatis ferri ℥ii.  
 Balsamæ copaibæ.  
 Mucilag. g. m. nilot. āā ℥i.  
 Aquæ pulegi ℥vi.

Misce, sumantur cochlearia duo magna ter in die.

438. R. Massæ pilularum myrrhæ compositæ, (viz. myrrhæ, aloes, et croci anglīci).  
 Sulphatis ferri āā ℥i.  
 Pulveris seminis capsicæ ℥ii.  
 Mucilaginis q. s.

Ut fiat massa, dividenda in pilulas viginti quinque; quarum sumat æger tres bis in die, vel sæpius.

439. R. Carbonatis ferri.  
 Gum. resin. myrrhæ āā ℥ss.  
 Aloes socotorinæ ℥i.  
 Opii gr. vi.

Fiat massa, dividenda in pilulas quindecim: sumantur tres, ter in die.

440. R. Massæ pilulæ hydrargyri ℥i.  
 Pulveris myrrhæ composit. ℥ii.

Subige in unam massam, et divide in pilulas triginta sex; quarum sumat æger tres quater in die; sed semper caveat medicus, ut vix et ne vix quidem afficiantur gingivæ, et halitus oris.

441. R. Massæ pil. myrrhæ composit. ℥ii.  
 Submuriatis hydrargyri ℥i.

Subige diligenter terendo, in massam, ope mucilaginis; divide in pilulas viginti; quarum sumat æger tres bis in die.

Simul utatur pediluvio, et habeat hora decubitus haustum anodynum, e tincturæ opii guttas viginti quinque.

442. R. Pulveris myrrhæ compositi (viz. myrrhæ, rutæ, et sabinæ, p. æ.) ℥ii.

Forme in massam, dividendam in pilulas viginti quatuor, quarum sumat æger tres, ter in die.

443. R. Pulveris myrrhæ compositi ℥i.  
 Sulphatis ferri gr. iii.  
 Pulveris capsici gr. x.

Fiat massa, dividenda in bolos duos.

444. R. Pulveris myrrhæ compositi gr. x.  
 Sulphatis ferri gr. iss.  
 Pulveris sem. capsici gr. iv.  
 Confectionis aurantii q. s.

Ut fiat bolus, quater in die sumendus; vel sumantur boli duo ter in die.

445. R. Pulveris aloeticus cum ferro ℥iii.

Divide in partes æquales viginti: Sumatur una ter vel quater in die, in quovis crasso vehiculo.

446. R. Rubiæ tinctorum ℥ss.

Pulveris aromaticæ ℥ii.

Mucilaginis g. m. nil.

Syrupi zingiber. āā ℥i.

Aquæ menth. piperitæ ℥iv.

Sumantur, agitata phiala, cochlearia magna tria, ter in die.

447. R. Radicis rubiæ tinctorum ℥ii.

Carbonatis ferri gr. vi.

Sacchari rubri ℥i.

Fiat pulvis, ter in die sumendus.

448. R. Tincturæ lyttæ ℥ii.

———— cardamomi ℥iv.

Misce, sumat æger cochleare parvum ter in die, in quovis vehiculo idoneo.

449. R. Extracti hellebori nigri ℥i.

———— gentianæ ℥ii.

Fiant pilulæ No. 12. quarum sumantur duæ, nocte manequæ.

#### OF STIMULANTS.

The slightest stomachic cordial, such as we give for curing acidity, and removing spasms, or pain, is a sti-

mulant; and the highest exciting power, such as we use in the cure of hemiplegia, or any partial paralysis, is still but a stimulant, as simple as the former: and wine, alcohol, or æther, are, according to the way in which they are used, either the most delicate cordials, or the most dangerous exciting powers. When medicines, the most trivial, and those of the most powerful efficacy, are thus classed under one common denomination, the trifling and the dangerous are apt to be confounded; when the most ordinary arrangement, if arrangement it may be called, is to name them according to alphabetical order; when they are thus thrown down *pell-mell* before the young physician, in one undistinguished heap, nothing surely can be more perplexing, nor can more tend to engender an irresolute, timid, vacillating practice. To throw the dice, and arrange the most precious resources of our art, at sixes and sevens, as the dice fall, would be a master-piece of ingenuity, compared with this of the alphabet! I know well, that there are sensible men, who are averse from any arrangement, who seem willing to believe, that their very intellect and senses might be fascinated by one invidious glance of a well-ordered list. But what fascination, what dangerous theory can be imagined, in distinguishing stimulants as feeble or powerful, cordial or exciting? fit for exhibiting in slight hysterical languor, or in universal palsy? Upon my word, I can find no offence in arranging medicines, not according to the phantasms of a whimsical imagination, but according to the suggestions of plain sense. I have found it useful to form, and would fain engage my reader in forming for himself, some sort of order corresponding with what experience dictates, of the known and acknowledged powers of medicines, or of their efficacy in particular diseases.

Stimulants, I have been accustomed to think of, as

fulfilling some of the following purposes. Stimulant medicines are useful, rarely for the purpose of accelerating circulation, but chiefly for exciting the sensibility of the nervous system. No doubt they have this effect, partly by exciting a more lively circulation, which affects sensation, and thence alters the condition of the nerves, but chiefly by directly exciting that sensibility of which the nerves are the organs. Stimulants excite either topically the nerves of the stomach, or generally the nerves through those of the whole system; or, finally, by a moderate and sustained excitement, they invigorate both the nervous system and the vascular actions.

Stimulants I have been accustomed to think of as fulfilling one or other of the following purposes: *First*, By directly and immediately exciting the nerves of the stomach, stimulants prove **CORDIAL**, and are useful in pains of the stomach, spasms, indigestion, and all other forms of dyspepsia; in hypochondriacism; in hysterical languor, or in hysterical fits and convulsions; in faintings, coldness of extremities, and asphyxia, or suspension of animation; in the deadly paleness, sickness, and fainting, with which the palsy of old age often begins, a palsy not urged on by accelerated circulation, or organic disease, but arising rather from want of power in the circulating system.

The medicines suited to those occasions, are the smaller doses of wine as a cordial; of æther, alcohol, and alcoholized æther, cordial doses, viz. small and frequent, of opium and ammonia, the bitter tinctures, especially those of columbo, serpentaria, aloes, gentian, and rhubarb, capsicum, chamomile, and bitters, and rubefacients, applied to the stomach, or to the head. Those are many of them anticipated in the febrifuge prescriptions, for fever is just this state of nervous languor produced by accelerated circulation, and cured by cordials. But

at present we have chiefly to present those medicines which are appropriated to complaints of the stomach itself; these are either the lowest stimulants, viz. bitters, tinctures, &c. or the most moderate of the more powerful.

*Second,* Though it is through the nerves of the stomach, that all stimulants, whatever their strength or qualities, have their effect upon the system; yet there are some on which we peculiarly rely, in affections of the whole body. When hemiplegia, or when total palsy have taken place, when the powers of the nervous system are to be awakened, and the muscular motions restored, we have recourse to rough and harsh stimulants, in large doses; and many of these are peculiarly acrid, as ammonia, lytta, terebinthina, arnica, sinapis, zingiber, capsicum, pulvis aromaticus, essential oils. These are intense and acrid stimulants.

*Third,* There are stimulants whose operation is more gradual, permanent, invigorating, and which should more justly be denominated tonics, as bark, bitters, steel, &c. Those several classes of stimulants all tend to one effect, viz, the exciting and supporting the powers of life; while almost all the medical powers hitherto enumerated, tend rather to subdue than to support the actions of the living machine.

*Fourth,* The stimulants hitherto enumerated are all aided by a FOURTH order of stimulants, viz. the same stimulant powers EXTERNALLY APPLIED, viz. ammonia, opium, and alcohol; lytta, terebinthina, sinapis, and armoracea. To provide the young physician with a competent number of prescriptions for these purposes, is the next object.

WINE is no longer sent from the shop of the apothecary, and can hardly be written down as a medical prescription. In hospital practice, and in fevers, it is



sometimes written for by the attending physician, or by the surgeon in cases of fever, diarrhœa, dysentery, or gangrene,

450. R. Vini rubri uncias duodecim.  
Aquæ uncias sex.

Sumatur uncia subinde, et repetatur singulis horis.

We are inclined, in faintness and in hysterical paroxysms, to prescribe any medicine rather than wine; and in the palsy of the aged and debilitated, we require a more immediate and powerful excitement.

451. R. Alcoholis ammoniati  $\zeta$ i.  
Aquæ lauri cinnamomi  $\zeta$ i.  
Syrupi  $\zeta$ iii. m.

Fiat haustus, ter in die repetendus.

452. R. Alcoholis ammoniati  $\zeta$ ss.  
Aquæ menthæ piperitæ.  
—— lauri cinnamomi  $\bar{a}\bar{a}$   $\zeta$ iv.  
Syrupi zingiber.  $\zeta$ i.

Fiat mistura, cujus adhibeantur cochlearia magna tria sæpe in die.

453. R. Alcoholis ammoniati.  
Tincturæ lavendulæ spicæ  $\bar{a}\bar{a}$   $\zeta$ ss.  
—— aristolochiæ serpentariæ  $\zeta$ i.

Misce; sumat æger cochlearia parva duo, in aqua tepida, ter in die.

454. R. Ætheris sulphurici alcoholizati  $\zeta$ i.  
Tincturæ lavendulæ  $\zeta$ ss.

Sumat æger cochleare parvum, cum saccharo, vel in quovis vehiculo aquoso.

455. R. Aquæ menthæ piperitæ ʒxvi.  
 Sacchari ʒii.  
 Ætheris sulphurici ʒii.

Misce; quarta vel sexta quaque hora, adhibeatur cyathus parvus in typho, in paralyti, vel in gastrodynia; addantur in hocce cyatho guttæ decem tincturæ opii.

456. R. Syrupi zingiber.  
 Aquæ lauri cinnamomi āā ʒii.  
 — fontis ʒiv.  
 Olei anethi guttas viginti.  
 Tincturæ lavendulæ spicæ ʒii.

Fiat mistura; sumantur cochlearia tria ter in die.

457. R. Camphoræ gr. iv. solve in  
 Alcoholis ʒi.  
 Aquæ lauri cinnamomi ʒi.  
 Syrupi ʒiii.  
 Subcarbonatis ammoniæ gr. x.

Fiat haustus, tertia quaque hora exhibendus, in gastrodynia, defectione animi, hysteria, paralyti. Vel,

458. R. Subcarbonatis ammoniæ gr. x.  
 Camphoræ gr. iv.  
 Conservæ rosæ q. s.

Ut fiat bolus.

Though the subcarbonate of ammonia is at once a powerful stimulant and antacid, yet its absolute quantity is not such, as to neutralize any great proportion of acid in the stomach; we are thence in the habit of adding the carbonate of lime.

459. R. Carbonatis calcis ℥ii.  
 Subcarbonatis ammoniæ ℥i.  
 Mucilag. gum. mimos. nilot.  
 Syrupi zingiber.  
 Aquæ menthæ piperitæ āā ℥ii.  
 Tincturæ opii gtt. xl.

Agitata phiala, sumatur cyathus parvus singulis horis,  
 donec levatur ventriculi dolor, in gastrodynia, pyrosi,  
 &c.

460. R. Carbonatis calcis ℥i.  
 Pulveris amomi zingiber. gr. vi.  
 Sacchari ℥i.  
 Tincturæ opii gtt. x.

Fiat haustus, secunda quaque hora sumendus.

461. R. Sacchari anizati ℥i.  
 Olei menthæ pulegi gtt. vi.  
 Pulveris lauri cinnamomi ℥i.  
 Aquæ puræ ℥iiss.

Fiat haustus.

462. R. Tincturæ columbæ ℥ii.  
 Aquæ ammoniæ gtt. xv.  
 ——— menthæ piperitæ ℥i.

Misce, ut fiat haustus.

463. R. Tincturæ columbæ.  
 ——— aristolochiæ serpentariæ.  
 ——— rhei palmati āā ℥iiss.

Sumantur cochlearia duo parva ter in die, in cyatho  
 parvo aquæ tepidæ.

464. R. Tincturæ gentianæ luteæ.  
 ——— aristolochiæ serpentariæ āā ʒss.  
 ——— rhei palmati ʒiiss.  
 Aquæ menthæ piperitæ ʒvi.

Misce: sumat æger cochlearia magna duo, mane et ves-  
 pere.

These bitter stomachic tinctures, at the same time that they are the fittest cordials, in those enfeebled by ague, or fever, in the giddiness that accompanies these disorders, or remains after them, and in hysterical and hypochondriacal disorders, are also the best regulators of the bowels, and best promoters of digestion.

465. R. Tincturæ valerianæ ammon. Phar. Lond. ʒi.  
 Spiritus lavendulæ comp. ʒii.  
 Spiritus ammoniæ aromatici ʒi.  
 Aquæ lauri cinnamomi ʒiv.

Fiat mistura, cujus sumatur cochlearium magnum pro  
 dosi.

466. R. Ætheris sulphurici ʒi.  
 Tincturæ opii gtt. xx.  
 ——— castorei ʒi.  
 Spiritus carui ʒss.  
 Syrupi ʒii.

Fiat haustus, ter quaterve die sumendus.

467. R. Pulveris capsici ʒi.  
 ——— cinnamomi ʒi.

Fiat massa, dividenda in pilulas quatuordecim, quarum  
 sumat æger quatuor, ter vel quater in die.

468. R. Carbonatis ammoniæ gr. vi.  
 Pulveris baccæ capsici indici gr. iv.  
 Confectionis opii Phar. Lond. ℥i.

Fiat massa, dividenda in pilulas quatuor, quarum una singulis horis sumenda.

To allay sickness, or to excite and support the stomach, a few grains of cayenne pepper may be infused in boiling water, or mixed with a glass of warm Madeira and water, or white-wine whey.

469. R. Sulphatis ferri gr. xv.  
 Pulveris capsici indici.  
 ——— aromatici āā ℥i.  
 Magnesiae ℥ii.

Misce et divide in p. æ. duodecim : sumat æger unam ter in die, in dyspepsia, dolore ventriculi, &c.

470. R. Pulveris radice valerianæ sylvestris ℥i.  
 Subcarbonatis ammoniæ gr. xv.  
 Aquæ lauri cinnamomi ℥ii.

Fiat haustus, quarta quaque hora sumendus.

471. R. Aquæ carbonatis ammoniæ ℥i.  
 ——— lauri cinnamomi.  
 ——— menthæ piperitæ.  
 ——— fontis āā ℥iiss.  
 Syrupi aurantii ℥i.

Sumatur uncia in gastrodynia, syncope, vertigine, &c.

472. R. Confectionis aromaticæ ℥ii.  
 Subcarbonatis ammoniæ ℥ss.  
 Pulveris cinnamomi ℥i.  
 Syrupi aurantii ℥iiss.  
 Aquæ lauri cinnamomi ℥viii.

Cyathum parvum ter in die.

473. ℞. Pulveris radice aristolochiæ serpentariæ ℥i.  
 Camphoræ pauxillo alcoholis solutæ gr. x.  
 Confect. rosæ q. s.

Ut fiat bolus, tertia quaque hora sumendus.

474. ℞. Pulveris radice amomi zingiber.  
 Seminum a. cardamomi.  
 Piperis longi.  
 Radicis acori calami āā ʒss.  
 Magnesiae ʒii.

Tere simul diligenter in mortario; divide in partes duodecim: sumat æger partem unam ter in die, in languore ventriculi, dyspepsia, diarrhœa atonica, &c.

475. ℞. Pulveris aromati.  
 Carbonatis calcis āā ʒii.  
 Pulveris ipecacuanhæ cum opio ℥ii.

Misce et divide in pulveres duodecim; sumatur una omni quadrante hora.

We turn next to the more pungent and ACRID stimulants, such as are used in paralysis, or the most severe rheumatism.

476. ℞. Pulveris lyttæ gr. x.  
 Spiritus camphorati.  
 Aquæ menthæ piperitæ āā ʒiii.  
 Syrupi zingiber. ʒi.  
 Subcarbonatis ammoniæ ℥ii.

Fiat mistura, cujus sumantur cochlearia duo magna, ter in die.

477. ℞. Pulveris lyttæ granum.  
 Subcarbonatis ammoniæ.  
 Confectionis aromaticæ āā ℥i.  
 Syrupi q. s.

Ut fiat bolus, sexta quaque hora sumendus.

478. R. Pulveris radice valerianæ sylvestris ℥iij.  
Subcarbonatis ammoniæ ℥ii.  
Syrupi zingiber. q. s.

Ut fiat electuarium; detur drachma una, vel altera unius,  
vel duarum horarum intervallo.

479. R. Carbonatis ammoniæ ℥ss.  
Aquæ menthæ piperitæ ℥vii.  
Syrupi aurantii ℥i.

Misce, sumantur cochlearia duo magna pro re nata.

480. R. Alcoholis diluti amari ℥viii.  
Olei terebinthinæ ℥ii.

Sumantur cochlearia duo magna in cyatho aquæ lauri  
cinnamomi, pimentæ, vel menthæ piperitæ.

481. R. Olei terebinthinæ ℥ii.  
Mellis despumati ℥i.

Misce ut fiat linctus. Sumatur cochleare parvum nocte  
manequè, cum haustu cujusvis potus tenuioris tepe-  
facti, in hemiplegia, vel rheumatismo.

482. R. Terebinthinæ vitello ovi solutæ ℥ss.  
Spiritus lauri cinnamomi ℥ss.  
Aquæ menth. piperitæ ℥i.

Fiat haustus, in rheumatismo mane et vespere sumendus.

483. R. Terebinthinæ venet. ℥ii. in pauxillo vitelli  
ovis solutæ.  
Mucilaginis gum. mimos. nilot. ℥i.  
Aquæ menth. piperitæ ℥v.

Fiat mistura; sumantur cochlearia magna duo ter in  
die.

484. R. Balsami pini laricis in vitello ovi soluti ℥ss.  
 Tincturæ aromaticæ ℥ii.  
 ——— opii camphoratae ℥ss.  
 Mucilaginis g. mimos. nil.  
 Aquæ menthæ piperit. āā ℥ss.  
 Syrupi zingiber. ℥iii.

Fiat haustus, vespere sumendus.

485. R. Olei terebinthinæ ℥i.  
 Pulveris rhei palmati q. s.

Ut fiat massa, dividenda in pilulas singulas pendentes  
 grana quinque; sumantur tres, ter in die.

486. R. Olei terebinthinæ ℥i.  
 Opii.  
 Pulveris scillæ siccatae āā gr. viii.

Micæ panis q. s. ut fiant pilulæ triginta: sumantur tres  
 mane et vespere in paralyti, in blenorhagia, vel gonorrhœa  
 chronica, in sciatica, urinæ stillicidio et incontinentia.

487. R. Aquæ menthæ piperitæ ℥iv.  
 Syrupi scilliticæ ℥ii.  
 Tincturæ opii ℥i.  
 ——— lyttæ ℥ii.

Sumatur cochleare magnum ter in die.

488. R. Semen sinapis ℥i.

Sumatur cochleare amplum semen contusorum in  
 aqua frigida, mane et vespere, vel cochlearia tria ter  
 in die.

489. R. Semen sinapis albi leviter contusorum.  
 Conservæ aurantii āā ℥i.

Sumantur cochlearia minima duo, sæpe in die.



490. R. Florum arnicæ montanæ exsiccatae ℥ii.  
 Aquæ ferventis ℥xvi.  
 Macera per horam in vase clauso, dein cola,  
 et adde,  
 Syrupi aurantii ℥i.

Sumantur cochlearia duo magna, vel tria, quater in die,  
 in paralyti.

491. R. Guaiaci ℥i.  
 Subcarbonatis ammoniæ gr. x.  
 Conservæ rosæ q. s.

Ut fiat bolus, ter in die sumendus.

492. R. Balsami copaibæ.  
 Mucilaginis g. mimos. niloticæ.  
 Mellis despumati āā ℥i.; misce diligenter  
 et adde,  
 Aquæ lauri cinnamomi ℥iii.  
 Tincturæ opii ℥ss.

Sumat æger cochleare medium ter in die, superbibens  
 haustum seri lactis, vel emulsionis nitrici.

493. R. Olei terebinthinæ ℥i.  
 Mellis despumati ℥ss. m.

Sumatur pro dosi drachma, in quovis vehiculo idoneo.

494. R. Radicis cochleariæ armoraciæ incisæ unciam.  
 ——— zingiber. ℥i.  
 Pulveris aromatici ℥ii.

Infunde aquæ ferventis libram, stent per horam in vase  
 clauso, et colaturæ adde,

- Ætheris sulphurici alcoholizati ℥ii.  
 Syrupi aurantii ℥ii.

Sumatur cyathus, vel uncia duæ, sæpe in die.

495. R. *Seminum sinapis alb. contrit.*  
*Radiceis cochleariæ armoraciæ incisi* āā ʒii.  
*Corticis aurantii* ʒss.  
*Aquæ ferventis libras duas; coque ad unam*  
*libram.*

Sumat æger (rheumaticus, paralyticus, hypochondriacus)  
 cyathum amplum ter in die.

496. R. *Seminum sinapis nigri unciam.*  
*Terendo successive affunde.*  
*Lactis vaccini recentis libram, tandem ad-*  
*dite acetî vel vini rhenani q. s.*

Ut fiat coquendo coagulum, coletur serum: sumatur se-  
 milibra hora decubitus.

497. R. *Arniciæ montanæ florum exsiccatorum* ʒii.  
*Aquæ ferventis* ʒxvi.  
*Macera per horæ dimidiûm in vase clauso, dein cola*  
*et adjice,*  
*Syrupi aurantii* ʒi.

Sumantur unciæ duæ vel tres quater in die, in paralyti,  
 rheumatismo, &c.

Such combinations of the more dangerous stimulants  
 as the following, are prescribed to very little purpose, I  
 believe, in impotency and want of excitement from ex-  
 haustion or age.

498. R. *Lyttæ pulverisatæ gr. xviii.*  
*Opii.*  
*Camphoræ* āā gr. xxxvi.  
*Conservæ rosæ q. s.*

Fiant pilulæ, No. 36.; capiantur 1—11, singulis nocti-  
 bus, hora decubitus.

## OF TONICS AS A CLASS OF STIMULANTS.

A tonic is merely that degree or species of stimulant, whose operation is slow and permanent; of these the chief are, bark, steel, bitters, and mineral waters. My reader is aware that I am not impressed with any extravagant opinion of the efficacy of bark, in any cure but that of intermittent. Yet its reputed excellence in supporting the system in gangrene, ulcerated sore throat, and low fever, as well as in remittent and intermittent fever, imposes it as a duty to represent the various forms in which it is used, viz. of mixture, draught, and decoction, pill, electuary, and extract.

499. R. Pulveris cinchonæ officinalis ℥iiss. ; divide in  
p. æ. duodecim.

Sumantur tres vel quatuor in die.

500. R. Pulveris cinchonæ officinalis ℥i.

———— rhei palmati.

Carbonatis magnesiæ āā ℥ii.

Divide in doses duodecim.

501. R. Pulveris corticis cinchonæ ℥ss.

Sulphatis ferri gr. ii.

Magnesiæ gr. vi.

Misce, fiat pulvis, mane et vespere sumendus.

502. R. Pulveris cinchonæ officinalis ℥i.

———— aromaticæ ℥ii.

———— baccæ capsicæ ℥i.

Divide in pulveres duodecim, quarum sumatur unus quarta quaque hora.

503. R. Pulveris cinchonæ officinalis ℥ss.  
 ——— aromatici ℥i.

Camphoræ pauxillo alcoholis solutæ gr. vi.  
 Fiat pulvis, quater in die sumendus, in cynanche ma-  
 ligno, sphacelo, variolo confluyente, &c.

504. R. Pulveris cinchonæ officinalis ℥ss.  
 ——— crotonis eleutheriæ.

——— aristolochiæ serpentariæ āā gr. x. m.  
 Fiat pulvis, sæpius sumendus.

505. R. Pulveris cinchonæ officinalis ℥iv.  
 ——— myrrhæ ℥ii.  
 ——— aromaticæ ℥i.

Misce, et divide in pulveres duodecim: sumatur unus  
 ter in die.

506. R. Pulveris cinchonæ officinalis.  
 Supertartritis potassæ āā ℥i.  
 Pulveris crotonis eleutheriæ ℥ss.

Divide in doses No. 18.: sumatur unus tertia quaque  
 hora.

507. R. Pulveris cinchonæ officinalis ℥i.  
 Confectionis aromaticæ ℥ii.  
 ——— aurantii ℥i.  
 Syrupi rosæ q. s.

Ut fiat electuarium, cujus sumatur ad magnitudinem  
 nucis singulis horis.

508. R. Pulveris cinchonæ officinalis unciam.  
 Extracti glycyrrhizi glabri drachmam.  
 Mucilaginis g. mim. nil.  
 Syrupi aurantii āā ℥ii.  
 Aquæ fontis.

Misturæ camphoratæ āā ʒiv.

Tincturæ cinchonæ unciam.

Antequam bibatur mixturæ, agitetur phiala; interdum adde,

Tincturæ opii gtt. xl.

Acidi sulphuric. dilut. ʒss.

Ætheris sulphurici vel nitrici ʒi.

Confectionis aurantii ʒii.

509. R. Pulveris cinchonæ officinalis ʒi.

Extracti glycyrrhizi glabri ʒii.

Mucilaginis gum. m. nil.

Syrupi zingiber. āā ʒii.

Decocti corticis cinchonæ ʒvi.

Tincturæ opii guttas triginta.

Fiat mistura, cujus sumat æger cochlearia tria magna, quater in die.

510. R. Pulveris cinchonæ officinalis ʒii.

Extracti ejusdem ʒii.

Balsami copaibæ ʒss. vel q. s.

Ut fiat massa, dividenda in pilulas viginti quatuor: sumantur tres quatuorve, ter in die vel sæpius.

511. R. Pulveris cinchonæ officinalis ʒi.

Extracti glycyrrhizi glabri ʒi.

Syrupi aurantii ʒii. ; misce, dein adde,

Aquæ lauri cinnamomi ʒi.

Tincturæ opii gtt. x.

Fiat haustus, sæpe in die sumendus.

512. R. Extracti cinchonæ molliss. ʒi.

Syrupi aurantii ʒii.

Decocti ejusdem ʒviii.

Acidi muriatici ʒii.

Sit mistura, cujus sumatur altera quaque hora uncia.

513. R. Pulveris cinchonæ officinalis semiunciam.  
Aquæ ferventis libram.  
Decoque ad uncias decem; exprime per linteum et cola;  
adde ad libitum, cujuslibet syrupi, quantum velis: ad-  
hibeantur unciaë duæ, ter in die; interdum adduntur,  
tincturæ aristolochiæ serpentariæ, vel corticis cinchonæ  
ʒi. ad ʒii. interdum acidi sulphurici, ætheris sulphu-  
rici, acidi muriatici, &c. ʒi. ad ʒii.
514. R. Acidi sulphurici dilut. ʒss.  
Tincturæ cinchonæ compositæ ʒii.  
Misce; capiatur cochleare parvum unum vel alterum  
bis in die, in aqua.
515. R. Corticis cinchonæ ʒi.  
Radici aristolochiæ serpentariæ ʒss.  
Aquæ ferventis libram.  
Macerata in vase clauso per horas duas, dein cola,  
colaturo adde,  
Tincturæ cascarillæ ʒss.  
———— cinchonæ officinalis ʒi.  
Syrupi aurantii ʒiiss.  
Fiat mistura, cujus adhibeatur cyathus parvus quater in  
die.
516. R. Decocti cinchonæ officinalis ʒxii.  
Tincturæ ejusdem.  
Syrupi aurantii āā ʒii.  
Spiritus ætheris nitrici ʒss.  
Fiat haustus, quarta quaque hora sumendus. Vel,
517. R. Decocti cort. cinchonæ ʒiiss.  
Tincturæ compositæ ejusdem ʒii.  
Confectionis aromaticæ ʒss.  
Syrupi aurantii ʒiii.  
Fiat haustus, sæpe in die sumendus.

The muriatic acid, invaluable as it is in apthous and putrid ulcers of the tongue, cheek, or tonsils, is far too little used. In conjunction with the bark, it is very efficacious; it should at the same time be directly applied to the sores with a pencil:—the acid being for this purpose mixed with honey, mucilage, or syrup.

518. R. Extracti cinchonæ mollis.

———— glycyrrhizi glabri āā ʒi.

Pulveris cort. cinchonæ officinalis ʒss.

Tincturæ ejusdem ʒii.

Acidi muriatici gtt. x.

Aquæ menthæ piperitæ ʒiss.

Fiat haustus, trium horarum intervallo sumendus.

In weakness attended with diarrhœa, bark is given with magnesia, columbo, and laudanum.

519. R. Corticis colombæ.

Magnesiaē āā ʒii.

Extracti corticis cinchonæ.

———— glycyrrhizi glabri āā ʒii.

Mucilag. gum. mimos. nilot.

Syrupi aurantii.

Aquæ fontis āā ʒii.

Tincturæ opii gtt. xxx.

Fiat mistura, cujus sumantur cochlearia duo ampla ter in die.

520. R. Pulveris cinchonæ officinalis ʒiii.

Coque ex aquæ puræ ʒxvi. ad ʒviii.; adde sub finem coctionis,

Radici aristolochiæ serpentariæ ʒii.; colatura admisce,

Spiritus lauri cinnamomi ʒiss.

Acidi sulphurici diluti ʒii.

Sumantur infusionis cochlearia tria, quarta quaque hora.

Preparations of iron, like chalybeate waters, are unquestionably stimulants of a very universal effect on the animal system. They restore the strength, enliven the vascular actions, improve the complexion, cure hypochondriasis, hysteria, disordered stomach, and uterine obstructions: and they as invariably augment disorders of the brain, endangering palsy, and often hastening on a paralytic stroke. One of the most simple forms in which iron is administered, is the powdered rust of iron.

521. R. Carbonatis ferri ℥iv.  
Magnesiæ.  
Sacchari.  
Pulveris aromatici āā ℥ii.

Misce, et divide in partes æquales duodecim, quarum sumat æger unam ter in die.

522. R. Tincturæ ferri muriatis ℥i.

Sumantur guttæ quindecim, ter in die, in quovis vehiculo idoneo.

523. R. Tincturæ ferri acetati ℥i.

Capiat guttas triginta, ter in die.

524. R. Carbonatis ferri.

Pulveris zingiber. āā gr. vi.

Confectionis rosæ q. s.

Ut fiat bolus, ter in die sumendus.

525. R. Pulveris colombæ ℥ss.

Sulphatis potassæ ℥i.

Fiat pulvis, bis in die sumendus.



526. R. Supertartritis potassæ.

Magnesiæ āā ʒss.

Confectionis aurantii ʒi.

Pulveris cinnamomi ʒii.

Carbonatis ferri ʒi.

Misce, ut fiat electuarium; sit cochleare parvum pro dosi,

527. R. Pulveris cinchonæ officinalis ʒi.

Carbonatis ferri ʒi.

Confectionis aurantii ʒss.

Syrupi zingiber. q. s.

Ut fiat electuarium; sumatur cochleare parvum, ter in die.

528. R. Sulphatis ferri ʒi.

Extracti gentianæ luteæ ʒi.

Pulveris aromatici ʒss.

Fiat massa, dividenda in pilulas No. 18.: sumat æger duas, ter in die, superbibendo haustum infusionis aliqujus amaræ.

529. R. Sulphatis ferri gr. iv.

Extracti cinchonæ gr. xxxii.

Syrupi q. s.

Ut fiant pilulæ No. 16.; sumatur una quater in die.

530. R. Extracti cinchonæ.

Pulveris myrrhæ āā ʒiss.

Sulphatis ferri ʒiss.

Olei cinnamomi gtt. v.

Syrupi zingiber. q. s.

Ut fiant pilulæ No. 40.: sumantur quatuor ter in die.

531. R. Ferri ammoniati gr. v.

Rad. rhei palmati gr. iii.

Fiat pulvis, in quolibet vehiculo idoneo quotidie sumendus.

532. R. Tincturæ muriatis ferri gtt. xv.  
 Aquæ cinnamomi ℥ss.  
 Syrupi rosæ ℥ii.

Fiat haustus, ter in die sumendus, in aquæ cyatho.

533. R. Gummi resinæ myrrhæ,  
 Pulveris colombæ āā ℥v.  
 Carbonatis ferri ℥i. m.

Divide in partes duodecim: Sumatur pulvis bis quoti-  
 die, in pauxillo syrupi.

534. R. Subcarbonatis sodæ gr. iv.  
 Pulveris colombæ gr. vi.

Fiat pulvis, bis in die in syrupo vel melle exhibendus.

Yet I am careful not to load the stomach of a child,  
 nor to provoke puking with many or frequent bitter  
 draughts.

535. R. Tartratis ferri.  
 Magnesiæ āā gr. x.  
 Sacchari gr. xxv.  
 Olei menthæ piperitæ gr. ii.

Fiat pulvis, ter quaterve in die sumendus.

536. R. Ammoniatis ferri.  
 Pulveris zingiber. āā gr. xii.  
 Mucilaginis q. s.

Ut fiat bolus, bis die sumendus.

537. R. Pulveris cinchonæ officinalis ℥i.  
 Sulphatis potassæ cum sulphure ℥vi.

Tere simul, et divide in partes duodecim: sumatur  
 pulvis mane et vespere, vel ter in die.

538. R. Ferri ammoniacalis gr. iv.  
Pulveris cinchonæ officinalis ʒi.

Fiat pulvis, ter in die sumendus in syrupo.

539. R. Pulveris aloes compositi ʒi.  
Sulphatis ferri ʒi.  
Pulveris rhei palmati ʒss.  
Balsami peruviani q. s.

Ut fiat massa, dividenda in pilulas No. 36.: sumat  
æger duas nocte maneque.

540. R. Pulveris myrrhæ ʒss.  
Sulphatis ferri gr. iii.  
Mucilag. g. m. niloticæ.  
Syrupi aurantii āā ʒii.  
Aquæ menth. piperit. ʒi.

Fiat haustus, ter in die sumendus.

541. R. Pulveris myrrhæ gr. xv.  
—— rhei palmati gr. iii.  
—— aromatici ʒi.

Misce, ut fiat pulvis, ter in die sumendus.

542. R. Radicis colombæ.  
—— gentianæ.  
Calami aromatici.  
Corticis aurantii āā ʒii.  
Vini Hispanici, (Madeira) libras duas.

Infundantur per dies octo: hujus infusionis sumantur  
cochlearia tria bis in die.

543. R. Radicis gentianæ luteæ ʒss.  
Seminum coriandri.  
Corticis aurantii exsiccatae āā ʒi.  
Alcoholis diluti ʒiv.

Infunde per tres horas, dein adde aquæ ferventis libram.  
 Infusio stomachica, cujus sumatur cyathum parvum,  
 ter in die.

This is an excellent stomachic; it is the BITTER INFUSION of the Edinburgh Dispensatory; and the half, or indeed the whole almost, might be taken in the day.

544. R. Myrrhæ ℥ii.  
 Sulphatis ferri ℥ss.  
 Subcarbonatis potassæ ℥ss.  
 Mucilaginis g. m. niloticæ.  
 Syrupi zingiber. āā ℥ii.; Misce terendo,  
 myrrhum, sulphatem ferri, et subcarbonatem potassæ, mucilagini et syrupo:  
 dein adde,  
 Aquæ menthæ piperitæ.  
 ——— fontis āā ℥viii.  
 Tincturæ aurantii ℥i.

Sumantur cochlearia tria magna, ter vel quater in die.

545. R. Tincturæ colombæ ℥i.  
 Aquæ menthæ piperitæ ℥xii.

Fiat haustus, ter in die sumendus.

546. R. Pulveris radice colombæ ℥ss.  
 Carbonatis ferri gr. vi.

Fiat pulvis, mane et vespere sumendus, in cyatho aquæ menthæ piperitæ.

547. R. Pulveris rad. colombæ.  
 ——— zingiber. āā ℥ii.  
 Supertartratis potassæ ℥i.

Misce, et divide in partes æquales duodecim: sumantur pulveres ter in die.

548. R. Pulveris cuspariæ vel corticis Angusturæ  
 ℥ii.

Carbonatis calcis ℥ii.

Divide in partes æquales duodecim, una ter in die sumenda.

549. R. Pulveris subtiliss. cuspariæ gr. xv.

Pulveris rhei palmati gr. v.

———— magnesiae gr. x.

Fiat pulvis, ter vel quater in die sumendus.

550. R. Oxydi zinci ℥ii.

Pulveris lauri cinnamomi compositi,

Sacchari puri āā ℥i.

Misce in pulverem, dividendum in partes duodecim æquales, quarum sumatur una mane et nocte quotidie.

The sulphate of zinc, except as an emetic, is rarely used, though some are inclined to ascribe to it tonic powers. Less than a quarter of a grain is usually given at a dose, but it is repeated to the extent of three or four grains in the day, sometimes dissolved thus :

551. R. Sulphatis zinci gr. iv.

Aquæ rosæ gallicæ ℥vi.

Tincturæ aromaticæ ℥i.

Sumantur cochlearia tria magna, tertia vel quarta quaque hora.

552. R. Sulphatis zinci gr. iv.

Extracti glycyrrhizi glabri ℥i.

Fiat massa dividenda in pilulas duodecim; quarum capiat æger duas ter quaterve die.

Though we were to ransack the records of all ages, we should probably find few other reputed tonics besides those now enumerated, and none efficacious. Two only remain to be described, and those of ambiguous character as tonics, and proverbially dangerous, viz. copper and arsenic! on which the caprice or fashion of the hour has set a high value.

553. R. Ammoniareti cupri gr. viii.

Micæ panis ℥ii.

Aquæ subcarbonatis ammoniæ q. s.

Ut fiat massa, dividenda in pilulas No. 16. : sumat æger tres vel quatuor in die.

554. R. Oxidi arsenici.

Subcarbonatis potassæ utriusque grana duo.

Aquæ distillatæ uncias quatuordecim; priora duo, in aqua in vitrea lagena coquite, donec soluta fuerint; frigefactam liquorem, per chartam cola, dein adde,

Tincturæ lavendulæ compositæ uncias duas.

Sumatur semuncia bis in die, gradatim dosin augens ad unciam.

This is a medicine difficult and dangerous to use. It is recommended in fevers, especially of the intermittent kind; in epilepsy, in angina pectoris, and in periodic headaches. It is perhaps more useful in bad impetiginous ulcers, than in any of those diseases; and in cancer also, especially when used externally as a caustic, in the manner by and by to be explained.

It will be observed, that the dose above described, (viz. half an ounce of the arsenical liquor), conveys the sixteenth part of a grain twice-a-day, increasing gradually to the eighth of a grain: and let it be observed,

that the doses, whether repeated twice or three times a day, should be given at very regular intervals: in all diseases the prescription, and the manner of giving the medicine, is the same. If sickness or griping ensue, the medicine should be discontinued; if they increase, some warm cathartic should be given, followed by opiates and broths; arsenic, even when it produces no such alarming symptoms, must not be long nor uninterruptedly used. It is the basis of nostrums for the cure of poisonous bites, as of serpents, and of the mad dog: and the impartial experiments of scientific men, using those ague-drops, and cures for hydrophobia, have flattered us with the hopes of the medicine being sometimes successful.

#### OF ASTRINGENTS.

It is not possible to speak of the use of lead internally, without a vehement protest against so wanton an experiment upon the health of any human creature.

555. ℞. Superacetat. plumbi gr. ss.

Confectionis rosæ gr. iv.

Tincturæ opii gtt. ii.

Fiat pilula, quarta quaque hora sumenda, in hæmoptysi.

556. ℞. Folior. rosæ gallicæ ℥ii.

Aquæ ferventis ℥vii. ; fiat infusio; infusioni adde,

Syrupi rosæ ℥i.

Acidi sulphurici diluti ℥iss.

Tincturæ opii gtt. xxx.

Fiat mistura, cujus sumat æger cochlearia duo magna, quater in die; in hæmorrhagia pulmonum, ventriculi, vel uteri.

557. R. Lactis vaccini bullientis libram.  
Supersulphatis aluminis et potassæ ℥ii.  
Ebullient simul, ut fiat coagulum; coletur serum, et  
sumatur sæpe in die.
558. R. Supersulphatis aluminæ et potassæ.  
Extracti cinchonæ āā gr. x.  
Fiat bolus, ter in die sumendus.
559. R. Supersulphatis aluminæ et potassæ.  
Pulveris subtil. fol. ros. gall. āā ℥ii.  
—— zingiber. ℥i.  
Opii duri purificati gr. vi.  
Tere simul optime, et divide in p. æ. duodecim: suma-  
tur una quater in die, in cyatho infusæ rosæ gallicæ  
in hæmatemesi.
560. R. Acidi sulphurici aromat. ℥i.  
Sumantur quater in die guttæ triginta in aqua frigida.
561. R. Sulphatis zinci gr. xii. solve in  
Aquæ distillatæ ℥iii.  
Sumatur tertia pars, ter in die, augendo dosin si opus  
sit.
562. R. Succi spissati mimosæ catechu.  
Supersulphatis aluminæ et potassæ āā gr. x.  
Opii duri gr. ss.  
Conservæ rosæ q. s.  
Ut fiat bolus, ter in die sumendus.
563. R. Electuarii catechu.  
Carbonatis calcis āā ℥ii.  
Mucilag. g. mimos. niloticæ.  
Syrupi zingiber.



Aquæ lauri cinnamomi āā ʒii.

Tincturæ opii ʒi.

Fiat mistura, cujus sumantur cochlearia tria magna, ter in die.

564. R. Electuarii extracti catechu ʒ.

Aquæ lauri cinnamomi ʒi.

Syrupi aurantii ʒss.

Tincturæ kino ʒss.

———— opii gtt. x.

Misce, ut fiat haustus, sæpe in die sumendus.

565. R. Supersulph. alum. et potass.

Extracti corticis cinchonæ āā ʒi.

Gummi kino ʒss.

Fiat massa, dividenda in pilulas triginta; sumat æger tres vel quatuor ter in die.

566. R. Carbonatis calcis ʒii.

Syrupi zingiber. ʒii.

Aquæ rosæ gall. ʒvi.

Tincturæ opii ʒi.

Spiritus lauri cinnamomi.

———— colombæ āā ʒi.

Misce: sumatur cyathus parvus quater in die.

The potio cretacea of the Dispensatories, is a mixture of the carbonas calcis with sugar, gum mimosa nilotica, water, and spirituous cinnamon water. This is an admirable and useful composition, fit to be kept ready, and made fresh from day to day for hospital use; but apt to become acid in the apothecary's shop; and better replaced with extemporaneous prescriptions. To the potio cretacea, the addition of RHUBARB, of small doses

of IPECACUAN, and of LAUDANUM, adapt it to the various degrees and characters of alvine fluxes.

The PULVIS CARBONATIS CALCIS, represents this chalk mixture, and mixed with mucilage and water, forms it. The pulvis carbonatis calcis consists of CHALK, NUTMEG, AND CINNAMON. The PULVIS CARBONATIS CALCIS cum opio, is the same, mixed with opium in such proportion as to convey a grain of opium in two scruples of the powder.

The electuarium catechu, is a third well-imagined compound, the CATECHU being combined with kino, opium, cinnamon, and nutmeg. The proportion of opium in it is too small, being no more than a grain and a quarter to half an ounce of electuary, or confection as it has been termed, of catechu. The pulvis kino compositum, is a fourth combination, also very useful, conveying a grain of opium in one scruple of the powder; it may, like the others, be mixed in draughts, or given in powder, to the quantity of ten grains three or four times a-day.

567. R. Pulveris kino composit.

———— colombæ.

———— aromaticæ āā gr. x.

Sumatur ter in die, in dysenteria.

568. R. Pulveris serpentariæ.

———— carbonatis calcis cum opio āā gr. x.

Aquæ menth. pip. ʒi.

Syrupi aurantii ʒiii.

Fiat haustus, ter in die sumendus.

569. R. Misturæ cretaceæ ʒi.

Confectionis aromaticæ.

Electuarii catechu āā ʒii.

Pulveris ipecacuanhæ gr. ii.

Fiat haustus, quarta quaque hora sumendus:

570. R. Pulveris rhei palmati.  
 Carbonatis calcis āā ℥ii.  
 Pulveris ipecacuanhæ cum opio ℥ii.  
 Pulveris zingiber. ℥i. m.

Ut fiat pulvis, dividendus in partes duodecim : sumatur una ter in die, in quovis viscido vehiculo.

571. R. Pulveris rhei palmati ℥ss.  
 Confectionis aromaticæ ℥i.  
 Tincturæ rhei ℥ii.  
 Pulveris ipecacuanhæ gr. iii.  
 Aquæ menthæ piperitæ ℥iiss.  
 Syrupi ℥ii.  
 Tincturæ opii gtt. xxv.

Fiat haustus.

572. R. Corticis quercus roboris pulverizati vel contusi.  
 Corticis cinchonæ officinalis āā ℥i.  
 Confectionis aurantii ℥ss.  
 Aquæ ferventis libras duas; macera leni calore per horas duas, dein cola, et colaturæ adde,  
 Spiritus cinnamomi ℥iii.  
 Acidi nitrici ℥iii.

Sumantur cochlearia tria magna, secunda quaque hora; in diarrhœa, dysenteria, feбри remittente et intermittente.

573. R. Corticis quercus roboris drachmas duas.  
 Aquæ ferventis libram; coque ad uncias octo, et adde,  
 Supersulphatis aluminis et potassæ drachmam.  
 Syrupi semiunciam.

Sumantur cochlearia tria magna ter in die, rarius vel sæpius ; in diarrhœa, dysenteria chronica, sed maximum cum abilitate in sanguinis profluvio.

574. R. Hæmatoxyli campechiani ligni rasi sescunciam.

Corticis lauri cinnamomi.

—— lauri cassiæ āā ℥ii.

Pulveris baccæ capsicæ indici ℥i.

Sacchari puriss. ℥ss.

Aquæ ferventis libras duas ; decoque lignum hæmatoxyli, cort. cassiæ et cinnamomi, in aquæ bilibras ad unam ; adde sub finem coctionis, saccharum et capsicum ; dein,

Vini rubri ℥iii.

Sumatur uncia ad duas tertia quaque hora.

575. R. Confectionis aromaticæ.

Extracti hæmatoxyli campechiani āā ℥i.

Misturæ cretaceæ ℥iss.

Fiat haustus, quater in die sumendus.

576. R. Fol. arbutus uvæ ursi ℥i.

Olei terebinthinæ q. s.

Ut fiat massa, dividenda in pilulas duodecim ; sumantur tres ter in die.

577. R. Fol. arbutus uvæ ursi ℥ss.

Magnesiae ℥i.

Fiat pulvis ter in die sumendus, superbibendo haustus aquæ acidi carbonici.

578. R. Pulv. fol. arbuti uvæ ursi ℥iii.

Subcarbonatis sodæ.

Pulveris aromaticæ āā ℥ii.

Misce in pulverem, dividendum in p. æ. duodecim : sumatur una ter vel quater in die, in nephriti, morbo vesicæ mucoso, vel catarrhali, &c.

## OF EXTERNAL STIMULANTS AND ASTRINGENTS.

Stimulant applications are to be distinguished from astringent, both by their purpose and their form : The STIMULANT applications being used for exciting and maintaining vascular action, and nervous sensibility ; ASTRINGENT applications, to abate sensibility, and restrain vascular action. STIMULANTS are chiefly applied in form of hot fomentations, spirituous embrocations, and warm oils, and plasters. Astringents are applied chiefly in form of watery solutions, and almost always cold. STIMULANTS are sometimes used for the relief of deep-seated inflammatory diseases, as in the viscera, joints, and bursæ ; but never in superficial or cutaneous disorders of that nature ; while ASTRINGENTS are used in all external inflammations and ulcerations, and also in those of hollow tubes, viz. in inflammations and slight exulcerations of the skin, scalp, eyes, lips, throat, urethra, uterus, vagina, &c.

## OF STIMULANT FOMENTATIONS, EMBROCATIONS, OILS, OINTMENTS, POWDERS, AND CATAPLASMS.

## FOMENTATIONS.

579. R. Alcoholis diluti lbss.

Acidi acetici diluti lbi.

Muriatis ammoniæ ℥iii.

Pro fomento, in contusione, vel contortione articulorum, tepide vel frigide linteis madefactis imponendum.

580. ℞. Aquæ acetatis ammoniæ lbi.  
Alcoholis lbss.

Misce pro fomento, frigide vel tepide admovendo,

581. ℞. Aceti lbi.  
Alcoholis diluti lbss.  
Acidi sulphurici dilut.  
Mellis despumati āā ʒii.

Misce pro fomento, in ulceribus sordidis.

582. ℞. Artemisii abrotani.  
————— maritimi.  
Menthæ sativæ.  
Anthemidis nobilis āā manipulum.  
Aquæ fontis libras tres; decoque ad duas,  
adde,  
Alcoholis diluti ʒiv.  
Ammoniaë mur. ʒiii.

Fiat fomentatio, ter in die tepide imponenda.

#### STIMULANT EMBROCATIONS.

The Solutio Saponis, which enters into many of the stimulant embrocations, is formed by dissolving an ounce of soap in a pound of dilute alcohol.

583. ℞. Solutionis saponis uncias duas.  
Aquæ acetatis ammoniæ uncias quatuor.  
Addatur interdum,  
Aquæ ammoniæ ʒi.

584. R. Saponis albi duri ꝑiii.  
 Camphoræ ꝑss.  
 Alcoholis diluti.  
 Aquæ fontis āā lbss.

Fiat embrocatio.

This is the Compound Soap Liniment, to which is often added laudanum, in the proportion of one ounce of laudanum to three of the saponaceous liniment.

585. R. Olei oleæ Europeæ ꝑii.  
 Aquæ ammoniæ ꝑi. ; misce.

In rheumatalgia, cynanche parotideæ, tonsillari, et in morbis articulorum idoneum.

586. R. Olei oleæ Europeæ ꝑii.  
 Camphoræ ꝑss. ; misce.

587. R. Camphoræ ꝑii. ; solve in  
 Alcoholis ꝑiv.

588. R. Olei oleæ Europeæ ꝑii.  
 — terebinthinæ.  
 Aquæ fontis.  
 Ammoniæ liquidæ āā ꝑss.

Fiat linimentum, egregie stimulans.

589. R. Mellis despumati.  
 Terebinthinæ venet. āā ꝑi.  
 Farinæ q. s.

Ut fiat cerateum pernionibus, et ulceribus phagedenicis, &c. applicandum.

590. R. Tartratis antimonii.  
 Camphoræ āā ꝑi.  
 Adipis suillæ ꝑi. ; m.

591. R. Tartratis antimonii  $\mathfrak{z}$ i.  
Linimenti saponis terebinthinatæ  $\mathfrak{z}$ ii. Misce.

592. R. Solutionis saponis.  
Olei oleæ Europeæ  $\mathfrak{a}\mathfrak{a}$   $\mathfrak{z}$ i:  
Tincturæ lyttæ.  
Olei distillati pini laricis  $\mathfrak{a}\mathfrak{a}$   $\mathfrak{z}$ ss.

Misce pro linimento, in arthrodynia, paralyti, spasmo idoneo.

593. R. Olei oleæ Europeæ  $\mathfrak{z}$ iii.  
— pini laricis  $\mathfrak{z}$ i.  
Acidi sulphurici gtt. xx. m.

594. R. Linimenti camphorati  $\mathfrak{z}$ i.  
Tincturæ lyttæ.  
—— opii  $\mathfrak{a}\mathfrak{a}$   $\mathfrak{z}$ ss.  
Aquæ ammoniæ  $\mathfrak{z}$ ii. Misce,

595. R. Opii  $\mathfrak{z}$ ii.  
Camphoræ  $\mathfrak{z}$ i.  
Alcoholis q. s. ad solvendum camphorum.  
Adipis suillæ  $\mathfrak{z}$ ss.

Fiat linimentum.

596. R. Vitelli unius ovis.  
Olei terebinthinæ  $\mathfrak{z}$ i.  
Tincturæ opii  $\mathfrak{z}$ ss.

Misce ut fiat linimentum.

597. R. Camphoræ.  
Aquæ kali præparatæ singulorum  $\mathfrak{z}$ i. solve  
et adde,  
Olei oleæ Europeæ  $\mathfrak{z}$ iii.



598. R. Camphoræ (ope alcoholis in pulverem redacti) ℥ss.

Adipis suillæ præparatæ ℥i.

Ammoniaë liquidæ ℥i.

Misce, linimentum excitans, idoneum in paralysi, aphrodisia, in distentione paralytica vesicæ urinariæ, &c.

599. R. Ammoniaë liquidæ ℥i.

Spiritus ætheris sulphurici ℥ss.

Tincturæ lavendulæ ℥ii.

Misce pro embrocatione, in hydrarthros, rheumatalgia, odontalgia, et in morbo faciei doloroso, hodie nuncupato "tic douloureux."

600. R. Saponis sebacei rasi.

Olei terebinthinæ āā ℥i.

Subcarbonatis potassæ ℥ii. solve in

Alcoholis diluti camphorati ℥vi.

M. ut fiat embrocatio saponis terebinthinatus, in rheumatalgia, paralysi, peruiio, contortione articuli, applicanda; cui adde, ut fiat embrocatio rubefaciens,

Ammoniaë liquidæ ℥i.

Tincturæ lyttæ ℥ss.

601. R. Unguenti resinæ flavæ ℥iii.

Camphoræ pauxillo alcoholis solutæ in pulverem redactæ ℥ss.

Olei terebinthinæ q. s.

Ut fiat epithema, in rheumatalgia, arthritide paralysi applicandum.

602. R. Pulveris sinapis albi ℥ii.

Olei olivæ ℥vi.

— terebinthinæ ℥viii.

Misce pro linimento.

603. R. *Seminum sinapis albi.*

*Medullæ panis* āā lbss.

*Aceti* q. s.

Ut fiat cataplasma, excitans, rubefaciens, in inflammationibus articularum applicandum.

604. R. *Seminum sinapis nigri contusorum.*

*Farinæ.*

*Medullæ panis, utriusque unciam.*

*Aceti* q. s.

Ut fiat cataplasma, vi vitæ deficiente in febribus in stupore, comate febrili, apoplexia, plantis pedis, malleolis vel cruribus, vel scrobiculo cordis, imponendum.

605. R. *Allii sativæ quantum vis.*

Contusa radice, et in pauxillo alcoholis macerata, applicatur plantis pedis, in ultimo febris typhoidis stadio, in apoplexia, lethargo, hydrope, &c.

Certain external remedies are useful, not in rousing the vital powers, nor remedying nervous pains, or rheumatic diseases, but in resolving indolent swellings, or exciting such a degree of vascular action as to cause SUPPURATION. Those are chiefly stimulant plasters and ointments.

606. R. *Muriatis sodæ* ʒi.

*Pulveris lini usitatissimi.*

*Farinæ avenacæ* āā lbss.

*Aquæ fontis* q. s.

Ut fiat cataplasma: Stimulans, resolvens, tumoribus chronicis ægre, glandularum conglobatarum cervicis, glandulæ thyroideæ applicandum.

607. R. Emplastri oxydi plumbi semivitrei partes  
duodecim.

Gummi resinæ ammoniaci.

—— galbani.

Balsami pini laricis.

Ceræ flavæ ; singulorum partem unam lique-  
facto, probe movendo commisce.

608. R. Farinæ.

Saponis terebinthinatæ.

Allii cepæ tosti āā partes æquales.

Misce, ut fiat cataplasma, pus maturans.

609. R. Allii cepæ quantum vis.

Coque in aqua ad aptam mollitiem.

610. R. Gummi resinæ ammoniaci quantum vis ;  
redige in pulverem, et adde,  
Aceti scillitici q. s.

Ut fiat emplastrum.

611. R. Muriatis ammoniæ ʒss.

Saponis ʒss.

Emplastri lithargyri ʒii.

Liquefacta sapone et terebinthina, miscetur ammonia, et  
imponatur sine mora emplastrum.

These, or the ointment of tartrate of antimony, have often very powerful influence in dispelling strumous swellings of the glandulæ concatenatæ, in discussing incipient white-swellings of the knee joint, and in bringing to maturity scrupulous buboes, and other indolent tumours.

612. R. Emplastri picis  $\mathfrak{z}$ i.  
 Opii.  
 Camphoræ  $\mathfrak{a}\mathfrak{a}$   $\mathfrak{z}$ ii.  
 Pulveris lyttæ  $\mathfrak{z}$ i. m.
613. R. Muriatis sodæ  $\mathfrak{z}$ ss. solve in  
 Aquæ tepidæ  $\mathfrak{z}$ i.  
 Fellis tauri recentis.  
 Olei oleæ Europææ  $\mathfrak{a}\mathfrak{a}$   $\mathfrak{z}$ i.  
 Opii.  
 Camphoræ  $\mathfrak{a}\mathfrak{a}$   $\mathfrak{z}$ ii.

Misce, ut fiat linimentum, quo struma assidue perfricanda est; et post frictionem, admovendum est emplastrum calidum, stimulans.

614. R. Emplastri oxydi plumbi  $\mathfrak{z}$ ss.  
 Muriatis hydrargyri  $\mathfrak{z}$ i.  
 Tartratis antimonii  $\mathfrak{z}$ i.

Misce secundum artem, ut fiat emplastrum.

But when inflammation has terminated in gangrene, the living parts are to be stimulated, and the dead parts separated, and the sloughs and putrid serum (the absorption of which poisons the system) to be corrected, by applying camphorated and stimulating medicines, in the form either of poultice or powder.

615. R. Vini rubri lbii.  
 Farinæ avenacæ q. s.

Ut fiat cataplasma, cui adde

- Olei distillati pinæ laricis  $\mathfrak{z}$ ss.  
 Olei camphorati  $\mathfrak{z}$ i.

616. R. Camphoræ  $\bar{z}$ ss. solve in  
 Olei pini laricis  $\bar{z}$ ii.  
 Cataplasmatidis domestici.  
 Pulveris carbonis ligni  $\bar{a}\bar{a}$   $\bar{z}$ viii.  
 Alcoholis diluti q. s.

Ut fiat cataplasma, antisepticum stimulans.

617. R. Nitratis potassæ.  
 Gummi resinæ myrrhæ  $\bar{a}\bar{a}$   $\bar{z}$ ii.  
 Camphoræ pauxillo alcoholis in pulverem  
 reductæ  $\bar{z}$ ss.

Misceantur, ut fiat pulvis antisepticus, stimulans, quo  
 inspergantur partes, gangrenosæ, putridæ, superim-  
 ponens lintea alcohole camphorato imbuta.

There are various disorders, surgical as well as medi-  
 cal, which require the strong excitement of stimulant  
 washes and injections, usually composed of tinctures of  
 bark, myrrh, laudanum, or muriate of mercury or am-  
 monia. The less important occasions, as that of relaxed,  
 spongy, and ulcerated gums, tonsils, &c. require only  
 more dilute injections or washes of the same medicines  
 which suit the more desperate diseases, as disorders of the  
 antrum Highmorianum, syphilitic diseases of the spongy  
 bones, and palate, or superficial ulcers of sloughy or gan-  
 grenous tendency.

618. R. Decocti cinchonæ officinalis  $\bar{z}$ iv.  
 Tincturæ myrrhæ  $\bar{z}$ i.

Fiat lotio vel injectio.

619. R. Tincturæ myrrhæ.  
 ——— cinchonæ officinalis  $\bar{a}\bar{a}$   $\bar{z}$ ii.  
 Aquæ rosæ  $\bar{z}$ iv. m.

Fiat lotio.

620. R. Tincturæ aloes.  
 ——— myrrhæ āā ʒii.  
 Aquæ calcis lbi. m.

621. R. Muriatis hydrargyri gr. x.  
 ——— ammoniæ ʒii. solve in  
 Alcoholis ʒi.  
 Tincturæ opii ʒi.  
 Aquæ rosæ lbi. misce.

622. R. Decocti corticis cinchonæ ʒxii.  
 Tincturæ myrrhæ ʒi.  
 Muriatis hydrargyri gr. x.  
 Mel. rosæ ʒi. misce.

623. R. Opii ʒii. solve in  
 Aquæ ferventis ʒvi. m.

For exciting the secretion of the cerumen, the defect of which, and the corresponding state of the membrane of the ear, is a frequent cause of deafness, we often use stimulant oils and ointments, all of which must be introduced into the tube of the ear with much caution; sometimes we use opium, sometimes camphor, sometimes aloes, and sometimes the gall of animals.

624. R. Fellis bovinæ ʒii.  
 Olei oleæ Europeæ ʒss. misce.

625. R. Fellis bovinæ.  
 Opii āā ʒii.  
 Adipis suillæ ʒss. misce.

626. R. Camphoræ.  
 Opii āā ʒi.  
 Unguenti hellebori nigri ʒss. misce.

627. R. Olei oleæ Europææ  $\bar{z}$ ss.  
 — pini laricis gtt. x.

For Tinea Capitis, and other foul cutaneous ulcers, we use the pitch plaster, and mercurial ointments, alternated with the stimulant washes just mentioned, washes and fomentations of hot salt water.

628. R. Resinæ pini liquidæ lbss.  
 Ceræ flavæ  $\bar{z}$ ss.  
 Sulphuris  $\bar{z}$ ii.

Misce, ut fiat unguentum.

629. R. Muriatis sodæ  $\bar{z}$ ss.  
 ——— hydrargyri gr. x. solve in  
 Aquæ ferventis lbi. ; adde,  
 Alcoholis diluti  $\bar{z}$ ii.

Misce, fiat fomentatio, mane et vespere calide applicanda.

630. R. Unguenti hellebori albi  $\bar{z}$ i.  
 Oxydi hydrargyri rubri  $\bar{z}$ i.

Misce, ut fiat unguentum, raso capiti illinenda, locis scabie fædatis, hora somni ; mane diligenter lavatur capillitium, solutione saponis in aqua tepida.

631. R. Carbonat. calcis.  
 Oxydi plumbi albi āā  $\bar{z}$ i.

Misce, ut fiat pulvis, quo inspergatur capillitium, erosa scabie.

For psora, the sulphur ointment, ointment of extract of hyoseyamus, of rue, or of hellebore, are used ; the latter especially is effectual, and is the basis of the best quack ointments for the itch.

632. R. Pulveris hellebori albi ʒi.  
Adipis suillæ ʒviii.  
Olei citri medici gr. xx.

Misce pro unguento anti-psoradico.

This is the SAFE, SPEEDY, and EFFECTUAL CURE.

When we would make assurance doubly sure, we add a proportion of the red oxide of mercury; and though it might seem dangerous to anoint the whole surface with such a composition, we by experience know it to be safe; it should be washed off every night with warm water and soap.

OF ASTRINGENT SOLUTIONS FOR WASHES, COLLYRIA,  
AND INJECTIONS.

THE class of astringents is already sufficiently defined and described, and no great art can be required to arrange the prescriptions usefully, nor should any be affected. Astringent applications should be simply and plainly arranged according to their use and intention.

1st, As washes, solutions, or powders, for excoriations, ulcerations, or sores.

2d, As collyria, or astringent and gently stimulant solutions, and ointments, for the eyes and eye-lids.

3d, As gargles, or stimulant and astringent washes, for ulcers of the tonsils and throat.

4th, As injections and washes for moderating uterine discharges, for suppressing mucous fluxes from the vagina, and for assuaging the pains of cancer of the womb.

One of the most valuable astringents I am acquainted with, though the least used, is wine. Vinegar is a most useful astringent, alcohol another excellent ingredient in



astringent infusions; but rough port wine combines the entire acid, and alcohol, and should be the menstruum or chief fluid vehicle for other astringents. Port wine diluted, strengthened with vinegar, with acetæ plumbi, &c. makes a valuable injection in gonorrhœa; sour claret, an excellent collyrium; and hot wine, one of the best stimulant stupes, when combined with aromatics, and used hot; or one of the most valuable astringents, when applied cold, and on most occasions an excellent gargarism.

633. R. Corticis quercus roboris  $\bar{z}$ ss.  
 Aquæ lbiss. decoque ad libram, et adde,  
 Supersulphatis aluminæ et potassæ  $\bar{z}$ ii.  
 Aceti  $\bar{z}$ iv.

Fiat mistura astringens, pro fomento, injectione, vel gargarismate.

634. R. Corticis salicis  $\bar{z}$ i.  
 ——— quercus roboris  $\bar{z}$ ss.  
 Aquæ lbiss. decoque ad libram; adde,  
 Acidi sulphurici diluti  $\bar{z}$ iv.

Fiat infusio astringens, quo lavantur ulcera, hæmorrhoides, ani prolapsus, sæpe in die; injiciatur inter vaginam, in fluore albo, prolapsu uteri, procidentia vaginæ, &c.

635. R. Pulveris quercus cerris  $\bar{z}$ i.  
 Aquæ lbiss.

Decoque ad libram pro fomento; pannis laneis, admoveatur tumoribus hæmorrhoidalibus, mane et vespere; vel in uteri, vel in vaginæ procidentia.

636. R. Muriatis hydrargyri  $\bar{\theta}$ ii.  
 Aquæ calcis lbij,

Fiat solutio astringens, stimulans, pro scabie, ulceribus cutaneis, syphili, &c.

637. R. Muriatis ammoniæ ʒi.  
Alcoholis diluti ʒiv.  
Aceti ʒvi. misce.

638. R. Acidi nitrici diluti ʒii.  
Infusi rosæ lbi.

Fiat lotio, ulceribus foetidis, hæmorrhagicis applicanda.

639. R. Sulphatis zinci ʒi. solve in  
Aquæ distillatæ ʒviii.; dein solve  
Acetatis plumbi ʒss. in  
Aquæ distillatæ ʒx.

Misceantur liquores, quiescant, coletur solutione acetatis zinci.

640. R. Supersulphatis aluminae et potassæ ʒii.  
Infusi rosæ ʒvi.  
Aceti puri ʒii. m.

Ut fiat solutio astringens, naribus injicienda in epistaxi, vel recto in profluvio sanguinis periculoso, e vasculis hæmorrhoidalibus interioribus.

641. R. Sulphatis cupri.  
Supersulphatis aluminae et potassæ āā ʒiii.  
solve in  
Infusi rosæ ʒiv.

Fiat solutio astringens styptica.

As an astringent in piles, we use, along with opiates and laxatives, an astringent ointment of galls.

642. R. Pulveris quercus cerris ℥ii.  
 Adipis suilli ℥i.  
 Camphoræ.  
 Opii āā ℥i.

Fiat unguentum.

Astringent and absorbent powders, are far too little used in the cure of sores and ulcerations. There are few ulcers which improve when dressed with ointments; but if, after the use of warm stimulant or astringent fomentations, an astringent powder be applied, as suggested in the rules for the cure of ulceration, often in a few days a sore is healed, which had continued for months. Of those powders perhaps hardly any can excel the PULVIS CERUSSÆ COMPOSITUS; I have usually prescribed it in this form.

643. R. Oxydi plumbi albi.  
 Carbonatis zinci.  
 Amyli āā ℥ii. m.; vel,

644. R. Carbonatis zinci.  
 Carbonatis calcis.  
 Oxydi plumbi āā p. æ. misce.

Or for hæmorrhagic ulcerated surfaces.

645. R. Supersulphatis aluminæ et potassæ.  
 Gummæ mimosæ nilot. pulverizatæ āā ℥ss.  
 Carbonatis calcis ℥i. m.

Or in dangerous hæmorrhages from the nostrils, mouth, or other ulcerated surface.

646. R. Supersulphatis aluminæ et potassæ ℥iii.  
 Kino ℥i. misce.

A portion of this powder diffused, if not dissolved in claret or port wine, is a valuable injection into the rectum, in hæmorrhagies from the internal hæmorrhoidal vessels; or into the womb, in dangerous hæmorrhages from abortion, from polypus uteri, or (as sometimes happens) from a protracted or violent menstrual action, altogether unconnected with pregnancy or disease. I have frequently seen women reduced to the lowest ebb of weakness from such hæmorrhages, and have saved them alive, after being so drained of blood as never to recover the natural complexion of the cheek or lips.

## COLLYRIA.

647. R. Aceti.

Alcoholis diluti āā ʒiiss.

Aquæ rosæ ʒvi, misce.

648. R. Superacetatis plumbi gr. xv.

Camphoræ pauxillo alcoholis solutæ gr. vi.

Aceti ʒiii.

Infusi rosæ ʒviii.

Fiat collyrium.

649. R. Camphoræ grana sex.

Sacchari purissimi ʒi.

Spiritus ætheris nitrici ʒii.; tere simul, et adde,

Aquæ acetatis ammoniæ ʒvi.

Misce, ut fiat collyrium.

650. R. Acetatis ammoniæ liquidi.

Aquæ rosæ centifoliæ āā ʒiii.

Tincturæ hyoscyami ʒi. misce.

651. R. Zinci sulphatis.  
Cerussæ acetatæ āā ℥ss.  
Aquæ rosæ ꝑvi. cola.

Fiat collyrium.

652. R. Supersulphatis aluminæ et potassæ ℥i.  
Aquæ rosæ ꝑviii.  
Tincturæ opii ꝑi. m.

653. R. Sulphatis zinci ℥i.  
Spiritus camphorat. ꝑss.  
Aquæ distillatæ ꝑviii.

Misce pro collyrio.

654. R. Muriatis hydrargyri gr. iii.  
Syrupi simplicis ꝑii.  
Aquæ rosæ ꝑiv.  
Tincturæ opii ꝑi.

Misce pro collyrio.

655. R. Camphoræ.  
Aquæ kali Phar. Lond. singulorum ꝑss.  
Olei oleæ Europææ ꝑii.

Misce, ut fiat linimentum ophthalmicum, in ophthalmia  
asthenica applicandum, in hora decubitus.

656. R. Extracti opii mollis.  
Camphoræ āā ℥ss.  
Tere simul in mortario marmoreo, dein adde,  
Aquæ fontis ferventis ꝑvi.  
Aquæ rosæ ꝑiv. misce.

The inflammation having terminated in extravasa-  
tion, betwixt the laminæ of the cornea lucida, or in  
other terms, in specks, or opacity, the cure of these is to

be attempted by more stimulant solutions and powders, as of copper, corrosive sublimate, &c.

657. R. Aquæ acetatis ammoniæ gr. iv.  
Muriatis ammoniæ ℥ii.  
Aquæ calcis recentis ꝑviii.

Digere per horas viginti quatuor, et cola: in lippitudine, vel ophthalmia senili, ulceratione chronica palpebræ, maculæ corneæ lucidæ, et in ulceribus phagedenicis remedium.

658. R. Muriatis hydrargyri gr. iv. solve in  
Aquæ distillatæ ꝑviii.

Collyrium, pro ophthalmia tarsi, opacitate corneæ, &c.

659. R. Muriatis ammoniæ gr. vi.  
—— hydrargyri gr. iii.  
Tincturæ opii ꝑii.  
Aquæ rosæ ꝑvi.

Fiat collyrium.

660. R. Submuriatis hydrargyri ℥i.  
Muriatis hydrargyri fortius gr. iii.  
Sacchari puriss. ꝑii.

Tere simul, ut fiat pulvis, intra palpebris inflandus ope arundinis, vel calami scriptorii, hora decubitus.

661. R. Oxidi hydrargyri rubri ꝑss.  
Adipis suilli ꝑss.

Misce pro unguento ophthalmico.

662. R. Oxidi hydrargyri rubri ꝑi.  
Camphoræ pauxillo alcoholis solutæ ℥ii.  
Subacetatis cupri ℥i.  
Adipis suilli ꝑi.

Tere simul diligenter in mortario calente, ut fiat unguentum, in ophthalmia tarsi, intra palpebras intromittendum, ope pencilli. In ulceribus syphiliticis et scrophulosis, in morbis cutaneis, impetigenis, &c. optimum est remedium. In ophthalmia chronica palpebrarum adhibetur, palpebris noctu dormituris inunguendo.

663. R. Acetatis cupri ℥i.

Mellis despumati ℥i.

Misce diligenter, terendo in mortario vitreo. Pauxillum hora somni introducendum subter palpebras, adhibetur etiam ulceribus scrophulosis glandularum, vel cutis, narium, palati, &c.

664. R. Acetatis cupri crystallisati ℥i.

Aquæ ammoniæ ℥i.

Misce, ut fiat solutio; ad drachmam hujus solutionis, adde uncias quinque aquæ distillatæ, ut fiat lotio astringens, ulceribus sæpe in die applicanda.

665. R. Adipis suilli ℥i.

Acidi nitrici ℥i.

Misceantur ope caloris, in vase figulino, ut fiat unguentum; in affectionibus herpeticis, ulceribus syphiliticis, in psora, et in indurationibus glandularum remedium.

666. R. Adipis suilli pauxillum.

Acetatis cupri ℥i.

Unguenti resinosi ℥i.

Misceantur, ut fiat unguentum ophthalmicum.

## ASTRINGENT AND STIMULANT GARGLES.

667. R. Infusi rosæ centifoliæ ℥vi.

Syrupi ℥ii.

Acidi sulphurici diluti ℥ss.

Fiat gargarisma.

668. R. Infusi rosæ ℥vi.

Tincturæ myrrhæ.

———— cinchonæ officinalis āā ℥i.

Misce pro gargarismate. Vel,

669. R. Decocti cinchonæ lbi.

Acidi sulphurici diluti ℥ii.

Misce pro gargarismate.

670. R. Supersulphatis aluminæ et potassæ ℥i.

Decocti hordei lbi.

Mellis ℥ss.

Acidi sulphurici ℥ss.

Misce pro gargarismate.

671. R. Mellis flavi ℥i.

Aquæ fontis lbi.

Aceti ℥ii.

Misce pro gargarismate; interdum addatur alcoholis impuri uncia, in cynanche tonsillari.

672. R. Sub-boratis sodæ.

Mellis āā ℥ss. solve in

Aquæ fontis lbi.

Pro gargarismate.



673. R. Muriatis ammoniæ ℥ii.

Oxymellis ℥i.

Aquæ rosæ.

Aquæ acetatis ammoniæ āā ℥vi.

Misce, ut fiat gargarisma.

These are all useful in the purely inflammatory sore throat, affecting the tonsils and arches of the fauces, and are useful also, after the tonsils have suppurated, for washing out the cavities of the ulcerations. But in that ulcerated or rather gangrenous sore throat, in which the gums and cheeks fall into a sloughy condition, described in the section on suppuration and gangrene of the throat; or in deep suppurations of the tonsils, or in venereal sores, we need to use the most pungent gargarisms of oxymuriatic acid, of the muriates of mercury, &c. mixed with honey, and penciled upon the sores, with injunctions to the patient to avoid swallowing what is thus applied. Of the more stimulant gargles, in diseases of relaxation, the chief are oak bark, peruvian bark, tincture of myrrh, capsicum, ammonia, and muriatic acid.

674. R. Decocti quercus roboris ℥vi.

Supersulphatis aluminæ et potassæ ℥ss.

Fiat gargarisma astringens.

675. R. Extracti cinchonæ officinalis ℥i.

Decocti cinchonæ officinalis.

Vini rubri āā ℥vi.

Fiat gargarisma.

676. R. Capsici annui fructus ℥i.

Aquæ ferventis ℥viii.; infunde per horas duas et cola, dein adde,

Oxymellis.

Tincturæ myrrhæ āā ℥i.

Misce pro gargarismate.

677. R. Tincturæ myrrhæ.  
Mellis rosæ Phar. Lond. āā ʒi.  
Infusi rosæ ʒvi. misce.

678. R. Infusi lini usitatissimi lbi.  
Aquæ ammoniæ ʒiii. misce.

679. R. Decocti quercus lbi.  
Aceti.  
Tincturæ myrrhæ āā ʒi.

Sit pro gargarismate.

680. R. Acidi oxymuriatici ʒss.  
Aquæ hordei ʒviii.  
Mellis rosæ Phar. Lond. ʒi.

Pro gargarismate.

681. R. Acidi muriatici ʒi. ad ʒii.  
Mellis rosæ ʒi.

Misceantur, ut fiat pigmentum, quo partes sphacelatae  
sæpe in die ope penicilli tanguntur.

682. R. Muriatis hydrargyri ʒi.  
———— ammoniæ ʒii. solve in  
Alcoholis diluti ʒi.

Fiat solutio caustica in usum externum, ulceribus syphi-  
liticis, verrucis, &c. ope penicilli applicanda.

683. R. Mellis despumati ʒi.  
Acidi oxymuriatici ʒiss.

Fiat pigmentum, cujus applicetur pauxillum, ope peni-  
cilli, ulceribus palatæ, linguæ, oris, in apthis, ulceri-  
bus gangrenosis gingivarum, tonsillarum, &c.

684. R. Sub-boratis sodæ ℥ii.  
 Mellis rosæ.  
 Tincturæ myrrhæ āā ℥ss.  
 Aquæ rosæ centifoliæ ℥vi.

Misce, ut fiat gargarisma.

A mineral solution, now extolled, not merely as an external application in blotches and ulcerations of the skin, in scrophulous, impetiginous, herpetic, and other irregular and non-descript diseases, but also as a powerful tonic, and especially as a cure for intermittent fever, is the ARSENICAL SOLUTION.

685. R. Oxidi arsenici ℥i.  
 Nitratis potassæ ℥ii.  
 Aquæ fontis pondere uncias septem.

Misce in lagena vitrea, in aqua bulliente suspensa, lagena interdum agitata donec perfecte solutum fuerit arsenicum, dein per chartam cola, et adde Tincturæ Aromaticæ ℥i. ad ℥iss. ut sit pondus accuratum, decem unciarum.

Pro usu interno in febribus intermittentibus, pertussi, epilepsia, morbis herpeticis, &c.; sit dosis hujus solutionis guttæ viginti, sensim sensimque augendo ad quadraginta, simulac nausea et vomitus, tormina et diarrhœa occurrunt juvat interponere opiata et diluentia, medicamen efficax est in pyrexia, salutem idem brevissimo tempore revocans.

Linteam carptum (charpie dictum) hacce solutione madidum sæpe imponendum est ulceribus syphiliticis, eruptionibus herpeticis, &c.

## INJECTIONS FOR GONORRHŒA, FLUOR ALBUS, &amp;c.

686. R. Superacetatis plumbi ℥ss. solve in  
 Aquæ rosæ centifol. ℥viii.  
 Aceti ℥ii.

Misce pro injectione.

687. R. Pulveris cerussæ compositæ ℥i.  
 Opii ꝑi.  
 Aquæ distillatæ ℥viii.  
 ——— rosæ ℥iv.

Tere simul diligenter opium, et cerussæ pulverem, dein adde paulatim, aquam distillatam.

688. R. Sulphatis zinci ℥ss.  
 Mucilaginis gummæ mimosæ niloticæ ℥ii.  
 Aquæ distillatæ ℥vi. misce.

689. R. Supersulphatis aluminæ et potassæ ℥ii.  
 Infusi rosæ ℥vi.  
 Mucilaginis g. m. nilot. ℥i. m.

Pro injectione.

In gleet or continued mucous discharge, higher astringents are required; and in fluor albus, the mineral and vegetable astringents must be combined.

690. R. Herbæ theæ viridis ℥ii.  
 Aquæ ferventis ℥vii. fiat infusio, adde  
 Acidi sulphurici diluti gtt. xx.

Pro injectione.

691. R. Opii drachmam.  
 Mucilaginis gum. mimos. niloticæ.  
 Olei oleæ Europææ āā ʒss. misce, dein adde,  
 Sulphatis cupri gr. x.  
 Aquæ rosæ ʒvii.

Misce pro injectione.

692. R. Sulphatis zinci ʒi.  
 Camphoræ in alcoholis pauxillo soluto ʒi.  
 Aquæ rosæ ʒvi.

Misce pro injectione.

693. R. Sulphatis zinci ʒi. solve in  
 Infus. rosæ ʒviii.  
 Acidi sulphurici diluti guttas xx. m.

694. R. Vini rubri Lusitanici.  
 Aquæ rosæ āā ʒiv.  
 Acidi sulphurici diluti ʒi.

Misce pro injectione.

695. R. Corticis quercus ʒiv.  
 Aquæ libram decoque ad ʒviii.  
 Cola et adde,  
 Supersulphatis aluminæ et potassæ ʒi.

Fiat injectio in gonorrhœa chronica, et in leucorrhœa.  
 Vel,

696. R. Supersulphatis aluminæ et potassæ ʒii.  
 Sulphatis zinci ʒi. solve in  
 Infusi quercus cerris ʒviii. m.

When in the high inflammatory stage of gonorrhœa virulenta, the priapism is such as prevents sleep, and aggravates the disease; it is best appeased by giving opiates, or camphor and nitre draughts, at going to bed,

and applying at the same time a large and warm camphorated poultice; anointing the whole length of the urethra with camphorated oi, and making the patient sit for an hour over the bidet, filled with warm water, using during the day camphorated, oily, and anodyne injections, with mercurial ointment mixed in them.

697. R. Opii ʒi. solve in  
Aquæ fontis ʒiv.

Ut fiat injectio, tepide utenda; interdum addatur acetatis plumbi scrupulum.

698. R. Opii drachmam.  
Camphoræ drachmas duas.  
Alcoholis q. s. ad solutionem camphoræ.  
Olei oleæ Europeæ.  
Mucilaginis g. m. niloticæ āā ʒi.  
Aquæ distillatæ ʒvi.

Misce pro injectione anodyna.

699. R. Aquæ acetatis ammoniæ ʒvi.  
Opii.  
Camphoræ āā ʒii.

Misce pro injectione, quater in die tepide injicienda.

700. R. Unguenti hydrargyri fortius ʒii.  
Opii ʒi.  
Olei amygdali communis.  
Mucilaginis g. m. nil. āā ʒi.  
Aquæ ʒiv.

Misce, ut fiat injectio, sæpe in die utenda.

IF I have omitted any thing of the immense farrago of medical prescriptions, it is, I hope, what can well be spared, and what a judicious reader would wish me to omit. Perhaps the class of Alteratives! why, all medicines are alteratives, if changing the condition of the system be what is meant. But it is changing the condition of the system slowly and imperceptibly that is meant; and the medicines peculiarly designated as alteratives, are no other than the ANTIMONIALS, MERCURIALS, NARCOTICS, and SUDORIFIC DECOCTIONS, which I have in various forms taught my reader to prescribe; their narcotic, diaphoretic, and other qualities, operate slowly, and the courses are long continued, and hence are named alterative courses, because they produce no visible alteration!

DEMULCENTS are another class of medicines which I may be censured for omitting. Demulcent medicines, those which sheath other more acrid medicines, as lime-water or alkaline solutions, and medicines which lubricate the trachea in cough, or the bowels in dysentery, are indeed valuable; but I may safely appeal from the custom of writers on materia medica, to the good sense of my reader, whether these same demulcents do not pertain more to the confectioner than to the apothecary? whether honey, and figs, and barley-water, tapioca, and sago, and spermaceti, almonds, and calf's-foot jelly, milk, and marshmallows, and lintseed tea, and beef tea, oat meal gruel, isinglass, and starch, and even gum-arabic, are not articles fitter to adorn the scientific pages of Mrs Glass's works? Sure I am, that it were a burlesque upon our profession, to crowd a work of this serious nature, with things so irrelevant, which need to be remembered be-

cause they are often useful, but which need only to be remembered, not to be described in detail.

One great and general impression I wish to leave on the mind of my reader, and it is this, that our influence over the living system is resolvable into three chief operations.

1st, In allaying inordinate actions, and subduing the nervous sensibilities of the system, by **SEDATIVES** and **NARCOTICS**.

2d, In raising, inciting, and supporting the actions, and rousing the feelings of the system, by stimulants, tonics, and astringents, external as well as internal.

3d, In altering the state of the secretions, by the skin, kidneys, and bowels, and from all the great surfaces of the body; which enables us at once to cure the disorders of these individual organs, and to affect the whole animal frame.

**FINIS.**



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## FINIS.

