**The principles and practice of the botanic system of medicine : a guide to the understanding of the nature of disease, its prevention and cure, by the use of simple, safe, and sanative means / by W. Dale.**

# PRINCIPLES AND PRACTICE

OF THE

# BOTANIC SYSTEM OF MEDICINE.

BY W. DALE, M.D.

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# BOTANIC SYSTEM OF MEDICINE:

## A GUIDE

TO THE

UNDERSTANDING OF THE NATURE OF DISEASE,

ITS

## PREVENTION AND CURE,

BY THE USE OF

## SIMPLE, SAFE, AND SANATIVE MEANS.

BY

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MDCCCLV.

# PREFACE.

THE principles and practice of the Botanic System of Medicine, as exhibited and exemplified in the following pages, are laid before the public under the impression that the more extensively they are known, the more generally they will be appreciated. The author thoroughly believes that this simple and rational system of treating disease is destined, in the course of a few years, to supersede the present desultory practice. He does not, however, expect it to be immediately adopted by the present generation of medical men, nor does he expect them voluntarily to abandon the errors of their present practice; public opinion and popular preference must exercise their coercive power over this department of public service, as over every other, before the improvements commensurate with the enlightened public understanding, will be made in it.

Therefore to the public, in a cheap, concise, and it is hoped readable and practical form, the principles of the Botanic system, with examples of Botanic practice, are addressed.

To Medical practitioners of the Allopathic School, who may feel inclined to resent what may, very probably, appear to them our attempts to usurp their profession, we have only to say, the public interest is paramount; the same remedies which we use are open to your use, and you can possess yourselves of them with-

out our medium; and if the public, on trial, find these remedies safer and superior in efficacy, you are bound to accede to the public preference so far as to adopt them.

To the Botanic practitioners the author desires to say, that what may appear new to them in this work has long been the subject of his reflections, and that in publishing it he has no object so much at heart as the advancement of the Botanic System of Medicine in philosophy, and the public estimation.

To the public the author would respectfully say, Judge not Medical Botany by small examples of things done in its name; there never was a true thing that was not counterfeited; and when it is remembered that old established and special-law-protected things, cannot avoid suffering from spurious imitation, it cannot be expected that Medical Botany should; but "by their works ye shall know them;" mystery and ignorance go hand in hand with presumption and duplicity.

Medical Botany is a thing that the public can understand, appreciate and practise, and it will be the safest in the hands of the public, whom it is calculated most to benefit.

Botanic Medical Hall,
40, Queen Street, Glasgow,
*January* 22, 1855.

# INTRODUCTION.

THE thing called medical science at present is no science at all; it is a confusion, a chaos.

There is a medical art, but no medical science; and because there is no science to give law to the practice of the art, the art is so imperfect that its professors in no case are agreed what are the proper materials, and tools, to be used for the production of a given effect. For proof of this, refer to medical works and lectures, and to the confusion of opinions which prevailed during the cholera epidemic of 1854, and on previous occasions, and to general medical practice.

There is a vast quantity of excellent materials, and a sufficiency of means for their application, but there is needed *rule*, founded in reason and on fact, for the direction of their use. The why, the when, the where, and the how, are the inquiries to be instituted with regard to the use of the medicinal materials and tools at command, and on the correct answering of these important questions, depends the fate of the structure to be reared—a medical science, and an infallible art of curing disease in all instances where cure is possible. An attempt to answer these questions philosophically is the object of the present work.

Established opinion, prejudice, and apparent personal interest, are obstacles too great in the way of reform, for the reformer to hope easily to surmount them; the error of habit too strong, for truth to vanquish quickly. But as error in every department of human thought and action, has received a shock from the electrical light of science, there is hope for besieging truth, though its position be unfavourable and its army small, though the ramparts,

intrenchments, and walls of the citadel of error be many and strong, all bristling with loud-mouthed cannon, and swarming with a defending army in numbers uncountable.

The sciences that specially treat of the preservation of health and life, and the prevention and cure of disease, have, up to the present time, received but a small share of the attention and study of men in general, the mystery, difficulty, and expensiveness of these studies, and the confusion of opinion upon the most important, as well as upon the most trivial questions, in connection with them, have all tended to prevent their becoming a part of popular knowledge. Popular inquiry, however, is being more extensively excited upon these important subjects, and I anticipate it will do more towards an improvement in the healing art than any other circumstance that could possibly occur.

Without actually becoming their own doctors, which is perhaps no more desirable than that they should become their own builders, all men ought to possess sufficient knowledge of these subjects, to enable them to exercise an amount of criticism upon the works of the professors, sufficient to prevent their being seriously imposed on by either legal or illegal quackery. As popular knowledge of art has increased, popular works of art have improved, and so will it be with this most important of all arts, the art of curing disease.

I am not prepared to say that medical men are wilfully negligent, or designedly humbugging, but the facilities that the ignorance of their patients affords for humbug are so palpable and many, that few medical men have the professional honesty to resist the temptation, whilst many are as ignorant as their patients themselves; aptly representing "the blind leading the blind."

I have known medical men in this country called to patients whom a little proper treatment would have relieved in a day or two; an opium pill or an alkali has been given. The patient has lingered on, day by day getting worse and weaker; the medical man, kindly considerate, and nothing too confident in his own opinion, has called in to his aid a senior brother, an M.D. of some fame; there has been much timing of the pulse, sounding of the

chest, stomach, liver, and other parts; many grave inquiries made, much sympathy expressed, and a deal of interest excited, and a blister or a blue pill prescribed; the patient thought it gave him a little relief, or thought it did'nt; the doctors did'nt seem to understand his complaint; what can be the matter with him; the M.D. said his lungs were sound, but he has a severe cough, and he is wasting away "day by day?" Thus months have passed, and the patient has grown worse, and wearied, almost of life. His hope has fled, and his faith in medicine died out. He tries hydropathy and medical botany—quackery, says the allopath—has he any right to complain?

It is not by narcotic sedatives, nor narcotic stimulants, that debility can be cured; nor by alkalies that functional disorders of the stomach, that give rise to acidities, can be corrected. It is true that an alkali taken into the stomach will neutralize an acid within it, forming a neutral salt, and thereby affording temporary relief; but if the acidity arises from functional disorder, and not temporary fermentation, it will re-appear, and its repeated neutralization will only add a burden to the overloaded organ.

I would ask, is it not preferable that every man and woman should be able, in cases of sudden attacks of disease, to apply a judicious remedy for the relief or cure of it, or at least to understand why the remedies prescribed should be faithfully administered, in place of standing by, weeping and wringing their hands, and falling prostrate with sympathy, because they do not understand how to afford assistance, or why it should be rendered; or, in case of personal attack, taking to their beds and giving up all hope without an effort to save themselves, probably reasoning that because some neighbour was attacked in a similar manner, and did not recover, that therefore all hope for them is past!

Such things I have seen done; a repetition of such I would prevent. There are known to me many working-men and tradesmen, who, with a little knowledge of the human frame, and of the theory and practice of medicine, have been able to mitigate, by their own efforts, much suffering in their families, and in many

cases to cure serious complaints which were considered by regular doctors as incurable; and if they have failed in many instances where their faith and hope have been greater than their knowledge and ability, they have rarely, if ever, done harm, when using the simple botanic medicines, which is so much more than can be said for their betters in education and opportunity, that they have but small need to be dissatisfied with the results of their labours. I believe it is desirable to add to their number, for their own interests and the interests of society. Faith in old physic is daily dying, and hope in the new springing up. It is not to destroy the profession of medicine that I write, but to elevate it; to raise the drooping confidence of the afflicted, by giving them a reason for their faith; to teach them how disease is cured, that they may understand the amount of power delegated to the doctor; to substitute light for darkness, plainness for mystery, and for wonder, understanding.

Next in importance to the possession of the power of criticism on the part of the employers of artists, is freedom of competition in the departments of art, as a means of elevating it. Then why keep the art of medicine a monopoly, in which only the sons of the wealthy can become qualified, because of the enormous expense of the education of the artist? Ought not education to be free for all? And whilst it is not so, is it just that those aspiring youths who are able and willing to educate themselves, should be debarred from entering that field of science and art for which their natural faculties best fit them, because they are unable to pay enormous fees to institutions and professors, as well as to obtain their own education by incessant labour and midnight thought? It is but proper that practitioners in the most responsible and important of all professions should be examined as to their qualifications by a national board, qualified for that duty; and this examination as to qualification should be of a more rigid character, in many important respects, than that which is now instituted in our medical schools and colleges, where a few pounds expended on *cramming*—a system of parrot education—substitutes

for careful investigation and patient research. The moral and intellectual characters of men should undergo examination as well as the powers of their memories to retain for a brief period certain rules and phrases, the practical application of which it is doubtful if they clearly understand, if such examination is to be of any benefit to the public, is to answer its specific object, the protection of the public against presumptuous ignorance, low cunning, quackery, and immorality. For quackery is not excluded from the ranks of the legally qualified. But recently one of the educational towns in England was the scene of a most disgraceful disturbance, got up by the gownsmen of the place, in a lecture-room where a gentleman had undertaken to demonstrate the folly and injury of consuming the noxious weed, tobacco. And these gownsmen are they who in a few months are to be let loose upon society as qualified medical practitioners, and ministers of the gospel, according to authority. Verily, the wisdom of man is great, but the folly of authority is greater!

To the healing art above all others attaches a deep, a solemn responsibility. Not only are the health and life of the patient committed to the care of the doctor, but also the interest and happiness, perhaps the very lives, of other individuals connected with him by the dearest and most tender ties. In many cases even the prosperity and happiness of a whole community may be seriously affected by the illness or death of one of its chief ornaments and greatest workers. Considering this profession as thus momentously connected, as associated with life and death, and the influences they exert upon the interests of individuals and societies, how important is it that those who engage in it should do so with the purest, the highest, the most honourable motives—and that they should be personally men of the highest moral and intellectual character—that prejudice and short-sighted selfishness should find no dark corner in their hearts to lurk in—that they should have wisdom and moral courage enough to search for, and to gaze on the brilliant light of truth, and mental power enough to prevent their being dazzled and confounded by it? No

youth nor man should lightly, or on slight consideration, determine on the choice of any profession, least of all on choosing the medical profession. Neither should parents or guardians allow slight considerations to influence them in the choice of such a profession, for those who look up to, and are guided by them. Perhaps there is no profession that requires for its successful practice, honestly and usefully, the varied and important qualities of character and ability, than the profession of medicine does. A quick perception, a retentive memory, a taste for study, a power of comparison and judgment, with a faculty for application, are indispensable as intellectual qualifications. Self-possession, firmness, coolness, circumspection, and hopefulness—kindness, charity, and good temper—patience, industry, and sobriety—are equally essential as moral qualifications to the greatest of all artists, who writes life or death to his patron by a stroke of his pen!

What can the public think of the amount of knowledge possessed by medical men as a class, or of the amount of skill exhibited by them as a class, when they read their inconsistent prescriptions, and witness their incompatible exertions on the occasions of epidemics breaking out in our country, or when they observe with what eagerness they run after a medicine newly made fashionable (as cod-liver oil), and apply it as a specific not only for consumption but for almost every other complaint? Whilst, if a medicine be not lauded by some influential members of their own body, no matter how excellent it may be, they close their eyes to its virtues, their ears to its claims, and condemn it without a trial. What progress can medical science make whilst thus fettered? If chemistry or mechanics had been thus bound by the fetters of prejudice and the interests of a class, should we have witnessed the gigantic strides which they have taken during the last fifty years? And is the science of medicine of less importance to the public interest than those, that the public should be allowed to take so much less interest in it? and should tolerate that every new-born light that sheds a ray of truth on it

should be extinguished under the iron heel of a despotic class, whose prejudice blinds them to their own real interests, and the true interests of humanity?

The medical faculty would be more respected by the public for liberality and candour, than they are now feared, on account of their petty tyranny and presumption. Nothing must be tried without their sanction and prescription, and they refuse to prescribe or acquaint themselves with what the public are daily proving to be of the highest value and utility.

It has ever been, that when a good work was needed to be done for the public welfare, the public has had the doing of it. The history of every improvement in the healing art shows conclusively, that from the regular professors of medicine, no progress may be expected until they are forced into it by the power of public opinion. Their patients must positively refuse to take their poisonous medicines before they will endeavour to procure sanative ones. Harvey was ridiculed as a fool, and Jenner as a madman, whilst Thomson was persecuted and imprisoned by them—but the truths they refused, the public received and cherished.

# PRINCIPLES

OF THE

# BOTANIC SYSTEM.

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## PHILOSOPHY OF LIFE.

LIFE, and vitality, are terms employed by the general consent of mankind, to designate the peculiar phenomena, exhibited by organized bodies.

These phenomena are—inherent power of action, or inherent sensibility to causes of excitement; feeling, in its various degrees, perception, and power of appropriation.

The special actions of life—assimilation, growth, and reproduction.

Life, then, as the term is commonly understood, signifies a peculiar species of action, performed by peculiar (organized) bodies, or a capability for such action possessed by them. Men, in all ages, from the first effort of human intellect to the last, have speculated upon the origin of the power which enables organized bodies to maintain their individuality, and exhibit the various phenomena peculiar to them; and various and widely-different notions have been given to the world as the results of their speculations and inquiries. These notions or reasonings constitute the philosophy of life. One class of philosophers says, "Life is a property of organization;" and on asking them, What is organization? they answer, "A property of matter," or a peculiar arrangement of materials. If this be true, then, life is the property of a property of matter. It seems equally philosophical to say, organization is a property of life; and on being asked, what is life? to answer, life is an intelligent force peculiar to certain forms of matter: and if further asked, what is an intelli-

gent force? to answer, a force sensible of its own activity and power.

The phenomena of life are certainly dependent on organic sensibility, which is excited to peculiar manifestations by appropriate agents, and continues in connection with the organism so long as appropriate circumstances continue. It is known that muscle moves bone, and nerve moves muscle; which is accounted a proof that sensibility resides in the nervous system. And it is supposed that vegetable organizations possess a structure corresponding to the nervous structure of animals. It has occurred that animal sensibility has suffered such intense excitement as to arrest the ordinary organic functions, and death has ensued. From this we learn that animal sensibility—the medium through which the phenomena of life are exhibited—may also become the medium of destruction to life, or, by its own excitement, annihilate the capacity of the organism to retain itself. Is organic sensibility the primary power of life—the life force? Whither has it fled, and how? Or is it a property conferred on the organism as a means of external relation by a still more subtle and incomprehensible power?

Is the *mind* the power of life? or, in other words, "Is mind the only *living substance* in the universe?" by whose inherent energies all material operations are performed—all material laws conferred—a portion of which, in conformity with the nature and destiny of the organic creature, is delegated to it? And is organization the result of the active energy of the living mind upon matter capable of organization? And is electricity the immediate agent of the living mind, by which it puts itself in communication with grosser materials, and by which its laws are carried into effect upon them? And does a portion of the living universal mind take up its residence in substance, capable of organization, and continue its operations in connection with the materials it has chosen, so long as appropriate circumstances permit its activity, in accordance with the laws it has conferred on such materials? And does this subtle and all-powerful substance, mind, take its departure when the materials with which it has lived in connection for a time, become, through opposing circumstances, incapable of being moved and used for the purposes of its organic mission and design? Are life and organization the result of electric action in connection with certain materials? It

is known that all living organized bodies become diseased, and quickly die in an atmosphere electrically deficient; and also, that sudden death is produced by an over-charge of electricity. But the same may be said with respect to the oxygen of the atmosphere. It is believed by some that all material operations, animate and inanimate, are the effects of electric action. Others imagine that the laws of chemistry are destined to reveal all the causes of material phenomena. If it shall ever satisfactorily do this, one thing is certain, it will never reveal the why and the wherefore of its own laws. "Is heat (caloric) the principle of life?" It is known that all living animal organizations possess a temperature more or less elevated above the medium in which they exist. That, in tropical climates, where the temperature is constantly high, vegetable and animal life is most prolific, and that in such climates organized bodies are not subject to the torpidity, or semi-death, which they exhibit in climates that are subject to great variations of temperature, at different seasons of the year. It is known that the body of a child born apparently dead, has been excited to the manifestation of healthy phenomena of life, by placing the after-birth, or placenta, whilst in connection with the child, upon hot embers, or in hot water. Yet these facts only prove that a certain external temperature is necessary to the exhibition of the phenomena of vegetable and animal life; and that the circulation of the blood in the body of the child, or in its natural appendage, was too weak to be perceived by the observer, or to endow the organs with their natural stimulus; and that, by applying the external stimulus of heat, the energies of the circulation were increased, or the obstacles to their free exertion removed. Or it may be said, that the organic sensibility was excited to more energetic action by the application of an appropriate exciting agent. Heat, therefore, or a certain temperature of organic bodies, can be regarded only as a condition necessary to the display of the active energy of life; or it may be regarded as a force operating in connection with a superior force, and an inseparable attendant on the active operation of its superior in living organisms. Perhaps the following theory will be found comprehensible.

The forces of animal life are—animal heat and nerve-power. Animal heat maintains the integrity of the component parts of the animal body—their impressibility, elasticity, and fluidity. Nerve-

power acts upon the fluids and solids, urges them to, and maintains them in motion. Animal heat, or the temperature of the animal body, is not "the principle of life," nor "the cause of the phenomena of life," but the effect of vital change and living motion. Heat expands the body, and renders the fluids still more fluid, as well as maintains the integrity of the fluids. An accession of heat, whether the result of increased animal motion or of absorption, promotes exhalation and perspiration. Animal heat is developed or produced in the animal body in proportion to the vital action that takes place within it; whenever increased vital action takes place, animal heat is developed in increased quantity. The quicker the circulation of the blood, the quicker is animal heat developed; and the feebler the circulation, the more slowly; but the stronger and fuller, the greater the quantity of heat developed. Is it necessary to explain that the circulation of the blood may be in a small, thin stream, flowing rapidly or the reverse, or in a strong, full stream, flowing quickly, or slowly? When animal heat is developed in unusual quantity, and perspiration (the process by which the body is kept at a uniform temperature) is not eliminated, the temperature of the body is naturally increased; this is the condition of the body in a state of fever. In this condition, the blood of the body is expanded by the accession of heat, and all the vessels are distended; which, together with the retention within them of the matters that are usually exhaled in the form of perspiration, constitute a source of pressure upon, and irritation of, the nervous system. The formation and elimination of perspiration keeps the animal body at, or about, a uniform temperature, in the same way as the formation of steam keeps boiling water from rising above a temperature of two hundred degrees F. The cause, of perspiration not being eliminated in a state of fever, is usually a constriction of the pores of the skin, or of the venous capillaries (hair-sized blood-vessels of the skin). Animal heat, therefore, can only be regarded as one of the vital phenomena of living animal organisms—a due amount and equal distribution of which throughout the system, is an indication of health—the absence of which indicates, a cessation of the vital operations; but, by no reasonable rule, can it be considered as "the principle of life itself."

Man may rest satisfied that it is not within the limits of his

comprehension to understand the cause of his own life and existence; happily it is of less importance to his interests, than to understand the laws of life and health, and the relations of external things to his own being, which are within the limits of his comprehension, and to the knowledge of which a great reward is attached—the power to live in peace and harmony with the external world and with himself.

The life of man is maintained by three great agencies—air, motion, and food.

As the breathing of air is the most immediately important necessary of life, it is of the three, the least under the control of the will of man, to choose, or refuse, to provide himself with it, to partake of it, to influence its quality, or determine the quantity he will take.

Still, by the congregation of large masses of human beings in commercial towns and cities, and through their undivided attention being directed to the production and accumulation of wealth, to the neglect of individual and social cleanliness, the air of these localities has become extensively polluted, and rendered an active cause of disease and death.

Motion being necessary to breathing, circulation, secretion, &c., it may be considered the second immediately important necessary of life; and therefore it is, in part, quite independent of the will and personal exertion of man, being placed under the charge of the involuntary nerves, or nerves of organic life; still motion is very imperfectly performed unless the voluntary motions of the body are daily exercised, and that fully; hence, from acquired indolence of body, and from engagement in studious and sedentary occupations, imperfect motion, has become an important cause of disease and premature death! Food—which includes both what we eat and drink—although indispensably necessary to the maintenance of life, may be omitted to be taken for a considerable length of time, the taking it, or refusing to take it, being a voluntary act, yet the instinctive and organic prompting to the act is of such force, and the pleasure experienced in the act is so powerful, that but few voluntary efforts are able to resist the inclination sufficiently long to produce serious consequences to health and life. Still, by repeated efforts, injurious habits of abstinence have been and are acquired; but far more generally

habits of a contrary nature,—over-feeding, and feeding on improper substances, from which arise much disease, suffering, and early death.

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## PHILOSOPHY OF DEATH.

As life is power, motion, sensibility, activity, warmth, attraction, love! death is the opposite of all these—organic insensibility, immobility, incapability of motion or of resistance. Death is the absence of that power of organized matter, which enables it to maintain its own identity and character, and to resist the ordinary chemical action of the elements by which it is surrounded; to convert other substances to its own condition and uses, in place of submitting to the laws of the elements.

Death—the condition of an organized body reduced to subjection to the ordinary chemical laws of inorganic matter. The temple of life thrown down—the throne of power laid prostrate to mingle with the vilest dust. Respiration and digestion are the two functions performed by animal bodies which are immediately concerned in the preservation of life; all other functions of animal bodies are the consequents of, are subsequent to, and dependent on, these for activity.

The air has an attraction for certain particles of the animal body, and the animal body has an attraction for certain particles of the air; and so long as the animal body is able to part with a portion of its substance to the air, and receive from the air a portion of its substance in exchange, the animal body continues its wonted operations; but if anything occurs to interrupt this reciprocal action but for a very limited period indeed, the phenomena of life ceases, and cannot, in the same organism, be resumed.

When, from a debilitated condition of the organs of respiration and digestion, these functions cannot longer be performed, death necessarily ensues. When any morbific, poisonous, or foreign matters obstruct the action of these organs, or by their offensiveness to the organic sensibility, excite them to excessive action in order to protect themselves against their pernicious influence, or to expel the offending matters, and they fail in their efforts to this end, the constitutional energies are exhausted and over-

powered, and death, as a consequence, takes place. Or if the organism be exposed to the action of corrosive substances, as fire, vitriol, &c., and the tissues be destroyed to an extent beyond the power of the constitution to repair, death necessarily takes place. And when the necessaries of life, as food and water, or a proper quantity of these are denied to the body, the elements of which the body itself is composed are consumed in the process of breathing (by which animal heat is maintained), the body is reduced to a mere skeleton, and death finally ends its misery!

Death is the still, cold, lightless night, of the body's bright, warm, active day.

Human beings die from three great causes—obstruction, consumption, and exhaustion.

Obstruction, is when, from mechanical pressure, spasmodic contraction, or inflammatory constriction, the circulating fluids of the body are unable to continue their regular and natural course, as, per example, when people die from apoplexy, paralysis, epilepsy, typhus, scarlatina, asthma, stone, hepatitis, dropsy, &c.

Consumption, is when, from the weakness of the conservative power of the constitution, it is unable to maintain its own, against the wearing, wasting, consuming action of the physical elements by which the subject is surrounded. When the waste of the material of the body is quicker than the repair effected, as, per example, when people die from starvation, pulmonary and abdominal wasting, and chronic dyspepsia, when the substance of the body is consumed in respiration, secretion, &c., and not renewed by digestion and assimilation.

Exhaustion, is when a depleting discharge of blood, or other fluid furnished from the blood, is continued to such an extent as to leave the constitution deprived of a sufficiency of vital power to continue its physiological action; as, per example, when people die from poisoning, cholera, black vomit, plague, diarrhœa, diabetes, starvation by cold, &c.

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## PHILOSOPHY OF HEALTH.

Health is the free, the easy, the steady, the pleasurable performance of the organic functions of the body. Health is the

proper performance of our natural, physical, moral, and intellectual functional duties. There is a health of thought, as there is a health of digestion or of muscular action. Great and good thoughts, great and good actions, kind sympathies and affections, are all the consequents of healthiness. The consequences of our health are not confined to ourselves, but extend to our families and to society. A healthy thought exhibited, attracts, induces reflection, becomes incorporated, excites to the generation of more of its own kind, or, by the contemplation of it, influences conduct. A healthy laugh excites, through sympathy, healthy laughter. An act of courage or of virtue contemplated, reproduces itself through imitation or emulation. Scenes, sounds, and all things that influence the sensorium of man affect his health. The air he breathes, the food he eats, the water he drinks, the clothes he wears, the people he associates with, and every other thing with which he daily, hourly, momentarily comes in contact, is fraught with influence on the health of his body or mind.

Health is the reward of obedience to the physiological laws. The human body is a united republic of living atoms, whose individual life is expended in the maintenance of the integrity and life of the state; and as the old servants die in the service of the living state, new births take place; and as the bodies of the old are removed, the new servants assume their places and their functions. Particles of the material of the body are constantly being exhausted of their vitality by the bodily motions; and upon the timely removal of the dead, and replacement of it by newly-made living material, depends the health of the tissues of the body. This change of the material of the body may take place too quickly or too slowly for the health. This disposition to change is the spring of motion, not only in organic but also in inorganic bodies. Every form of matter with which we are acquainted is possessed of its appropriate amount of conservative, or self-preservative power. The attraction of cohesion maintains the particles of the rock in contact with a definite amount of force, and determines its durability. Vegetable bodies also have their various degrees of conservative power, from the frail violet, to the enduring oak, as likewise have animals, from the moth, to the man. But this power of bodies to conserve or maintain their integrity is affected by circumstances, and in proportion to their opposing force is, overcome by them. The philosophy of health is

to know the circumstances that are opposed to the conservation of our bodies, and the amount of force they exercise—to know the circumstances that conduce to our preservation, and the amount of their favourable influence—to live in connection with the one class, and to avoid the other. What canst thou receive in exchange for thy health, and be the gainer? Health, then is the normal action of the organs of the body, soundness of constitution, the reward of temperance, of order, of practical wisdom. The preservatives of health are pure air and water, wholesome food, regular habits, exercise proportioned to the constitutional requirements, cleanliness of person and of dwelling, agreeable associations, temperance, and peace of mind.

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## PHILOSOPHY OF DISEASE.

Disease, ailment, or uneasiness, is a condition of the organism in which its ordinary functions, digestion, respiration, circulation, assimilation, secretion, and excretion, are more or less disordered; a condition of the system in which matters foreign and offensive to the organic sense exist within it, or a condition of the system in which it is suffering from some injury, or destruction, effected to some tissue of some organ, or organs.

Disease is organic weakness or debility, morbid irritability, torpidity, or obstruction; disordered organic action, or impaired organic tissue. Disease is either functional or organic. Example—the skin is functionally diseased, when perspiration is suppressed, or when it is excessively cold and clammy, the skin is organically diseased, when it is in a state of ulceration. The one form of disease relates to the forces, the other to the material of the body. The consequences of the one are starvation and exhaustion, of the other destruction of the tissues of the body. Disease is not a thing to be killed, but a condition to be altered; not so much a foe to be extirpated, as a consequence to be prevented. Disease is the result of ignorance or of accident, of want of knowledge or of want of means. Disease is not a necessary consequence of life, but of violation of the laws of health, or of inattention to them. In proportion to man's knowledge of the relations of external things to

his own body and life, will be his power to live in harmony with them, and in proportion to the harmony of his conduct with the universal laws, will be the health and happiness of his being. While men live in opposition to one another, and act individually as having opposed interests, the causes of disease and misery must continue active among and upon them. When men shall perceive the falseness of their present social life, and shall unitedly endeavour to associate truly, most of the causes of disease and misery which now exist will be removed.

The causes of disease are, first, *personal*, and consist of those errors which relate to eating, drinking, exercise, cleanliness, habit, clothing, and mental emotion. Second, *social*, and consist of errors which relate to the arrangements of our houses, ventilation, sewerage, supply of water and light, means for bathing, washing, drying, warming, and cooking; time and means for associating and travelling. Third, *accidental*, and consist of the opposing circumstances, which are universal, as climate and season, accidental exposure to vicissitudes of weather, and to mechanical contusion.

The errors which relate to the first and second class of causes comprise quantity, quality, mixture, regularity, proportion, time, and place. These are subject to mitigation, or even total removal, by the voluntary efforts of men. The third class is inevitable, but the least productive of injurious consequences.

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## THE HUMAN BODY.

THE human body is to be regarded as a living machine, operating by the force of laws peculiar to itself. Although within this living machine some laws, analagous to the laws of mechanics, chemistry, &c., are found in operation, yet it is necessary to a right appreciation of the subject, that these laws be not regarded as such, but purely as vital, organic, and human.

This machine consists of *solids* and *fluids*, so disposed and arranged as to support each other, and produce a form suitable for the purposes of its life and destiny, and also to effect a reparation of its parts as they are worn by the actions they perform.

The solids are divided into bones, cartilages, ligaments, muscles and their tendons, nerves, vessels, glands, and membranes.

The fluids into nerve-fluid, blood, chyle, lymph, saliva, ear-wax, mucus secreted by the mucous membrane that lines the mouth, throat, and intestinal canal; gastric juice, secreted by the stomach; pancreatic juice, secreted by the sweetbread or pancreas; bile, by the liver; urine, by the kidneys; semen, by the organs of generation; liquor of the prostate gland; and that general serous fluid that moistens the surfaces of all internal cavities; synovia, or oil of the joints; tears, fat, and marrow.

The bones are the hardest and most solid portions of the human machine; they are covered with a membrane called periosteum; their chemical composition is said to be phosphate of lime and gelatine. To the former constituent they owe their hardness.

Cartilages are solid, smooth, white, elastic substances which pad the ends of bones, allow of their free and easy movement upon each other, and prevent breakage, and in some measure deformity, by their elasticity. Sometimes they even act as bones, as in the case of the cartilages of the ribs. They are covered with a membrane like that which covers the bones. When cartilages suffer injury it gives rise to *stiff joints*, and other diseases common to those parts.

Ligaments are white, tough, flexible, slightly elastic bodies; they exist mostly in the form of bands, and serve to bind parts together and keep each particular part in its proper place; they are made up of fibrous layers, the strongest of which run lengthwise.

Muscle is that portion of the body generally called flesh. It is highly elastic, consisting of fine fleshy fibres, which, when acting, contract like india rubber, and become shorter. These fine fibres are united together into cords or ropes of various sizes, and, by their tendons or terminations, are attached to bones. If one end of a muscle be attached to a fixed part, and the other to a movable one, when its fibres contract, the movable part will be pulled towards that which is fixed. If both parts to which the extremities of a muscle are attached be movable, by the muscular contraction they will be drawn towards each other. If a muscle be hollow, and contain a fluid, when it contracts it will press upon and endeavour to expel its contents. Such a muscle is the heart, and, in some measure, the stomach and bladder. If the fibres of a

muscle return upon themselves in the form of a ring, when they contract they will diminish the area within that circumference, making the circle narrower. Such muscles are employed to close cavities, and are called *sphincters*, because of the office they perform.

Tendons are the terminations of the fleshy muscular fibres, than which they are smaller, harder, and drier, and are not capable of similar contraction, therefore are more convenient for firmness of insertion, and for the direction of motion.

Vessels are the tubes or canals through which fluids move; they are formed of membrane of varied fineness, rolled up in the form of a hollow cylinder. According to the size of the vessel is the thickness or thinness of its sides.

Vessels are divided into arteries, veins, absorbents, secretory vessels, and excretory ducts.

*Artery.*—This kind of vessel originates from the heart, and contains bright red blood, which it conveys from that organ to the surface of the body, and to every part, even to the heart itself, and to the tip of the extremities. As the arteries proceed from the heart, they diminish in diameter till they become finer than a hair, at which condition they are called arterial capillaries. In living animals they beat or have a pulse, which corresponds to the motions of the heart. Their coats are whitish, and stronger generally than those of the veins.

*Veins.*—These contain blue or venous blood, which flows from the extremities and surface of the body towards the heart; their coats are thinner and more transparent than those of the arteries, and therefore they appear of a bluish colour, the blood shining through them. In many places they have *valves* within them, small portions of membraneous substance fixed to their interior surfaces, so contrived that they open towards the heart and shut the contrary way; this contrivance prevents the blood flowing to and fro in them.

*Absorbent vessels.*—So called because they absorb or take up fluids. They are divided into lymphatics and lacteals (from *lymph*, water, and *lac*, milk). They are similar in appearance, only they have different origins, and are used for different purposes, whence they derive their names.

The lymphatics arise from the surface of the body, and all cavities or cells of the cellular membrane, the surfaces of the intestines, of the urine and gall bladders, of the ventricles of the

brain, and all other parts, and carry a pellucid liquor towards the *receptaculum chyli* (receptacle of the chyle), and thoracic duct, in which, like the lacteals, they all terminate. The lymphatics are the general absorbents of the system.

The lacteals are the special absorbents of the chyle, a milky fluid formed from the aliment. By digestion chyme is formed from the food, and from the chyme is elaborated, by the lacteals, the chyle, or the new colourless blood of the body, destined to become, by assimilation, flesh and bone, &c.

Secretory vessels are those minute tubes, found in the different organs of secretion, whose office is to separate, strain off, or elaborate from the general blood mass, the various secretions of the system, as the saliva, bile, the tears, &c.

Excretory vessels are those tubes or ducts which belong to the various organs of excretion; their office is to carry off the fluids filtered or separated from the blood, as no longer of any service to it, and to convey them either to their appropriate receptacles, where some of them are deposited, or to discharge them from the body.

The glands are simple or complex bodies. The simple glandular follicle is a bottle-shaped membraneous sack, supplied with nerves and blood-vessels, and apparently possessed of a contractile tissue, by which they are enabled to squeeze out their peculiar fluids. There are vast numbers of these glandular bodies throughout the body. Their anatomical structures appear alike, but the various offices they perform are widely different. Some of them secrete the mucus which everywhere lubricates the mucus membrane, and imbeds and protects its delicate nerves and vessels. Others, situated on the surface of the body, secrete the unctuous matter which oils the skin. Of these sabacious follicles there are said to be not less than a hundred and twenty millions. Others, situated in the interior of the ears, secrete the ear-wax.

The glands are often divided into the *conglobate* or simple, and the *conglomerate* or complex. These latter consist of an aggregation of the former, such as the kidneys and the liver, which latter is the largest gland, and almost the largest organ in the body.

*Membrane.*—This is a web, or rather lamina, formed of a very thin substance, appearing like bladder; its thickness bears a very small proportion to its length and breadth. Most of the membranes we see in the animal body are composed of, and resolvable

into, thinner ones. 1*st*. There is the fibrous membrane which everywhere surrounds the bones, the cartilages, and tendons, lines the spinal canal, the cavity of the skull, &c. 2*d*. The serous, which lines the closed cavities, such as the thorax and abdomen, and surrounds all the organs of those cavities. 3*d*. The membrane, which covers the whole external surface of the body like a sack, and passing over the lips and up the nostrils, lines the mouth, nasal cavities, throat, windpipe, lungs, meat-pipe, stomach, alimentary tube, and every other internal cavity which has an opening outward, or which, by a mouth or canal, communicates with the external world. The portion of this membrane which covers the external surface is called the *skin*, that lining the internal cavities, the *mucous membrane*.

Fibre is a small thread or filament, whose breadth and thickness bear a very small proportion to its length. The least fibre of all is too minute to be perceived by our senses. The fibres we can perceive are so many bundles, composed of single fibres and smaller bundles of fibres tied together.

Such are the solids of the human body, simply considered, and being orderly disposed and united by means of the cellular membrane, form the various organs of the system.

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## THE NERVOUS SYSTEM.

In the human body, two general classes of functions are active—the one is concerned in the general sustenance of the body—the other, in providing the means of sustenance—the one, in building up, repairing, and preserving the body—the other, in providing building-materials, and protecting the body from unpleasant, dangerous, and inimical objects and influences. These functions are performed by appropriate organs, and these organs are endowed with energy to perform their respective functions by the general nervous system.

The nervous system is divided into two parts—the nerves of organic life, and the nerves of animal life or cerebro-spinal nerves. The nerves present the appearance of fine white cords, of various thicknesses; but in reality they are tubes containing a fluid, with

the precise nature of which men are unacquainted. Some physiologists think it is identical with the electric fluid. The idea of the nerve-tubes containing a fluid is disputed by some. An eminent German physiologist thinks he has satisfactorily demonstrated its existence. I think that analogy is sufficient to prove it. For this fact prevails throughout all nature—the more fluid the substance, the greater its activity and power. It is not, however, necessary that this fluid should be demonstrated to sight and touch, in order for its existence to be satisfactorily proved.

We can neither see nor touch electricity, but it can touch us, and excite in us feeling; we can be acted upon, and materially influenced by electricity, but we cannot, by any bodily effort, act upon and materially influence it; we are subject to it; we may avoid the lightning's stroke, but cannot resist it. Electricity is the material moving agent of the universe—nothing can resist it—nothing is exempt from its influence—yet we can neither see it, touch it, weigh it, nor measure it, as we can ordinary matter; truly it is the material master and wonder of the world!

Similar relations exist between the other materials of the human body and the nerve-fluid; it has power to move them, they have no power to move it; if it move not, nothing in the economy is moved. Obstruction will excite it, poison irritate it—thus it may be thrown into violent commotion, which is always attended by similar commotion of the blood, which is its immediate servant or agent by which it endeavours to effect its own relief—by which it dissolves useless and offensive materials, floats them towards their proper outlets, and gives them up to the police of the economy—by which it receives additions of new materials from the food and air, from which it composes special materials suited to its special wants, and conveys and deposits them in their proper places.

In the nervous system is decidedly resident the life and intelligence of the animal. The primary structure of the animal economy is nervous; this nucleus of the human body may, with some propriety, be considered as a species of brain, and is the grand centre which presides over all the functions concerned in the development and growth of the body, and the general functions of nutrition during life. "In close connection with this central brain, and scarcely second to it in order of time, is produced the rudiment of a heart, with a few of its principal blood-vessels, which

gradually extend and enlarge, and become more complex;" with each new arterial branch, a new branch of nerve is given off—thus the body, like a double tree, one of nerve, and one of blood-vessel, simultaneously growing, expands and developes, till it has acquired the human form.

Next to the rudimentary heart, is developed in vertebrated animals, the commencement of the spinal cord, with the rudiments of its attending vertebral column or inclosing wall, evincing that nerve-structure is necessary to the development of animal tissue, and the basis of independent animal existence. At the top of the spinal column presently appears the rudimentary cerebellum and cerebrum—first, the organic; then the sentient, motor, animal, and passionate; and, finally, the intellectual portion of the nervous system—the upper, richer, and more complex, in this case, as in all others throughout nature, resting for support upon the lower, humbler, and more simple. This system we must regard as the source whence all energy, and power of action, in connection with the animal economy is derived, and the varied phenomena of life maintained. The circulation of the blood, the action of the heart and lungs, and of every other organ of the body, is dependent upon the nerve-force; and excitement and irritations of the nervous system, are immediately indicated by the condition of the pulse, the beating of the heart, and the manner of breathing. In the nervous system, then, resides organic force, sensation, and intelligence—the functional object of the first being the conservation of the body; of the second, the enjoyment of life and the perpetuation of the species; of the third, the exercise of will, the acquirement of knowledge, the exercise of reason, the determination of the conduct of life, and the employment of the materials of the world.

The first portion of the nervous system is called the ganglionic, the great sympathetic, or the nerves of organic life; this is the simplest form of nervous organization, and is common to all animal existences. It presides over the functions of nutrition and assimilation, consequently its branches are directly distributed to the organs composing the apparatus by which these functions are performed—the stomach, intestines, liver, absorbent vessels and arteries; and in connection with these latter to every part of the animal body, in order that its growth may be effected and its existence maintained. This system of nerves has its centre in

the centre of the body, in the upper part of the abdominal cavity, at the root of the diaphragm, nearly behind the pit of the stomach. It consists of several parts:—1. Two semilunar bodies, about an inch long, and half an inch broad, lying, one on the right, the other on the left side of the backbone. These are called the *semilunar ganglions*, they are closely connected one with the other by many large branches, which form what is called the *solor plexus*. The two semilunar ganglions, united by the solor plexus, constitute the grand centre of all the ganglions and plexuses of organic life. Surrounding this great centre, and united to it by cords and plexuses, are numerous special centres, which subordinately preside over particular functions. These, and the ganglions that range along the two sides of the backbone, are much smaller than the semilunar ganglions, and are of an irregular ovate form.

These ganglions of organic life are, in the descriptions of anatomy, divided into two orders, called the central and peripheral or limiting ganglions. The central are those which are more deeply seated among the viscera, and which are supposed to preside, generally and specially, over the functions concerned in sustaining and nourishing the body; the peripheral or limiting, are those which form the two ranges on the sides of the spinal column, and have been supposed to be more particularly appropriated to the general sympathies of the internal system, and are accordingly called the sympathetic nerves. These sympathetic nerves connect the various parts of the body one with the other, establishing free and sympathetic communion, combining the various portions of the republic body into one grand whole, in which suffering in one member is attended by suffering through sympathy in the other, the sympathetic suffering being proportionate in extent to the suffering of the individual member, and his importance in the economy. If any portion of this system of nerves of organic life be destroyed, or injured to a certain extent, the portion of the body supplied by such injured nerves, forthwith assumes the condition of *gangrene*, becomes utterly lifeless, and in general is removed from the constitution by nature's own amputatory process. There are three orders of the nerves of organic life. First, those that enter into the texture of the blood-vessels, and go with them in all their ramifications to their minutest terminations in the several tissues, and preside over the

functions of absorption, circulation, secretion, structure, &c. Second, those which go to the contractile tissue or the muscles of involuntary motion, and convey to them their appropriate stimulus. Third, those that are distributed to the organs, as the nerves of organic sensation, and which convey to the special centres, and, if necessary, to the common centres, the impressions made upon the organs.

The cerebro-spinal nerves, called also the nerves of animal life and of voluntary motion, are those which pass off in pairs from the spine (backbone). These are the nerves of external relation, and are not absolutely necessary to the maintenance of animal life as such; but to the acquisition of animal necessaries, communication with external things, and the protection of the body from external influences. They are distributed to the muscles of voluntary motion and to the skin, and enable the animal to perform voluntary motions and experience animal sensations. The spinal marrow, which is lodged in the hollow of the backbone, is composed of two kinds of nerve substance, white and gray, the gray being situated internally, the white externally. It is naturally divided into four columns, or a right and left pair, which pairs are exactly alike, and correspond to the two halves of the body, and are so far independent of each other that the one may be paralyzed whilst the other healthily performs its functions. These columns of nervous matter are composed of filaments or fine threads; each pair consists of a back and a front column. To compose a spinal nerve, a part of the filaments which compose the back and the front column unite; on the portion of the filaments coming from the back column is formed a small ganglion, or knot, just before it unites with its fellow coming from the front. The filaments which rise from the back column are the nerves of animal sensation, some few of which are distributed to the muscles of voluntary motion, and endow those organs with a small degree of animal sensibility, by which the mind is informed of the action of the muscles in obedience to the will, and enabled to regulate the extent of the action. The rest proceed to the surface of the body, and by endowing the skin with a high degree of sensibility, constitute it a general organ of feeling, which is the fundamental animal faculty of external relation.

The filaments which arise from the front columns of the spinal marrow are the nerves of motion, or excito-motor nerves. These

are distributed to the muscles of voluntary motion, convey to them the decisions of the will, and cause the muscular fibres to contract in accordance with voluntary determination in the performance of all voluntary motion. If, therefore, the filaments arising from the back portion of the spinal marrow be severed from their source, the mind is no longer sensible of impressions in the parts to which such severed filaments are distributed; but the power of voluntary motion in such parts remains. But if the filaments from the front columns of the spinal marrow be separated from their centre, the power of voluntary motion of the parts to which they are distributed, will be lost, while their sensibility will remain.

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## MEDULLA OBLONGATA.

At the top of the spinal marrow, just within the skull, attaching the spinal marrow to the base of the brain, is situated a bulb of nervous matter, about one inch in length and two-thirds of an inch in diameter; this is called the medulla oblongata, and instead of being composed of four columns, like the spinal marrow, it is composed of six, two front, two back, and two side columns. From the sides of this bulb arise several pairs of nerves, and from its top all the other parts within the cranium. The medulla oblongata is supposed to be the grand junction of nervous communication and association, and the starting-point whence the decisions of the will proceed. From its top proceed, through small openings from the skull, the nerves of special sense, and terminate in ramifications in the eye, the ear, the nose, the tongue, &c. Nearly at the top of the medulla oblongata arises the pneumogastric, or the lungs and stomach nerve. It issues from the base of the skull, through an opening, in company with another nerve called the spinal accessory; this latter is distributed to the muscles of the neck concerned in moving the breast and collar bones, the shoulder blade, and in drawing back the head and shoulders. The pneumogastric nerve has been the subject of more speculation and experiment, discussion and controversy, among physiologists, than perhaps any other portion of the human system. Having issued from the base of the skull, by numerous

branches, it forms connections and plexuses with almost every nerve in the region of the throat and neck, and thoracic cavity, to such an extent that it has been called the middle sympathetic. It sends branches to the pharynx, the top of the meat-pipe, and to the meat-pipe itself; to the larynx, the organ of the voice, and to the windpipe in its whole extent, and to its branches the bronchial tubes. It connects itself with the organic ganglions in the neck, and with the plexuses for the lungs, and some of its twigs extend to the solar plexus, and to the plexus of the liver, spleen, &c.; but its main body descends to the stomach, and is distributed over that organ, interweaving and uniting extensively with the nerves which come from the solar plexus, the great centre of organic life. In its origin it appears to be a nerve of sensation and motion, and by its subsequent connections to assume the character of an animo-organic nerve; being concerned most probably in the acts of coughing and vomiting, and of communicating to the centre of animal perception, knowledge of the wants of the organism, as indicated by hunger, thirst, and the need for air; and by which also the stomach, and the lungs, and the brain are brought into more direct and powerful sympathy with each other; so that when the stomach is irritated or sick, the brain and lungs also are sick or irritated; and this close sympathy and connection of parts, is of the highest importance to be considered by the physician. Another nerve, called the gloso-pharyngeal, or tongue and pharynx nerve, which arises at or about the same place as the pneumogastric, and passes out of the skull along with it, has been by some thought to form a part of that nerve, and its precise character is even now a matter of dispute; so also with respect to some others, which, as they are not subjects of much interest to the ordinary reader, nor a thorough knowledge of them necessary to the study of medicine, I shall pass over in silence. There is one other, however, which, on account of its physiological interest, I shall briefly mention; it is called the trifacial nerve, by some it has been called the sympathetic nerve of the head. It has been the subject of much physiological research, speculation, and experiment. It is distributed to the face, and all the organs seen in that index to the human, and, I may say, to the animal character. Branches of this nerve go to the eye, the ear, and the nose, and every tooth receives from it a branch; it connects all these parts sympathetically, and this explains how it is that the irritated

nerve of a tooth is able to produce such extensive pain, affecting the eye, ear, face, and head. This nerve is of the highest importance to those of special sense, so much so that from a diseased condition of this nerve a person may become partially, or even wholly, blind, deaf, or smell-less. There is another interesting view presented, by some physiologists, of the trifacial nerve, which is, that this nerve is peculiarly the cerebral organ of animal instinct. It is said that in the vertebrated animals the development of animal instinct appears to be in a direct ratio with the trifacial, and that the brain and the trifacial are always developed in an inverse ratio, and that the developement of the trifacial and the instinctive faculties always bear a precise relation to each other. "Man," say they, "is governed by reason and not by instinct; and in him the trifacial nerve, in comparison with the other parts of the nervous system, is reduced to its minimum of existence. Whilst in the seal and beaver, among the mammalia, the instinctive faculties are at their highest pitch of development; in these animals the brain is reduced to a state of atrophy, whilst the trifacial is carried to an enormous extent of development. In the wasp, the bee, and the spider, and especially in the bee, instinct is carried to its highest perfection. And here the brain is wholly wanting, the gasserian ganglion being the predominating part of the nervous system in all the invertebrata; and in the bee this organ is carried to its highest point of complexity and organization."

All the parts of the nervous system already described may be developed, and all the functions immediately essential to animal and organic life may be performed without the brain. "Instances are on record of human beings who were entirely destitute of the proper brain, and in whom the two gasserian ganglions approached each other and became confounded in one general mass; and with this the olfactory, auditory, optic, and other nerves of the head were connected, and during the life of the individuals, the functions of smell, vision, hearing, and taste were perfect. But these are monstrosities of nature, and fortunately are of rare occurrence. They, however, serve to demonstrate the relations and dependencies of parts, and sometimes teach us important physiological truths which it would be difficult, if not impossible, for us to ascertain in any other way."

# THE BRAIN.

THE human brain proper, is that large mass of nervous matter contained within the cavity of the skull. It is divided into the cerebellum and cerebrum, the former occupying the back portion of the base of the skull, the latter the whole of the upper and front portion. In infancy the brain is exceedingly soft, being about the consistence of the white of egg. In this condition it is incapable of performing the ordinary functions which, later in life, it is called upon to perform. Being an organ of external relation, its active functions are not necessary to infant life, whose external relations are confined for some time to the maternal breast. Each child, as it comes in contact with the things of the external world, receives its own impressions and ideas of them; and whilst undergoing this process of mental impression and experience, the brain gradually becomes more and more consistent, and by degrees assumes the form of determinate structure and arrangement. It is not, however, till about the seventh year of life, that the brain attains that degree of consistency and completeness of development, which fit it for vigorous functional exercise; and even at this age, the employment of the brain in long-continued mental operations, is neither wise nor safe.

To the brain belong the feelings of love and friendship, courage and aggression, contentment and acquisitiveness, cunning and contrivance, self-respect and desire for respect, prudence and self-control. The sentiments of charity, veneration, and fortitude, justice, hope, and admiration, refinement, wit, and imitation. The faculties of memory, by which we take cognizance of, and become intimately acquainted with, external existences, their character and qualities, their form, size, weight, and colour, the positions they occupy in relation to each other and to ourselves, their number and arrangement. The faculties by which we remember events, and the times at which they occurred, by which we arrange sounds, in order to express our feelings, and contrive words and sentences by which to communicate our thoughts; and finally, the faculties by which we analyze and compare our impressions of things and of ourselves, places, differences, and similarities; establish identities, institute illustrations, and classify sequences into general principles; by which we perceive the relation between

cause and effect, discover the causes of events, draw logical conclusions, and arrive at sound judgments.

It is through the agency of the brain and its appendages, the cerebro-spinal nerves, the nerves of special sense, &c., that we become acquainted with the natures of all external things, through which we are acted upon by them, and through which we act upon them. It is through the agency of the organic nerves that we become acquainted with the condition of our own body, with regard to the ease and healthiness of its several parts, and the causes of irritation and disease that act upon it, and the amount of disease thereby produced. It is through the agency of the brain and its appendages, that we decide upon the agreeableness or disagreeableness of things affecting our animal and human life —welfare. And through the agency of the nerves of organic life, that decisions are arrived at in respect to the agreeableness, or disagreeableness of the operations of things which have entered the sphere of organic life, and through their agency that organic reaction is excited, and the various symptoms of disease exhibited. But these two systems of nerves are so intimately connected, so entirely united, and so sympathetically affected, that their actions may be considered as co-operative. It is in the nervous system as a whole, that the pleasures of health are experienced, and the distress of disease is suffered. And since all the manifestations of life depend upon the presence and activity of this system—it being the prime mover of all bodily motions, and the prime sufferer of all bodily affections—it follows, as a logical consequence, that in all the operations of the causes that produce disease, this must be the power primarily affected; for if no other power can act independent of this, then must this power be the first to act, and if the other powers of the body cannot be impressed or affected but through this, then must this be the power primarily affected. But these affections are produced in two ways—physically and mentally—through the organism, or through the affections and perceptions. By a bruise or a burn, hunger or thirst, or the introduction of poison into the system, or by disappointment, anxiety, fear, grief, or despair. The effects produced upon the constitution are common to both agencies, and in their nature alike—the pain and disease caused to some systems by the loss of a dear friend, being equal to that caused by the loss of a limb; and the ease, comfort, and actual benefit derived by patients from sympathy,

the company of friends, the sight of agreeable objects, the hearing of agreeable sounds, and the possession of agreeable things, being as great, and even greater in many cases, than that derived from the administration of the best medicaments. It is the great error of our present medical practice, that each part of the system is regarded as a separate machine, alone diseased, alone to be repaired—the disease originating where it is found—the remedies to be applied only to the locality of the seat of the disease; whereas the truth is often the contrary of this, indirect medications being often of as much importance as direct ones. Man as a whole, and as a living thing, not man as a bundle of inanimate parts bound together by unfeeling bands, is the subject for the physician's skill. Neither is the human body a vase holding so many chemical constituents in solution, into which another can be poured, and a certain combination or effect be produced.

The human body has its own appropriate vital laws, and the nervous system is the press through which they are published, the magistrate by which they are enforced, and the police by which their violators are detected. Those who would live in peace and harmony must obey them, and those who would benefit the constitution or community, who would put down riotous fevers, or heal cankerous sores, must school their exertions in strict accordance with them, or they will add a brand to the fire, or doubly confound confusion.

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## TEMPERAMENT.

A VARIETY of constitution is decided in individuals by the relative proportions of nervous, vascular, muscular, and membraneous substance developed in the constitution. It is seldom that any one of these systems predominates excessively; there is more generally a predominant development of two of these over the third and fourth, and frequently an almost equal proportion or balance of three or of the whole. These peculiarities of development, or mixtures of temperament, sometimes alter considerably in their proportions, in the same individual, between childhood and age.

Temperament always exercises considerable influence on the character of individuals, upon the general health, upon the nature of the diseases to which they are most liable, and upon the variety of symptoms exhibited in connection with them.

### THE NERVOUS TEMPERAMENT.

The nervous temperament is the most excitable and sensitive of all the temperaments. The whole nervous system, including the brain, is predominantly active, and the mental manifestations are proportionately vivacious. This temperament is distinguished by fine silky hair, pale complexion, thin skin, small muscles, small bones, and sharp and delicate features. Children of this temperament are often prodigies, always precocious. They are very excitable, and when in delicate health from teething, or other slight causes of disorder, from which they always suffer more than others, they are exceedingly irritable. Parents have more trouble to rear children of this temperament than of any other. Children whose temperament is a mixture of the nervous and lymphatic, are more liable to be affected with *rickets* and scrofulous diseases than others, when exposed to the causes which produce them. Young people with a predominance of the nervous in connection with the sanguine, are more liable to pulmonary consumption than others. The health of persons of the nervous temperament, under similar circumstances, is always more delicate than that of others; and it requires less medicine to produce an equal temporary effect upon those of this temperament, than upon others. To delicate children of this temperament, fresh air, physical exercise, sea-bathing or coast residence, with milk, farinaceous and fruit diet, are of great advantage.

### THE SANGUINE TEMPERAMENT.

Next to the nervous temperament, the sanguine is the most excitable, quick, and active. In persons of this temperament, the vascular (blood) system is large and full. Their passions are sudden and intense, so are their diseases, but not long enduring. This temperament is distinguished by a well-defined form, moderate plumpness of person, tolerable firmness of flesh, chestnut hair, florid complexion, animated countenance, blue and sparkling eyes, lively and boisterous spirits. Persons of this temperament naturally speak, sing, and laugh loud; are open and free in their manners—love field sports and physical excitement —are generally enthusiastic, and come to decisions quickly— "they are hot in love and war."

Fevers, inflammations, and cutaneous eruptions, are the forms of disease to which they are most generally subject, and they are more subject than others to aneurisms of the heart and blood-vessels. Poets, painters, authors, and artists, in general possess a mixture of the nervous and sanguine temperaments. Critics and editors of newspapers, mixtures of the nervous and bilious.

### BILIOUS OR MUSCULAR TEMPERAMENT.

This temperament is less lively and active, but more vigorous and enduring than the preceding. It is characterized by dark or black hair, dark skin, moderate fulness and much firmness of flesh, with absence of obesity. Features decided, countenance strongly marked, and almost unwearied activity of body and brain. Persons of this temperament are generally very healthy—the diseases to which they are subject are generally of a chronic character, seldom sudden and violent. The tissues of the body do not waste so quickly in persons possessed of this temperament as in those of the preceding. They are chiefly subject to diseases of the stomach and liver—indigestion, costiveness, liver-complaint, gout, asthma, and sometimes dropsy; persons in whom predominates this temperament in connection with the nervous, are often melancholic or hypochondriac. The temperament of naval heroes, great voyagers, statesmen and warriors, hard-working, hard-living, long-enduring mechanics and artisans, sailors and soldiers—are generally bilious-nervous or bilious-sanguine.

### THE LYMPHATIC TEMPERAMENT

Is the most languid, sluggish, and slow; most disposed to regard ease as enjoyment, and exercise as toil, of all the temperaments. Body and brain are alike moved with an effort. It is distinguished by a fair, round, plump body, softness of flesh, fulness of cellular tissue, and depositions of adipose matter. The hair is usually light and lank, the skin pale, and the countenance heavy. Youths possessed of this temperament are very imobile and generally subjects of laughter to their companions, on account of their dulness and clumsiness. They make good publicans and porters, on account of their indisposition to stir abroad, and their general easiness. They are generally good eaters and drinkers;

stimulants have less effect upon them than upon others, and they need them more to rouse them to action; they are generally healthy, but often die suddenly; they seem incapable of much exertion, or the endurance of much suffering. Apoplexy and dropsy are diseases they are most likely to suffer from. A combination of this temperament with the nervous is often possessed by philosophers and men of remarkable talents; many people ridicule stout persons when they speak of being nervous, but such is often actually the case. The lymphatic gives to the person *embonpoint*, and the nervous activity; in such cases the individuals have fits of industry and fits of idleness; such men are not to be much depended on; they are frequently very selfish and inconsiderate of others. Of course, all that is said of temperament is said relatively, such is the tendency that the temperament impresses upon the constitution, but the brain reacts upon the temperament according to its particular organization or development; a subject very interesting, and not altogether irrelevant to our present subject, but one, through want of space, we must decline proceeding with beyond a few brief remarks.

By Gall's system of phrenology, the skull, the external envelope of the brain, is mapped out into regions and localities, in which situations, are found depressions, or protuberances in comparison with their neighbouring parts, or otherwise the parts are even with each other, like the surface of an egg. Upon the general evenness, and the local or individual depressions and protuberances found on the surface of the skull, is founded by observation a knowledge of the size and nature of the respective faculties of the mind; this science is termed phrenology: the study of it is interesting, and of importance to all. The brain seems to be a secretory organ, the nervous fluid, *the secretion* which is communicated to, and expended upon the other organs in the act of stimulating them to activity, and which is also used in the structure and development of the brain itself, as the blood is used in the structure of the heart, the great organ of its circulation and management. This fluid is probably used and renewed as the blood is, though of a finer character than the blood, from which, it derives materials for its own manufacture. The quantity of blood distributed to the brain, cannot be for the purpose of its nutrition merely; but must also be for the purpose of supplying material for the secretion of its peculiar fluid: when the stomach is active, its arteries are

charged with an increased supply of blood, and this is precisely the case with respect to the brain; besides, how else can weakness or debility of the nervous system be accounted for, but by expenditure of the nervous energy or fluid?

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## THE BLOOD.

THE blood is the body in solution, circulating—the body's parent, the body's builder, the body's servant, nurse, and former self. It is a vital, a living thing, possessed of interests, rights, integrity, and feeling. It is the living bricks and mortar, timber and iron, paint and glass, of the house of man. It is full of a special purpose, and knows and understands nothing but the accomplishment of it; this purpose is the building, the repair, the preservation of the body in a condition of health and ease suited to the purposes of vigorous life. The blood of the body exists in three conditions, white infancy in the lacteals, red maturity in the arteries, and blue age in the veins. It is constantly passing from the centre of the body to its surface, and from the surface to its centre. At the starting stages, and along the journey, it is constantly receiving and delivering passengers: at the heart, it receives infant passengers from the lacteals, fresh from the organs of digestion, and aged ones, worn out in the service of the body, from the veins, fresh from the tissues; these travel together to the lungs, where they get a breath of vital air, and become invigorated and matured; or if unfit for new and stronger life, are exhaled into the air within the cells of the lungs, which is waiting to receive them, and convey them to the world without, to seek a less exalted service in the vegetable kingdom And whilst these unworthy and worn out servants are leaving their places in the blood, it is receiving into their places, hot and strong ones from the lungs, new made from the air; and thus reloaded with youth, and strength, and fiery life, it starts upon its return journey to the heart, its regulating master, and strong-handed guard, that keeps its time, and measures its pace. Seventy strokes a minute, night and day, for seventy years, the sleepless watcher willingly performs; in regular quantity, and with steady pace, the bright

red, lively blood, pursues its willing way, from its watchful guardian, along its great high road (the aorta), and as it meets the branching roads (the arteries), which open with instinct desire, and press it on its path; it travels through them with an easy, happy roll, leaving its passengers at their destined homes, where they are recognized and established, and which they recognize and claim. Its mission executed, its outward journey done, not idle and empty does it travel in; new passengers from the outward world, candidates for employment in the living frame, through the absorbent (lymphatics) come pouring in; these to the heart, along with worn-out servants, and new-born infant ones, it steadily conveys; whence again it resumes its ceaseless journey, long as the life hath need of its service. The quantity of blood contained in the body of an ordinary sized man, is from three to four gallons; of this from one-fourth to one-third is supposed to be contained in the arteries, and from two-thirds to three-fourths in the veins; a large proportion of the whole being contained in the arterial and venous capillary vessels. It is supposed, that by every contraction of the left ventricle of the heart, it passes into the aorta from one to two ounces of blood—and that a quantity equal to the whole volume of blood in the body, passes through the heart as often as once in three minutes. In healthy adults, in the prime of life, the heart and *pulse* beat from 70 to 75 times in a minute; in a new-born child, about 140; at one year old, 124; at two years, 110; at three years, about 94 times; and in the decline of life, the beating of the heart diminishes in frequency, till in old age it does not usually exceed 60 beats in a minute. The frequency of the pulse varies in different individuals, and in the same individuals at different times, under the influences of temperament, diet, habit, passion, disease, &c. The blood varies in respect of quantity and quality in the system, and by these variations the health of the individual is immensely influenced. If the quantity of blood in the system be in excess of a proper proportion (which may arise from overfeeding, idleness, or morbid absorption), there exists a tendency to special or general congestion, inflammation, and sudden death. On the other hand, if the quantity be minus or deficient of the due proportion, the functional energy of the various organs is diminished, and the conservative power of health and life impaired. From the blood is secreted urine by the kidneys, bile by the

liver, perspiration by the skin, mucus by the mucous membrane, skin-oil by the sebaceous follicles, tears by the lachrymal glands, &c. When these secretions are interrupted, especially any of the three first, the blood quickly becomes impure, from the retention within it, of those materials which are usually eliminated from it, in the form of these excretory fluids; such impurity occasions irritations of the nervous system, the guardian of the integrity of the circulation and life forces; pain, oppression, uneasiness, headache, fever, or inflammation ensues, which can only be completely removed by the restoration and promotion of those functions, the suppression of which gave rise to the impurity. Excessive evacuations, such as occur in ague, diarrhœa, and diabetes, diminish the quantity of blood in the system, as well as destroy the normal proportions and qualities of the serum and crasamentum, and reduce the vitality of the remaining mass. Bleeding obviously produces similar effects. When the blood is first taken from the living healthy vessels, and examined under a microscope, it is found to consist of a fluid, containing innumerable minute globules, which are surrounded by a kind of pellicle or tunic of coloured matter. When allowed to stand for a short time, the blood coagulates, a portion of it gathers into a thick *clot*, called the *crasamentum;* and the remaining portion is a thin transparent fluid, almost colourless, of a saltish taste, called *serum*. If the clot be freely washed in cold water, its colouring matter is removed, it becomes white, and has a fibrous appearance; those who have analyzed the blood have called this *fibrin*. If a healthy robust man be copiously bled, and afterwards several smaller quantities of blood be taken from him, at short intervals, each successive portion will lose its vitality sooner than the preceding one, as well as show a diminished proportion of the vitalized particles or red globules; and the effect of these abstractions will be to reduce the nervous energy and general strength of the individual. Dyspepsia or indigestion, and starvation, are attended with precisely similar effects, though produced much more slowly. Hence the nervous debility and irritability resulting from such affections. From a consideration of these facts, we clearly perceive that there is a normal (natural) quantity and quality of blood to be maintained in every system, in order to secure its steady, vigorous, nervous, and functional action; and as the integrity of the

nerve-power is dependent upon the blood, and the integrity of the blood upon the integrity of the nerve-power, which imparts functional energy to the digestive organs, the lungs, kidneys, liver, skin, and every other organ of the body employed in the maintenance of the operations of life, it is obvious that all efforts to restore the integrity of either, or both (in which health consists), must be made in harmony with their natures and laws, and mutual relations and dependencies. The vitality of the blood is supposed to reside almost wholly in the red corpuscles or globules. These are minute, flattened, disc-like bodies, resembling thick round-edged coins; in man they have an average diameter of 1·3200ths of an inch, and a thickness of 1·12,400ths of an inch: they form a little more than half the weight of the blood as it is drawn from the body; when dried, they form about 13 per cent. of the whole weight of the newly-drawn blood. The fluid of the corpuscles contains the colouring matter of the blood (hematin), particles of fat, a colourless substance (globulin), which belongs to the same class of chemical compounds as gluten, albumen, and fibrin; and a small portion of saline matter. Into the blood-mass countless absorbent vessels are constantly bringing new liquids, whilst others are as constantly removing from it portions of its constituents; the thin husk which envelopes the corpuscles allows some of the newly received substances to pass freely into the interior, while others of them it in a great measure excludes. Each corpuscle is in fact a minute microcosm, within which changes chemical, and perhaps vital, take place, independent, in a sense, of all around it; this substance being admitted, and that refused a passage through its encircling membrane, as its discriminating power perceives their suitableness or unsuitableness to its purpose.

All parts of the body appear to be endowed with a similar discriminating power of selecting, from the universally nourishing blood, those portions which are specially required for the formation of their own substance, or the discharge of their special functions.

The blood of the human body has been subjected to chemical analysis, and is found to vary slightly on account of age, sex, state of health, and constitution of the individual. The following, however, is given as the average composition of the blood. It, and some other tables I shall select, are taken from *The*

*Chemistry of Common Life*, by J. F. W. Johnston, M.A., which excellent work I recommend to every one who wishes to become acquainted with the subject it treats:—

The blood, chemically considered, consists of 78½ per cent. of water, which may be evaporated from it by a heat a little exceeding that of boiling water. The solid dry matter consists essentially of the same substances as the several varieties of animal and vegetable food consumed by man. The proportions are—fibrin, albumen, gelatine, &c., 92 per cent.; fat, a little sugar, and a trace of starch, 3 per cent.; saline, or mineral matter (one half of it common salt), 5 per cent.

The blood, in a healthy, full-grown average man, weighs nearly 20 lbs., and consists very nearly of water, 15⅔ lbs.; dry solid matter, 4⅓ lbs. = 20 lbs. And this dry solid matter contains, fibrin, albumen, &c, 4 lbs.; fat, and a little sugar, ⅔ lb.; mineral matter, about ⅓ lb. = 4⅓ lbs. By this clear statement, we perceive that the whole amount of mineral matter contained in the whole blood of a full-grown average man, is no more than one-ninth of a pound, the greatest half (57 per cent.) of which is common salt; the remaining 43 per cent. of the one-ninth of a pound, consisting of phosphorus, sulphur, iron, &c. Can there possibly be a stronger argument adduced, except that of experience, in favour of administering purely botanic medicines which contain mineral elements, in their own composition, equal in proportion to those of the blood, with the exception of common salt, which, being partly discharged every day through the kidneys and skin, is as constantly renewed, in connection with the food, by an instinctive craving, unless the food eaten, or the water drunk, contain in themselves its principal elements?

And can anything be more absurd than the administration of large doses of mercury, zinc, iron, lead, copper, or any other metals or minerals, or the preparations of them, with an idea of curing disease, even supposing the absurd notion were correct, that the body is a chemical laboratory, into which we may enter and play what trick we please; and that, when the body is diseased, its chemical contents have formed improper combinations, or have neglected to form proper ones, or a portion of them have escaped by some mysterious means; and the introduction into it of other chemical compounds or elements will compel the action of the proper affinities, and thereby restore order and harmony? Can

anything, I repeat, appear more absurd than these notions, when the composition of the blood is known, and when it is understood that the vital and chemical operations that take place in the blood and living body, do so by virtue of laws peculiar to its living state, and under the direct and special control of the peculiar life-power resident within it?

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## THE CIRCULATION.

CIRCULATION is generally spoken of as connected with the blood only. I shall speak of it in a more extended sense. The circulation is double—vascular and nervous; the nervous fluid circulates as well as the blood. These two circulations are mutually dependent, concomitant, simultaneous, and harmonious. That the nervous fluid circulates may require some proof for those who have not contemplated the subject. What is that which imparts vigour, energy, activity to the various organs of the system? The nerve-power. This is communicated to the different organs by the circulation of the nervous fluid. Proof: the nerve-power, or animal energy, is capable of being concentrated—of being accumulated upon any given organ of the body—the arm, the stomach, the brain, and so on; and whilst it is concentrated upon any given organ, other organs of the system suffer a diminution of their regular quantity. Could this be if the nervous fluid did not circulate? The nervous energy, or power, is capable of being exhausted and of being renewed. As the blood is renewed, so is the nervous fluid: a nourishing meal of food well digested renews both. Dyspepsia (indigestion) or starvation diminishes the quantity and power of both. Impurity of blood clouds the intellect, irritates the nervous system, and debases the feelings and desires. Irritation and exhaustion of the nerve-power from external causes, induces impurity of the blood; grief, anxiety, and fear, cause indigestion, weaken the circulation of the blood, arrest the ordinary secretions by which the blood is purified, and thus induce both impurity and deficiency of blood. Are these proofs insufficient to establish my proposition, that the nervous fluid circulates as well as the blood, and that this double circu-

lation is mutually dependent, concomitant, simultaneous, and harmonious? Those who believe in the mechanical circulation of the blood, may object to this theory of circulation, by saying, what organ corresponding to the heart propels the nervous fluid in circulation? To this I answer, it is doubtful if the heart does propel the blood throughout its circulation; and that the *regulator* of the voluntary nervous circulation is the brain. Proof: the brain is the residence of the centre of animal consciousness—has the power to regulate and control feeling in some measure: the greater and stronger the brain (motives and repetition of efforts being equal) the greater the power. The brain has also the power to abstract thought from, and concentrate it upon, a subject; and this power strengthens by exercise or repeated effort, as the muscular power of a limb strengthens.

The regulators of circulation in the involuntary portions of the nervous system, are the centres of that system, the semi-lunar, and their subordinate ganglions, &c.

When a strong impression is communicated by the nerves to the centre of consciousness, there is a shock experienced—a feeling as of something having passed into or struck upon the sensorium. When a resolution is formed, or an effort of *will* made, or an important act determined on, there is a consciousness experienced of holding something—of letting it pass—or of forcing it from us. Whilst we are in the act of determining one thing, or experiencing one strong emotion, we cannot be engaged with another. If we hesitate, and cannot come to a resolution, we are uneasy, and cannot attend to other things so long as the impression lasts. What is the philosophy of this? The nervous fluid coming and going—leaving its message—holding our attention till it receives the reply of the judgment or the determination of the will; which having received, it hastens to execute, through the agency of the nerves, the muscles, and other organs the system stands possessed of, for making impressions and operating upon other things and persons.

Impressions communicated to the sensorium in respect to which no judgment or decision is arrived at, and also matters of knowledge seem, partly by a voluntary effort, to be passed into mental store, to remain till a future occasion, when they may be recalled before the consciousness, by something to which they relate, or by other impressions, their opposites, with which they may be com-

pared. In this way the mind, by a voluntary effort of attention, fixes or stores up impressions in the house of memory, to be called upon for future service; and this power to store up and recall for future service, increases by repeated exercise, as does the muscular power of a limb; and as the muscle of a limb becomes firmer and harder as it increases in strength, so does the brain; and this we all acknowledge in our every-day discourse, when we speak of men as soft-headed and hard-headed, weak-headed and strong-headed; and this again is proved by men being strong and firm, and quick and clever in some departments of brain work, whilst they are weak, vacillating, slow, and bungling in others.

The nervous fluid may be in globules like the blood, and each globule may be capable of becoming the residence of an impression; the nervous fluid may be an adaptation of electricity to the purposes of the animal economy, or it may be a fluid of a more ponderable nature, highly charged with that mysterious but most powerful fluid. That the nervous fluid circulates, I think there can scarcely be a rational doubt. If any man says he will not believe it till he sees it, I will not undertake to convince him; if, however, he is open to conviction by the evidence of feeling, he will stand a better chance. When the immortal Hervey, after having taught the doctrine of the circulation of the blood twenty-six years, published his imperishable work on the circulation, he was derided by his own profession as a quack, looked upon by the vulgar as crack-brained, and punished by the loss of an excellent practice; he lived, however, to see his system taught in every university in the world.

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## CIRCULATION OF THE BLOOD.

The organs which are directly engaged in the circulation of the blood in man are, *first*, the heart, which is the centre; *second*, the arteries, which receive the red blood from the heart, and convey it, deeply imbedded in the flesh, to, *third*, the arterial capillaries (hair-like vessels), which, everywhere throughout the body, deposit such portions as the tissues of the body require, and yield up the remainder to, *fourth*, the venous

capillaries, which convey it to, *fifth*, the veins, which return it as purple blood, running near to the surface of the body, to the heart. The heart is naturally separated by a partition into two parts, right red, and left blue; each part has two apartments, an ante-room, or auricle, and an audience chamber, or ventricle; the auricles have communication with the ventricles by trap-doors or valves, on the right, three-pointed (tricuspid), on the left, two-pointed (bicuspid). When a portion of the blood has passed from the auricles, the upper apartments, into the ventricles, the lower, these valves close till the ventricles have passed that portion into the arteries which convey it from them; at the mouths of the arteries leading from the heart are also placed valves, but closing the other way, shutting the blood in the arteries, and preventing its return to the ventricles. Each side of the heart has attached to it a set of veins and a set of arteries; from the lungs come veins filled with red blood, to the right side of the heart; and from this side of the heart go arteries filled with red blood to all parts of the body; from all parts of the body come *blue* veins to the left side of the heart, and from this side of the heart go arteries filled with *blue* blood to the lungs; the great blue artery going from the left side of the heart to the lungs is called the pulmonary artery, and the great red vein coming from the lungs to the right side of the heart is called the pulmonary vein. The valves placed at the mouths of the arteries are called semi-lunar (half-moon-like) valves. It is said by physiologists of the present day, that the office filled by the heart, with its accurately-working valves, is essentially that of a forcing-pump: that by the successive contractions of the ventricles, the blood is forced to go forward in the arteries to every part of the body, and that *thirteen* thousand pounds of blood are forced out of the left ventricle of the heart of an ordinary-sized man every twenty-four hours. The quantity of arterial blood propelled from the left ventricle of the heart at each contraction, is from one to two ounces. The arteries leading from the heart to all parts of the body, almost immediately they leave the heart, divide into branches, gradually diminish in capacity, and increase in number; so that if the circulation of the blood be effected solely by the mechanical force of the heart, the force it exerts must be considerable, since the force requisite to propel a quantity of blood through thousands, tens of thousands, perhaps millions of tubes, gradually diminishing in size, from the first, less than an inch in

diameter, till they finally terminate in capillaries small as the finest hair, must be very great; especially when the speed at which it is forced is considered. "A fluid injected into one of the jugular veins of a horse, has passed through the right side of the heart, the lungs, the left side of the heart, the arteries, the capillaries, and been detected in the veins of the leg in half a minute." One great physiologist entertaining this opinion, in order to proportion the force to the resistance to be overcome, has calculated that the heart exerts a force equal to *one hundred thousand* pounds. Another eminent physiologist, however, has calculated the force exerted as equal to *two ounces* only. There is a slight difference in the estimation, certainly.

The valves placed at the mouths of the arteries leading from the heart, are said to be placed there for the purpose of preventing the return of the blood to the cavities of the ventricles, whilst they are expanding to receive the blood from the auricles; if the blood be propelled by the left ventricle of the heart with a force adequate to its circulation, which must be considerable, then, whilst the left ventricle expands to receive another portion of blood from the left auricle, the semi-lunar valve at the mouth of the aorta must support the whole column of blood within the arteries, or at least, resist whatever force with which it has a tendency to return, which must be considerably more than these valves seem calculated to sustain. Along the course of the veins, but not along the arteries, at certain distances are placed valves that open towards the heart the way the blood is flowing, and close the opposite way; it is said these valves are to prevent the blood returning towards the capillaries, whence it has come; but if the whole blood be propelled by the force-pump power of the heart, these valves cannot be needed for the purpose ascribed to them, since the pressure onwards must always be the same, so long as the heart pumps, and always sufficient to maintain the onward flow of the blood. It is known that the blood flows hither and thither in the system, under the influence of excitement, in unequal quantities; this could scarcely be the case, if the blood were circulated solely by the force-pump power of the heart: it would still continue its regular routine in regular quantity, uninfluenced by local irritation or cause of excitement. The arteries beat (pulsate) as does the heart, at the same instant and in unison with it; it is supposed that the pulsation felt along the arteries is the passage

of the blood through them, as it receives its *push* or impulse from the heart. If the mechanical force-pump theory of the circulation were correct, would not a similar beating be felt along the course of the veins? it seems to me, naturally, it would; but this is not the case. From consideration of these facts, and others to be mentioned, at the risk of coming in contact with long and firmly established opinion, I venture to suggest, that the notions universally entertained with respect to the force that circulates the blood, are probably incorrect, as well as many other notions popularly entertained. In plain terms, I deny that the circulation of the blood is effected mechanically by the hydraulic pump-power of the heart, or by any other adaptation of mechanical power alone. The common notions of the force by which the blood is circulated being denied, and some reasons given for the denial, it becomes my duty to assert those opinions which appear to me more scientific, physiological, and philosophical.

This subject ranks amongst those which are of the highest interest to humanity, philosophy, and science. "Man is an epitome of the universe;" all the laws that operate in the external world without, operate also in the internal world within him, in connection with, and under the influence and dominion of, laws peculiar to his own nature and organization. Every principle of action, mechanical, chemical, and physiological, that operates in organic or inorganic matter in the world we inhabit, hath its representative in the human world, with a crowning principle raised above them all, peculiar to itself. This is the proper living view of humanity, and this is the view I take of the human system, in considering the laws and forces of the circulation. In illustration, I may mention the laws which govern respiration, which performs an indispensable item in the circulation of the blood. Respiration is *vital, involuntary, voluntary, physiological, chemical,* and *mechanical.* It is vital, because performed only by the living; voluntary, because, by an effort of will, man can control his breathing, expel his breath, and refuse to breathe for a time; involuntary, because this act of the will can be continued only for a short time; physiological, because it is a natural act of a portion of the muscular and nervous system; chemical, because the chemical affinities of the blood and the air are mutually attractive, and chemical action takes place in the cavity of the lungs; mechanical, because the air, in a measure mechanically, presses into the cavity of the

chest, and in a measure is mechanically pressed out. All that is said of respiration is true of circulation, except that the latter is placed beyond the influence of a direct voluntary effort. The circulation of the blood is influenced by every passing emotion, and by every form of disease; every irritation, excitement, or thrill of the nervous system influences the circulation of the blood; not only does the pulse vary in quickness, but in hardness, softness, fulness, thinness, tightness, and regularity, all which variations are the results of organic experiences, or animal sensations. If the circulation was effected by the force-pump power of the heart, it is obvious that all the various conditions of the circulating blood, as exhibited by the pulse, would only be indications of the variations of this force-pump power. The vigour of the circulation, the proportion of arterial blood in the animal system, and the complexity of the circulating apparatus, are in proportion to the energy, vigour, activity, and warmth of the animal body. In the fishes there are only two cavities in the heart, in place of four, as in the mammalia—an auricle and a ventricle—both which are placed in the circuit where the blood is venous; the gills of fishes answer as lungs. Among the crustacea (as the crab, the lobster, the crawfish, &c.), which are partly amphibious, are tenacious of life, take long, slow respirations, and whose bodies waste slowly, and are powerful and courageous for their size, the heart has but one cavity, like a fleshy ventricle, which is situated in the *arterial* part of the circuit. In the orders of animals below this again, the heart is rudimentary, or entirely wanting! What force-pump power circulates the blood in such animals? I am sorry if I shock any eminent professors of physiology, who have faith in the force-pump power, by this inquiry. The giant oak, the lofty cedar, the simple daisy, and the primrose sweet, have no heart; yet their blood (sap) circulates, not so quickly as in animals, yet it circulates through their tiny and their mighty stems; they live by this circulation; energy and force of circulation, are proportioned to the wants of the voluntary motions, of the living thing. The basis of the law of circulation is the eternal, universal, omnipresent law of change; matter circulates everywhere, in everything, in the air, in the earth, in the waters of the earth, and in the things of the earth. In organic bodies it is indicated by desire for, reception of, use, and rejection of the matters surrounding them. Give! give! is the first life-cry of the animal body; take, take, its

first and last living act; and when it can no longer take from the surrounding world, the surrounding world takes it. Our bodies daily fight to live! Life depends on circulation, and the first law of living circulation is the necessity which the whole body, and every living particle experiences, to live. Life for the living! The living only respect life; dead things are put aside, cast out, forgotten, or trampled under foot in the onward march of life; their living services only are remembered; the impressions which their living movements made are only seen in life; this is true of the individual and the aggregate, of the particle and the mass. The particle and the man, lives and makes his impression, dies and leaves room for his successor. I have said the blood lives as does the body—by the body's use the particles die—as they die, others are required to fill their places, that the body may be full of life, or all living. The living blood hath a love for the living body, and the body hath a living desire for, and need of the living blood; this is the vital force of circulation or organic attraction. Life is a process; it begins in lowliness, but ends in glory. The moss, and lichen, and coarse grass, first grow, and die, and make a bed, and form an earthy stomach full of food, for things that cannot live so barely; and these again yield up their bodies to the service of higher things of life. Though the bread, and the water, and the air are dead to-day, they have a capacity for being made living, and by to-morrow they will have been eaten, and drank, and breathed, and will have entered into the composition of the living body—by the power of life, will have been made living—and under its dominion, will manifest phenomena of life, and be spoken of as living. Whatever hath not the capacity for being made living, by the power of life within a given thing, is unsuited for the purposes of life within it. This is the basis of the vital law, and of medication on the botanic system.

The blood, then, circulates—first, by the law of vital organic attraction, indicated by the affinity of the body for the new-made blood, and the impulsive love of the blood for the body. In other words, mutual attraction, necessity for, and necessity towards. Second, by the physiological or natural act of the organs of circulation, the living heart, lungs, and blood-vessels, which are organically sensible of their own labour of life and love. Third, by the laws of vital organic chemistry and animal electricity, which effect the changes in the living body, in harmony with the force of

life or living principle, and the destiny of the organism. Fourth, by the mechanical pressure, which the living organs exert by their elasticity and contractility upon the elastic, flowing blood. Of these organs the heart is the centre, through and around which every drop of blood circulates; it is to the body, and the globules of blood, as the sun is to the solar system; it holds in check the flying steeds of life, regulates their speed, and gives them law. The young recruits from the lacteals, come and drop with the veterans, and ammunition waggons into the anteroom of the strong-handed general, whose sentinels, the valves, with precision admit them to his audience chamber, to be reviewed, and marshalled steadily on their way to receive their commissions from the lungs, for which they are full of desire: which having received, full of new life and brightness, bounding with vigour and hot with desire, they return to the general, to receive the order of march, who, as a general ought, receives them calmly, as steadily, his sentinels admit them; and then, with a hearty wave, passes them on their march of love and patriotism, for the body is their country, and their lives are expended in the defence of it. By this simile, we see the living nature of the blood, and the commanding office of the living heart, which is that of generalissimo, or supreme regulator of the living army, which is ever active, forming, repairing, and protecting the living body.

This view of the circulation contemplates the body as a whole, and the particles of which it is composed, as individually possessed of properties, in nature, like the aggregate which combined they form.

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## RESPIRATION.

Respiration is the act of breathing—of inspiring into the air-tubes and cells of the lungs the surrounding air, and after it has remained for a time in contact with that organ, of expiring it in a condition somewhat altered from that in which it entered. The air, as it enters the lungs in a pure state, is said to consist of two gases in a mixed state, nitrogen 79, oxygen 21 gallons in 100 gallons by measure. But there is also a small proportion of carbonic acid gas found constantly in the air, at ordinary elevations

of the earth, about 2 gallons in every 5000 of air, and watery vapour, varying in quantity from $\frac{1}{60}$th to $\frac{1}{200}$th of the entire bulk of the atmosphere. In large towns, and more especially in ill-ventilated houses, the proportion of carbonic acid gas in the air is considerably greater. When air, which has been inhaled by the lungs in a pure state, returns from them, it contains on an average $3\frac{1}{2}$ gallons of carbonic acid gas in every 100. In some cases of disease it amounts to as much as 7 gallons in 100. When carbonic acid exists in the air to the extent of 1 gallon in 100, it is not in a condition to support the body in health; when it exists to the extent of 10 gallons in 100, it is immediately dangerous to life. This shows the importance of ventilation. When the air returns from the lungs, its proportion of oxygen is reduced from 21 to 16 or 18 gallons in 100. From these facts, it appears that the air whilst in the lungs parts with from one-seventh to one-fifth of its oxygen to the blood it meets there, and receives from it in exchange nearly an equal bulk of carbonic acid. Thus we see that respiration is a depurating or cleansing process to the blood; for if those matters, unless material to the body, which are exhaled in the form of carbonic acid, mixed with the air returning from the lungs, were not removed from the blood, it would be unfit to support the body in its living operations. But respiration is not performed by the lungs alone, the skin performs a function somewhat similar to that of the lungs, with like results; only the latter exhales, in the form of perspiration, a greater quantity of carbonic acid and watery vapour in proportion to the amount of oxygen it absorbs. The skin alone of a full-grown man exhales, in the form of insensible perspiration, from one and a half to two pounds of water in twenty-four hours. A man in active exercise, who perspires freely, will exhale two or three times that quantity. No wonder that a suppression of perspiration causes so much oppression to the breathing, induces coughs, asthma, and consumption in some, and in others fevers and inflammations. No wonder that the blood becomes impure from the same source, and that the energies of digestion are weakened, and rheumatism racks the frame.

Many people imagine that under such circumstances the blood can be purified by adding something to it, to mix with it, and destroy the poison it contains—a most fallacious notion, only fit for medical chemistry. The only means of purifying the blood

are those which the body itself contains, respiration, perspiration, secretion of urine, bile, and evacuations of morbid matters lodged in the intestinal canal. As the air flows into the lungs they expand, as it flows out they contract. It is of great importance to health that nothing should be allowed to press upon the chest, or confine it so as to prevent this expansion and contraction in an easy natural way. I have seen several children in this country in a state of partial suffocation from their binders being drawn too tightly round them; and the number of young females who suffer in health from tight lacing of stays, notwithstanding all that has been said upon the subject, and their own assertions to the contrary, is very great.

The quantity of air inhaled at one inspiration varies in different persons. "The average quantity, which by an effort the lungs of an adult can be made to inhale, is from five to seven pints, and the quantity they draw in at an ordinary, natural, but full inspiration, *may* be as much as two pints and a half; an ordinary tranquil respiration takes in only about one pint." The lungs are therefore never entirely emptied of air, but always contain a portion which is undergoing a kind of digestion; for the oxygen of the air thus obtained is a part of the natural food of man, which he can obtain from no other natural source, and is immediately essential to the existence of life. At an average of eighteen inspirations per minute, one pint at each inspiration, the quantity of air drawn into the lungs and thrown out again, amounts to 1000 pints an hour, or 3000 gallons a-day. An athletic man undergoing severe exertion, it is estimated, will respire 5700 gallons a-day. By respiration the oxygen of the air is absorbed. By absorption of oxygen the blood continues to live, is changed from purple to red, and rendered fit to build up and repair the tissues of the body. By the chemical action or combustion which takes place in the lungs, between the elements of the blood and the air they contain, heat or caloric is set free, which the blood also absorbs without becoming sensibly hotter; and this is supposed to constitute the chief source of animal heat, but not the only one. A portion of the oxygen absorbed into the blood unites with its gluten to produce the proper substance of the tissues. By this change a certain amount of heat is set free and imparted to the body. "That in order to render the waste matter of the tissues easily removable, oxygen combines with it. That the phosphorus of the

tissues by combination with oxygen becomes phosphoric acid, and the sulphur sulphuric acid. The nitrogen and carbon assume the forms of urea, and uric acid, and so on. That every part of the substance of the body, in the course of removal, combines with more oxygen, and at every new change causes the disengagement of more heat." And that the oxygen, by which all these changes are affected, is conveyed to the blood by respiration, and by the blood to every part of the body by circulation. What an argument is this in favour of the botanic system of medicine, which, in its efforts to remove disease, aims at nothing beyond perfecting respiration, digestion, exhalation, secretion, and excretion, and through these purification and circulation!

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## DIGESTION.

DIGESTION is the process by which the solid substance of the body is renewed and growth effected. It is performed in the alimentary canal, which commences at the mouth and ends at the anus. The mucous membrane, in its various arrangements, constitutes the most important portion of all the organs by which digestion is performed. These are the mouth and its contents, the salivary glands that pour their secretion into it, the stomach and the intestines, the pancreas or sweet-bread, which secretes a fluid very like the saliva, and pours it into the *duodenum*, the first portion of the small intestines, and the liver which secretes the bile, and pours it from the biliary duct into the same place. Physiologists dispute whether the bile performs any important office in the digestive process. This process commences immediately food is taken into the mouth. The saliva is a solvent fluid, which, the moment it meets with food, begins to act upon a portion of it, which it reduces it to a condition fit to enter the living body, and a small portion of which is there and then absorbed by the lymphatics. By mastication (chewing), and insalivation (mixing with saliva), the first portion of the process of digestion is performed. When the food has passed the pharynx (throat), descended the œsophagus (meat-pipe), and entered the cavity of the stomach, gastric digestion commences. Numerous delicate little nervous

feelers, which abound in the vasculo-nervous web of the portion of the mucous membrane lining the stomach, instantly become aware of the presence of food, and convey the intelligence to their presiding centre, which immediately throws its stimulus upon the tissues of the organ; the muscular fibres of the stomach are called into rapid and vigorous action, an increased quantity of arterial blood flows into the vessels, the nervous power is exalted, and the temperature of the stomach slightly elevated. By successive contractions of the different layers of muscular fibres composing the coats of the stomach, it is thrown into gentle commotion, by which the food is carried round the gastric cavity, and everywhere pressed against its internal surface. Small secretory vessels or glands, lodged in the membrane composing the inner coat of the stomach, give out a thin, transparent fluid (the gastric juice), which, like drops of perspiration, exude out upon its internal surface and mingle with the food, soften, and dilute it. Soon as this process has been performed upon one portion of food, the stomach is ready to receive more; gradually its coats relax for the reception of it, till it has received a full meal, after which the action of the stomach subsides to a more gentle, undulating, vermicular motion, which continues till the whole mass of food is reduced to a semi-fluid, gruel-like mass, called chyme. During the time, however, that the stomach has been working, it has not altogether neglected to feed; as in the mouth, so in the stomach, absorbents have been active, taking up some of the most refined portions of the feast.

The pyloric orifice of the stomach, the opening at its right extremity, which opens into the duodenum (the first portion of the intestines), during the process of gastric digestion is completely closed; but when by that process a portion of the whole meal is brought to a proximate state of chymification, the pylorus (a ring-like valve) becomes sensible of the fact, and relaxes to permit its passage into the intestines. Soon as a portion of the chymified food arrives in the duodenum, the liquor of the pancreas flows into it, to assist in the further digestion of the mass. From the inner surface of the intestines, issues a half-liquid slimy mucus, called *succus entericus*, which intimately mixes with the partly digested food, and materially promotes the process. Bile, at the same time, is poured out from the gall bladder, a portion of which mixes with the digesting mass, and removes a slight acidity,

or sourness, which previously existed in it; thus digesting, slowly the food is moved along the intestines by their successive contractions or worm-like motions, those portions of the food nearest the surface being perfectly digested first, and assuming a milky appearance, called chyle. In this condition it is absorbed or drunk up by thousands of small mouths, which open to receive it into the lacteals. Along these small tubes the chyle circulates (without any force-pump power impelling it along), till it reaches the *receptaculum chyli*, a portion of the thoracic duct, whence it is poured into the left subclavian vein, which carries it to the right side of the heart. The unnutritious portions of the food, along with a portion of bile, &c., are passed along the whole of the intestines, and finally ejected from the lower portion of the bowel called the rectum.

*Remarks on the Agents that are employed in the Digestive Process.*—Some people, when feeding, seem to forget they have teeth or saliva, and to be totally unsuspicious of their use. They make haste to swallow their food, without introducing it to any acquaintance with the millstones of the mouth or its solvent fluid. This is an important error, by which much injury is sometimes done to the stomach. First, it necessitates the stomach to receive the food more rapidly than is consistent with the welfare of its physiological economy. Second, it necessitates it to secrete a larger quantity of gastric juice, than would be requisite if the functions of the mouth had been properly performed. Third, it imposes upon the stomach the necessity of reducing by maceration those masses of food which ought to have been cut up small, or finely pulverized by the teeth. Fourthly, by increasing the difficulty and duration of gastric digestion, it increases the expenditure of the functional powers of the stomach, causing thereby a great degree of vital exhaustion in that organ, tending to produce debility and disease. The quantity of saliva secreted by a full-grown man in twenty-four hours, varies very much, on account of the kind of food that he eats, the facility or difficulty with which it is digested, and so on. It may vary from 8 to 21 ounces. Chemistry says it consists mostly of water, holding in solution about 1 per cent. of saline matter, and of a peculiar organic compound, to which the name of *ptyalin* has been given. This latter constituent has the property of changing the starch of the food into sugar, some say only when mixed with the saline

matter, others say when alone it forms less than $\frac{1}{500}$th part of the whole weight of the saliva; and it is supposed not more than 15 to 20 grains are swallowed by a healthy man in twenty-four hours. Twenty-one ounces of saliva contain about 80 grains of the saline constituent. The saliva, by its peculiar properties, seasons, changes, and prepares the food for the successive operations that are performed upon it, and is therefore of much consequence to easy and comfortable digestion. It should not be wasted by chewing and smoking tobacco; for if it be, acidity of the stomach and heart-burn ensue, and those who spit much whilst indulging this habit always grow thin, and I have known the seeds of consumption in some cases sown by it. A fact proving the importance of the saliva, is, that it always flows more freely after food is taken into the stomach; whether it touches the mouth or not it is generally alkaline in its character, but after eating it is more so; its *alkalinity* lessens as the food becomes digested; and after long fasting, it is said (by Wright) to become slightly acid.

An ordinary stomach is capable of holding from two to three pints. Its temperature is about 98° Fah. The gastric juice contains some saline matter, a quantity of free acid, which renders it slightly sour, and a peculiar organic substance called *pepsin*. It dissolves the fibrin of flesh, the gluten of meat, gelatine, the white of egg, and the curd of milk or cheese to a fluid state. The fat of vegetable or animal food, by gastric digestion, is reduced to minute globules, and intimately mix with the other constituents of the chyme. The quantity of gastric juice poured into the stomach of a full-grown healthy man, is supposed to be from 60 to 80 ounces in twenty-four hours. The intestinal juice, like the saliva and pancreatic liquor, has the property of changing starch into sugar, and it assists in emulsifying the fat of food. The pancreatic, besides its property of changing starch into sugar, is believed by some physiologists to contain a special digestive property over the fat and oil of food; others think not, and ascribe this special power to the alkaline bile. The bile has the property of removing acidity or sourness from the food pulp, and I think there can be but small doubt of its being the natural purgative or softening solution to the bowels. Indeed the liver, that secretes it, is in every respect a protecting and depurating (cleansing) organ to the system. In secreting the bile it operates upon a

large quantity of newly recruited impure blood, supplied by what is called the portal system; this is the return venous blood from the venous plexus of the whole alimentary canal, together with that from the spleen, the pancreas, and the mesentery, all the veins from which unite to form the venous trunk, a large vein which plunges into the liver, and ramifies in that organ, after the manner of an artery. From this blood, charged with much of the fluids that are drank, which enter directly and without apparent change into the venous capillaries, the liver secretes the bile, which, when poured into the bowels, protects them from dryness, costiveness, flatulence, and other forms of disease; and which appears to be the chief article that nature employs for removing acidities in the intestinal canal, and of protecting it from the inimical influence of substances which otherwise would prove sources of much irritation. Many people believe themselves to be bilious, troubled with an overflow of bile, when the fact is they are troubled with gripings and sourness of the stomach for want of bile; this fluid, under the influence of a call on the part of the stomach, often ascends into that organ to assist in digestion; and if, from weakness of the stomach, occasion for this be repeated, true biliousness is established, that is, a flow of bile into the cavity of the stomach. But the form of disease is really one of dyspepsia or indigestion. In such cases the bowels are invariably costive, because deprived of their natural aperient.

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## FOOD.

THE food we eat is instinctively sought, and the kinds best suited to our wants instinctively chosen, till our appetites become morbid, from violation or neglect of the ordinary laws of health. Even cookery is more a matter of taste than of reason, or at least the judgment is secondary to taste. Climate and country produce the kinds of food best suited to their inhabitants. The cool, easily digested, binding rice, is the staple article of diet in the mild, warm, hot, relaxing climate of the east; wheat, oats, and barley, warming and stimulating articles of diet, in the temperate west and bracing cold north; luscious fruits in the sunny south and radiant east; and seal, bear, and whale blubber at the bitter, biting, dreary pole; animal fats in the cold regions, where

digestion is powerful, and the body requires them to maintain its temperature, take the place of the vegetable starch and sugars provided by nature in the warm regions, where the energies of digestion are less vigorous, and the cooling process of perspiration is necessary to prevent the system being fevered and parched up.

The light, cooling, watery, slightly acidulous juices of fruits, are plentifully provided in the regions where the heat of the climate produces excessive thirst, and drink seems of more importance than the solid kinds of food. The same rule prevails in our country as the seasons change. In summer and autumn we have the gooseberry, cherry, currant berry, apple, pear, peach, apricot and plum, raspberry and blackberry. In winter these things are gone; but rabbits, hares, poultry, and game clothe themselves with fat, and present the good liver with rich dainties and substantials fit to protect the body against the cold and bitter blast that keenly bites, and shakes, and shivers where the blood is thin. Much has been said, and something foolishly, of what we should eat and what we should not. Nature gives the rule, which if we observe we shall not err. Our instincts, or natural and seasonable desires, on the one hand, and the provisions of nature on the other, are the surest guides.

If in summer we partake of the fruits of our own country and climate when they are in a fit condition to eat—when approaching ripeness or fully ripe—and take them from the trees or newly plucked, we shall not suffer inconvenience from them, unless we are in an unhealthy condition of body, or violate temperance in the act. It is the inferior quality, or excessive quantity of food, that causes inconvenience.

A natural unvitiated taste would not, unless under the pressure of want, partake of one-third of the articles in the form of fruit that are exposed for sale in the public markets of our large cities. And I have seen vast quantities of flesh, and fish, and vegetables sold in the public markets to poor dealers and poor consumers, which were no more fit to be eaten than the veriest garbage that is thrown to the soil-heap. This is a matter that requires as much attention on the part of poor consumers as ventilation, and the proper construction and conveniences of cottage property. Not even bread, "the staff of life" to Britons, is free from extensive adulteration and deterioration in quality, arising from the

low cunning and excessive selfishness of those who prepare and sell it. When the working people have their attention drawn to these facts, they say the rich, or the authorities, or government ought to interfere to put down these malpractices. This is sheer absurdity. Why should they meddle in the matter, who have every convenience and means of protecting themselves from such impositions? Their duty to their fellow-creatures—ay, that is forgotten in the intensity of their engagements with their duties to themselves. It is you, who are defrauded and sickened, that must speak and act (you have the right and privilege to do so), if speaking and acting are to advantage you. A certain variety of food is necessary, but it is injurious to eat a number of things at one meal. Food consists essentially of the same principles or constituents as the flesh of the animal it is destined to sustain. Whether we feed on vegetable productions or the flesh of animals, we introduce nearly the same substances into the stomach. But these substances do not enter into the composition of the body in the forms and proportions in which they enter the stomach, but are, by the process of digestion, dissolved and mixed with products of the living body, then *re*-formed, or made to enter into new combinations, and finally reorganized and endowed with new life; the body exercising a discretionary power or judgment in the selection of materials from the general mass supplied to it, according to the wants of its economy.

This is the natural labour or exercise of the appropriate organs; and no attempt of art to supersede it can be of permanent advantage to the body. Pampering only weakens it, and dainty dishes cheat the organs of the labour they love. Nursing of the sick is well and wise, but nursing of the healthy is ill and foolish.

If we take bread as the representative of our vegetable food, and beef as the representative of the animal,

These different forms of food consist respectively of:

The bread—of gluten, starch or fat, and saline matter.

The beef—of fibrin, fat, and saline matter.

The vegetable gluten is similar in nature to the fibrin of flesh, and serves precisely similar purposes in nutritious food. Starch and fat also serve similar purposes in the animal economy, and may take the place of each other almost indifferently in the diet of those who can digest them equally well; but as invalids cannot, fats by them should be avoided, except a little cream, butter,

or salad-oil, and starchy and sugary food used instead. The albumen, gluten, and fibrin of food are chiefly what are used in the building up of the tissues of the body. The starch, sugar, and fats or oils, are the constituents of the food which maintain the heat of the body, and support respiration without subjecting the body to waste.

All the articles of solid food we consume contain a large proportion of water. Well-baked wheaten bread contains forty-five per cent., nearly one-half water. 100 lbs. of fine wheaten flour take up 50 lbs. of water, and give, when baked, 150 lbs. of bread. The following tables show the composition of some of the articles of food we daily consume:

Well-baked wheaten bread, 100 lbs., composed of—

| | |
|---|---|
| Water | 45 |
| Gluten | 6 |
| Starch, Sugar, and Gum | 49 |
| | 100 |

J. W. F. Johnston says, "The bran or husk of wheat, which is separated from the fine flour in the mill, and is often condemned to humbler uses, is somewhat more nutritious than either the grain as a whole or the whiter part of the flour." Other people, who think themselves authorities, say this is not the case; but from the facts that bran fed horses work well, and look well, and bran fed pigs have firm flesh, and that men fed on unbolted wheaten bread are firmer in flesh and work better upon it than upon fine flour bakers' bread, which I have personally observed, I believe that Johnston's statement is correct. The nutritive quality of grain depends very much upon the proportion of gluten which it contains; and the proportions of this in the whole grain, the bran, and the fine flour respectively, of the same sample of wheat, are very nearly as follows:—

| | |
|---|---|
| Whole grain or unbolted flour | 12 per cent. |
| Whole bran (outer and inner skins) | 12 to 14 „ |
| Fine flour | 10 „ |

The composition of wheaten-bread and rye-bread are nearly alike, but rye-bread retains its moisture and freshness much longer than that of wheat. Oatmeal is richer in gluten and oil than wheat meal, Indian-corn meal is much richer in oil than wheat meal, in

gluten it is about the same. The average relative proportions of gluten, fat, and starch contained in *fine* wheaten flour, Scotch oatmeal, and Indian-corn meal, are represented by the following numbers:—

| | English fine Wheaten flour. | Bran of English Wheat. | Scotch Oatmeal. | Indian-corn Meal. |
|---|---|---|---|---|
| Water..... | 16 | 13 | 14 | 14 |
| Gluten..... | 10 | 18 | 18 | 12 |
| Fat or oil..... | 2 | 6 | 6 | 8 |
| Starch, &c..... | 72 | 63 | 62 | 66 |

It will be seen from this table that the bran of wheat and the meal of oats are very near alike in composition. Rice contains not more then seven or eight per cent. of gluten—it also contains only a small proportion of fat; this is one cause of its binding quality. Figs contain as much gluten as wheaten bread, less than one-half the quantity of water, and twenty-seven per cent. more starch, sugar, &c.

| | Water. | Dry Food. |
|---|---|---|
| The potato contains..... | 75 | 25 |
| — carrot — ..... | 83 | 17 |
| — turnip — ..... | 90 | 10 |

The solid food of these vegetables is much the same as that of grain. The dry substance of potato and rice consists of—

| | Rice. | Potato. |
|---|---|---|
| Gluten..... | 7½ | 8 |
| Starch, &c..... | 92½ | 92 |
| | 100 | 100 |

The dried leaf of cabbage contains from thirty to thirty-five per cent. of gluten; that of cauliflower sometimes as much as sixty-four per cent.; mushrooms sometimes as much as fifty-six; all these are therefore nutritious vegetables. But, beside their nutritious qualities, all kinds of vegetable and animal substances used as food, possess peculiar flavours, which render them agreeable to some and disagreeable to others, and however small the proportion of the substance may be which imparts to them their odours and flavours, it is enough to make them welcome or unwelcome, to cause them to lie easy on the stomach or to produce nausea. A considerable proportion of water enters into the composition of all kinds of food, such as fruits, which in their natural

state are agreeable to our palates, and we imitate this condition when we prepare agreeable dishes by our cooking processes.

*Flesh.*—If a piece of fresh, newly cut beef be dried over boiling water, it will lose three-fourths of its weight, which shows it to consist of about seventy-five per cent. of water. The fibrin of flesh, and the gluten of wheat, are those portions which remain as a whitish elastic substance after repeated washings of flesh and flour in cold water, which separate the blood and salts and colouring matter of the flesh, and the starch, &c., of the flour from the gluten and fibrin, which are insoluble in cold water. The fat which remains after the washings, along with the fibrin of flesh, may be removed by maceration in alcohol. The lean parts of the muscles of animals chiefly consist of fibrin; it resembles the gluten of plants very closely in composition and properties. The composition of lean beef, compared with wheaten bread and flour, is—

| | Lean Beef. | Wheaten bread. | Wheaten Flour. |
|---|---|---|---|
| Water (and blood)..... | 78 | 45 | 16 |
| Fibrin or Gluten..... | 19 | 6 | 10 |
| Fat..... | 3 | 1 | 2 |
| Starch, &c..... | ... | 48 | 72 |
| | 100 | 100 | 100 |

The main differences between beef and bread are, first, that beef does not contain any starch, which is a large ingredient in bread; and second, that the proportion of fibrin in flesh is about three times as great as that of gluten in *ordinary* wheaten bread.

Some of the common kinds of fish are very rich in fibrin; the dried flesh of the following kinds of fish consists of—

| | Fibrin. | Fat, &c. |
|---|---|---|
| Skate..... | 97 | 3 |
| Haddock..... | 92 | 8 |
| Herring..... | 92 | 8 |
| Salmon..... | 78 | 22 |
| Eel..... | 44 | 56 |

These numbers vary, on account of the fed condition of the fish, the season at which they are caught, and the coast on which they are taken. Herrings, especially, are double as rich in fat on the west coast of Scotland as on the east coast of England, and the

salmon of Ireland is richer in fat than that caught in Scotland or England. Sole is a very nutritious fish, and contains little fat; when boiled it is an excellent food for invalids. But as fibrin or gluten is not the only nutritious quality of food, the rich fibrinous flesh of animals is not in general to be preferred to bread and other grain and fruit food; for as the system selects from what is supplied to it that which it most needs, it cannot be forced into the assimilation of fibrin beyond a certain point. I have known many instances of parents inducing children to eat flesh and flesh soups in larger quantities than was consistent with their welfare, under the impression that such diet would make them strong; it has had quite the opposite effect, and has rendered them, moreover, exceedingly irritable, peevish, and feverish; and when a more suitable diet has been prescribed, they have improved in strength, stoutness, health, and temper. I have also known working men devour large quantities of beef, under the impression that it would keep up their strength better than anything else, and have known it fail completely; whilst, on the other hand, I have known remarkably strong and long-enduring men who ate scarcely any flesh at all, tasting it not oftener than once in a week or fortnight, and even seldomer. I tried the vegetarian experiment on myself for six years, during which time I neither used tea, coffee, tobacco, nor alcoholic drinks, and I found myself equally well in health, and as strong as when subsisting upon the ordinary diet of Englishmen. I would, however, caution people against living exclusively upon one article of diet for any very long space of time—man needs a change of food occasionally, as well as of scene, air, and water. He is naturally a travelling animal, and needs to take excursions in the food world, as well as into the world of men and the districts of the earth, if he would enjoy perfect health. We cannot reasonably ascribe the improvement in health that in so many instances follows visits to the coast and famous wells, to the medicinal properties of the water alone. The medicines are found as much in the air, the food, the scene, and exercise, which are new to the body, and infuse new life into it, as in the sulphur or salts of the water. "Man does not live by bread alone, but by every word of God," which is written in his works.

*Beverages.*—What we drink is but another form of food, and water, in all countries and among all men, is the chief liquid used to supply the body with fluid, and is decidedly the best. We in-

fuse various kinds of herbs, and the leaves and fruits of plants to make *teas*, pleasant warm beverages, which have various properties, and we travel long distances to fetch them; this is a commercial folly, unless it is of other advantage to the nation, for we have sufficient of similar plants in our own country, whose leaves, roots, and fruits are annually wasted, which, if gathered and prepared, would make equally pleasant and more beneficial drinks.

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## MEDICINE.

THE desire for medicine is founded on necessity for it, and originates in instinct. Instinct and accident were the first discoverers of medicine; observation and experience the teachers, supporters, and propagators of the art of healing. Theory succeeded practice, and practice was true whilst theory was false; when theory governed practice, it partook of the nature of theory. No theory can be correct that is not founded on the laws of nature; and these, so far as they concern the human system and medicine, can only be known by observation and experience of the living body. The human constitution is essentially alike in all men, differing only in variety from the influence of external circumstances. Whatever medicine influences the organic economy to the performance of a certain act, at one time, and in one person, will, as a general rule, influence it to a similar act, at another time, and in another person, under similar circumstances. The exceptions to this rule are very rare. This reduces knowledge of medicine to precise records of experience. In the sixteenth century much of the previously existing precise records of experience were put aside, and unsupported theories and new experiments substituted in their place. Since then theories have been constantly multiplying, and practice has been constantly becoming more confused and confounded.

To such a condition has the general practice of medicine arrived, that if it were not for the general light that natural philosophy has diffused, the improved mechanical appliances for social convenience, and the increased general knowledge of men, all which have led to improved habits, the assistance rendered to the

sick by the general prescriptions of medical men, would be palpably useless.

The practice of one class of medical practitioners is founded upon the Latin aphorism, "*Contraria contrariis curantur*"—cure one disease by creating another—a less to remove a greater. Two irritations, or diseases, cannot exist in the system at one and the same time; therefore, counter-irritate, and you lessen or remove the original cause of irritation, or draw the energy of the system from it, or change the seat of irritation or disease. One genius, who thoroughly believed in this theory, taught the practice of curing all diseases by irritating the tip end of the big toe, and when a violent irritation was produced in that locality, of tying a thread round the part and cutting it out; by this means he taught that all diseases, or the causes that produced them, could be cut out of the body, finally expelled, and nothing left to do, but heal a simple sore. He deserved to be crowned king of allopathy. Another class of medical men found their practice upon another aphorism, "*Similia similibus curantur*"—a similar cause requires a similar cure. A medicine that will cause a given form of disease in the human system, will cure it; find out what symptoms result from taking certain deleterious drugs, when not taken in sufficient quantity to prove immediately fatal, and when you see similar symptoms exhibited in ordinary disease, prescribe those medicines which produce, by their action upon the system, symptoms like those you wish to remove. Only give the medicines in minute doses—in fact, in infinitesimal quantities; mix a grain of arsenic with a hogshead of sugar, and then a spoonful of the sugar with a hogshead of water, of which give ten drops on going to bed. A friend of mine taking this kind of medicine, and finding no sensible effect from it at the end of a fortnight, poured the contents of eight phials into a basin, and drank it off at a draught; the effect produced by the whole was equal to that produced by a prescribed dose. No wonder that the public lose faith in physic, when doctors themselves do, and try to substitute infinitesimal doses for none at all; no wonder that uneducated people have strange notions of the action of medicine, when these learned men talk of deadly poisons entering the system, and going straight to the cause of disease and *killing* it. Disease, according to their notions, is something living in the system, which requires to be killed there; not death itself in its infancy, irritating and

obstructing the operations of the sensitive living organs and powers, as I conceive it to be, and which can only be removed by stimulating the conservative organic power to increased general action, and administering such medicines as are known to have the power of directing its energies to the performance of special functions, by which the dead may be separated and ejected from the living.

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## THE PRINCIPLES OF THE BOTANIC SYSTEM.

MEDICAL BOTANY, is that division of medical science which treats of the prevention and cure of disease, by a proper use of the necessaries of life, air, food, water, exercise, and shelter, and the use of *innocuous* vegetable and animal productions, known to possess medicinal properties. The principles of this system are—

1st. That health is the natural condition of all living organizations, and is indicated in the human system by an equally diffused, appropriate temperature (warmth) of the body, ease, and enjoyment of exercise of body and mind.

2d. That there exists, in all living organisms, a sensitive, active, conservative power of organic health and life.

3d. That the object of all the organic functions of the living body, is the preservation of the organs themselves in a condition suitable for the performance of healthy actions; in other words, the object of the individual functions is the preservation of the general organs, which constitute the known substance of the living being, and by which the various phenomena of life are manifested.

4th. That the conservative organic power existing in all living animal organizations, is endowed with a peculiar organic intelligence, which, in its judgments and decisions, is infallible on all matters immediately connected with the welfare of the organization.

5th. That the organic intelligence, although the function of an involuntary power, is capable of being influenced by voluntary efforts.

6th. That disease can be removed or cured only through the agency of the conservative organic power.

7th. That what are called the symptoms of disease, are the

signs, shows, or indications of organic distress, uneasiness, or disease.

8th. That the conservative power of the organism is engaged in the exhibition of the symptoms of disease in all animated things, and in the lower classes of animals, in the selection of medicines; but as reason partly supersedes instinct in the human race, this power is less decisive in man, in the selection of remedies, than it is in the lower animals; this latter, therefore, is left chiefly to the decisions of the superior powers of intelligence, or the peculiar human mental faculties.

9th. That proper medicine is a species of food, or natural aid, required under certain circumstances by the living organism, and between which, and it, exist special relations.

10th. That the immediate object of medicine, is, to influence the conservative organic power to the performance of certain acts, by which the removal of the immediate cause of disease may be effected from the living system.

11th. That this influence consists in stimulating, depressing, equalizing, and steadying or toning, organic action.

12th. That such influence can be beneficially exerted, only, by such means, medicines, and medicinal applications, as contain no inherent, or constitutional, antagonism to the conservative power of organic life.

13th. That disease is essentially a unity, that is, all forms of disease arise from one source, an abnormal excitement or irritation of the organic sensibility, incompatible with organic peace and harmonious action—the forms of disease, being determined by the nature and locality, of the immediate cause of the disturbance of the normal operations of the organism.

14th. That there are only four distinct characters or classes of disease.

1, Organic; per example, an injury suffered by the organic tissues, a bruise, wound, burn, or ulceration.

2, Functional; per example, dyspepsia, costiveness, suppression of perspiration or, other secretion, not arising from ulceration or destruction of organic tissue.

3, Acute; violent, intense, sudden, and soon changing or terminating.

4, Chronic; slow, continuous, gradually getting worse or better.

All the functional diseases are diseases of secretion, digestion, respiration, or circulation; all organic diseases are diseases of the tissues of the organs which perform these functions; in this view the brain and blood are regarded as organs.

15th. That the condition, peculiar to each of these classes of disease, may precede that, peculiar to the other, and consequently, either pass into, or be succeeded by the other. The locations of disease are, necessarily, as numerous as the organs of the body, and from the location of disease it, generally, derives its name; but the locality does not in any essential particular affect its character.

16th. That animal heat, or *caloric*, being an essential property of living animal organisms, a phenomenon of animal life, which, in a condition of health, is equally diffused throughout the whole organic economy, it is of the first importance that this condition of temperature should be secured, and maintained, in all attempts to cure disease.

17th. That in a state of disease a uniform and appropriate temperature of the body does not exist.

18th. That the cause why a uniform condition of animal heat, or temperature, obtains in health and not in a state of disease, is, that the circulation of the nervous fluid and blood is free, equal, and regular in a state of health—obstructed, unequal, and irregular in a state of disease.

19th. That by the normal circulation of the nervous fluid and blood, animal heat is eliminated and maintained equally, and in due proportion, and all the organs of the animal body enabled to perform their respective functions.

20th. That the normal circulation of the vital fluids, the nervous fluid and blood, is maintained by respiration and digestion, assimilation, vital affinity, secretion, excretion, contraction, and expansion—in other words, that the vital fluids, in which reside the energies of life, construct and maintain the organism in order to communicate with the external world—and when constructed, the integrity of the various actions, of its various parts, is necessary, to the maintenance of the integrity of the source whence they are derived, and upon which they still depend for existence.

21st. That whenever the circulation of these fluids ceases to be free and equal, there is congestion of the circulating vessels in some particular organ, or organs, of the body, and the reverse of

this condition in some other portion of the system; and wherever there is an excess of the circulating fluids, there is also, and necessarily, an excess of animal heat, or *caloric*, as exhibited in cases of inflammation—and where there is the reverse of one of these conditions, there is, also, the reverse of the other.

22d. That all disease, or abnormal actions to which the various organs of the human system are subject, may be classed under the following heads:—

1. Excessive action; as, inflammation, diabetes, irritability, &c.

2. Deficient action; as dyspepsia in some of its forms, suppression of the various secretions, &c.

3. Morbid action; as, strange cravings of the appetite, false conception, gross absorption, madness, &c.

24th. That disease is in all cases produced in one or more of the following ways:—1st, By irritation; the application or introduction of some agent to the system, which irritates organic sensibility. 2d, By obstruction of the circulating fluids. 3d, By relaxation; exhaustion of the vital energy, or conservative organic power. 4th, By destruction; ulceration of organic tissue.

25th. That the only rational method of curing disease is by removing the causes of irritation and obstruction, and by influencing the vital energy, or conservative organic power, by appropriate agents.

26th. That remedies for disease are the opposites of its causes! For example, if the body has become diseased from breathing unwholesome, impure air—a powerful and necessary remedy is fresh, wholesome, pure air. If from drinking impure or excessively hard water, pure soft water is a helpful remedy. If from drinking fiery, inflaming spirits, cold water, cooling, and mucilaginous medicines. If excessive labour has debilitated the body, rest and gentle exercise are remedies that will help to recruit it. If exposure to cold and damp, has contracted the vessels and caused obstruction, and destroyed the life of some portion of the tissues, or prevented the timely removal of worn-out material from the system—warmth, stimulation, and expansion are the appropriate and necessary means to be used for the removal of the disease.

27th. That no medicine, or medicinal application, that in its nature is essentially antagonistic or, destructive to life, is capable

of being regularly, safely, and efficiently applied for the cure of disease; but is under all circumstances liable to produce disease, aggravate it, or cause death; and that when such medicines do relieve the symptoms of disease, it is by causing a change of symptoms merely, or by causing a transfer of the cause of disease from one locality to another, or by establishing a chronic for an acute form of disease.

28th. Notwithstanding the numerous forms in which disease appears, and the great variety of symptoms exhibited in connection with them, there is but one thing which can properly be called disease, which is, *non-integrity of the circulating vital fluids*, by which the body is formed and preserved, and life maintained within it. The symptoms of disease, are the signs and signals, of uneasiness and distress, which the system exhibits, to indicate to the observant faculties, the nature and locality, of the immediate cause that is producing them. From the symptoms we also learn somewhat of the nature of the assistance, or remedies, required—for they not only indicate the nature of the cause of disease, but frequently also the most proper and effectual way of removing it; these indications are the efforts of the conservative organic power to expel, by the natural outlets of the system, the cause of offence and uneasiness. They are not always, however, to be depended on.

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## THE REMOTE CAUSES OF DISEASE.

THESE exist on every hand, and in every thing we use; nothing, however salutary and immediately necessary to the support of life, but, by abuse or depreciation in quality, may be rendered a cause of disease. The air we breathe, the water we drink, the food we eat, the clothes we wear, the houses we dwell in, the beds we lie upon, the people we sleep with, our personal habits, our pleasures, our daily occupations, our passions and emotions, and our medicines, may all, by injudicious use, abuse, or perversion and depreciation in quality, be rendered remote or external causes of disease; and by the same rule a judicious management of them, may render them preservers of health and contributory to the cure of disease. The external, or remote causes of disease attack a

particular portion of the body, the skin, lungs, or stomach ; they produce a certain effect upon the sensibility of the particular organ, and upon the tissues which compose it; this effect remains a longer or shorter time according to its extent, and whilst it remains, the general sensibility of the body suffers more or less—this is disease. The effects, therefore, which the remote causes of disease produce upon the organism, may be justly regarded, as the *immediate* causes of disease, and the influence which these exert upon the general sensibility, the amount of obstruction and impurity they cause to the vital circulating fluids, as the *amount* of *disease* endured, or suffered.

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## RULES TO BE OBSERVED IN THE TREATMENT OF DISEASE.

1st, Ascertain, if possible, the cause or causes that have operated to produce the disease.

2d, Ascertain the locality or seat of the immediate cause of disease, and the nature or character of it.

3d, Resolve on the indications to be fulfilled in the treatment of it, or in other words, the effects that are necessary to be produced, by the administration of medicaments.

4th, Ascertain the best and most convenient means or agents for accomplishing the objects in view.

5th, In determining on the choice of agents, pay some regard to the means and convenience of the patient for availing himself of your prescription, and on all occasions give preference to the most safe and simple remedies.

6th, Be careful to let the dose be proportioned to the age, sex, and present condition of the patient as to impressibility.

7th, Observe the proper time for increasing or diminishing the dose of medicine, changing the medicine, or omitting it altogether —rather under, than over-dose, and cease medicine gradually.

8th, Pay strict attention to diet, air, condition of sick room, and all other nursing attentions, and take some pains to tranquillize the patient's mind.

## THOMSONIANISM.

THE first principles of this system are, that heat is the principle of life, and cold the principle of death. "That perfect health arises from a due balance or proper temperature of the elements of fire, air, earth, and water," of which the body is composed. That all diseases are the result of one general cause, and may be removed by one general remedy.

"That cold is the only cause of disease, and heat its only remedy; that by restoring the natural heat of the body, cleansing the system of all obstructions, and causing a natural perspiration, all diseases may be removed." That all diseases are produced directly from obstructed perspiration, which is always produced by cold. That the general remedy is, whatever will cause an increase of the internal warmth of the body, remove all obstructions of the system, restore the powers of digestion, and promote a natural perspiration. To effect these objects, six medicines are used.

1st, Stimulants, or hot-tasting medicines; cayenne pepper stands pre-eminent amongst them.

2d, An emetic or vomit, to cleanse the stomach, for which purpose *Lobelia inflata* is always preferred.

3d, Astringents, or rough-tasting medicines, of which bayberry is the chief—to cleanse away what is called canker, a kind of white scurf that forms upon the internal membranes of the system, and also to remove old mucous from the intestines.

4th, Tonics, or bitter-tasting medicines, to correct the bile and restore appetite.

5th, A bitter syrup, to be given to weakly patients recovering from fever, &c. Balmony stands at the head of the bitters.

6th, Tincture of myrrh No. 6, or rheumatic drops, to rub externally, and take internally, to remove cold and prevent putrefaction.

To Dr. Samuel Thomson, the founder of this system in America, a self-educated man, originally a farmer, the world is indebted for the revival of the botanic system of medicine in modern times. He was the discoverer of many valuable botanic medicines, which now enter into our botanic materia medica. His system was introduced into England by Dr. A. I. Coffin, an American, as his

own system. He also wrote a book very like Thomson's, and carried out the establishment of the system in England on the same principle as Thomson did in America, viz., by lecturing in different towns, and establishing agents in them for the sale of the medicines, and by forming Medical-Botanic Societies, composed chiefly of working men.

The Eclectic, or Reformed System of Medicine, is mostly botanic, and is sometimes called the Botanic System. It was founded in America by Dr. Beach. Connected with this system are some thirteen or fourteen colleges in America. Dr. Beach attempted to establish his system in England, purposing to found a college there, but from his system being known to be very like Thomsonianism, which was already adopted extensively, and from mismanagement on the part of those who connected themselves with him, his efforts were fruitless.

# PRACTICE OF BOTANIC MEDICINE.

## TREATMENT OF DISEASE.

### ACUTE, FUNCTIONAL, AND ORGANIC DISEASES.

#### FEVER.

THE phenomenon, or symptom exhibited in connection with disease in most of its acute forms, known as fever, is the general excitement of the living circulating fluids, produced by obstruction or irritation. It is organic sensibility offended and excited against the cause of offence—the protecting powers of the body in arms against the aggressor—or the general system sympathizing with the sufferings of some special part. Fever attends acute disease, both functional and organic.

#### SIMPLE FEVER.

*Causes.*—Cold, morbid matters lodged in the intestinal canal, errors of diet, checked perspiration, bodily pain, nervous irritation.

*Symptoms.*—Hotness and dryness of skin, quickness of pulse, chills, hot hands and head, and cold feet, thirst and loss of appetite, scanty high-coloured urine, costiveness, &c.

*To cure.*—Remove the particular cause or causes, as far as practicable. If the tongue be coated, indicating a foul state of the stomach, give an emetic (*see* article EMETIC), and a vapour bath or a sheet bath. (*See* BATHS.) Eight, ten, or twelve hours afterwards, give a doze of Common-purge. (*See* PURGES.) If the fever arises from local inflammation, attend to that immediately with proper remedies; if from ulceration, or any special or local obstruction, as suppression of urine, or other similar cause, other remedies must be used, specially adapted to the case.

As a general medicine for simple fever in children, arising from any cause, the following is excellent:—

| | | |
|---|---|---|
| Pennyroyal herb, pulverized | 1 oz. | Mixed. |
| Bayberry bark, pulverized | 1 oz. | |
| Bitter root, pulverized | ½ oz. | |

Prepare a tea-spoonful of the powder with one of sugar, infused in a tea-cupful of boiling water, from a quarter to one hour.

*Dose.*—For a child of two to three years, half; of one year, a quarter; four years, three quarters; six years, a full dose; repeated three or four times a-day, according to the size of the child. This medicine is generally sufficient to cure all cases of simple fever amongst children, with the assistance of a sheet bath, a vapour bath, or a warm salt bath, repeated from once to three times, with a tepid, or cold sponge bath, over the whole body quickly every morning.

If this treatment be adopted, when fever first commences, it will seldom arrive at any condition but that of simple fever, and seldom continue for longer than from one to three days. The above medicine generally causes vomiting at first, gently opens the bowels, and produces a gentle perspiration. Diet—sago, rice, arrow-root, dry toast. Drink—whey, milk and water, cold water, lemon or orange juice, and sugar and water; apple-tea, currant-jelly, rasp-jelly, or blackberry-jelly in water, and lemonade, and butter-milk, and water. Children and young persons are mostly subject to this form of fever.

## SIMPLE CONTINUED FEVER.

*Causes.*—Same as those of simple fever, only more powerful, and impure air, intemperance, suppression of the ordinary evacuations, exhaustion from great bodily exertion, or passionate excitement.

*Symptoms.*—Hot dry skin, nervous irritation, restlessness, headache, thirst, suppression of urine and perspiration, a little hot perspiration on forehead, strong quick pulse, oppressed breathing, chills, costiveness, &c.

*To cure.*—Cleanse the stomach and bowels, produce free and copious perspiration, restore the secretions, saliva, mucous, gastric juice, and bile.

*Means.*—Composition, Emetic, Vapour bath or Sheet bath, and Common purge. (*See* COMPOUNDS.) First give three doses of Composition, allowing an interval of twenty to thirty minutes between each dose. Then give a tea-spoonful of Emetic powder in a tea-cupful of blood-warm water. If it does not cause vomiting in half an hour, give another dose of Composition. Ten minutes afterwards, if vomiting has not taken place fully, repeat the Emetic powder, but give only half a dose. Both may be again repeated if necessary, to produce a free emesis. When the Vapour bath is given, it is better to give the first three doses of Composition as follows: first dose on going into the bath; second, ten minutes before leaving it; third, ten minutes after leaving it, when the body has been sponged over with vinegar and water, rubbed dry, well wrapped up, and a hot-water bottle, or brick, wrapped in a flannel, damped with vinegar, and put to the feet. If the bowels are very costive, Common purge should be given an hour or two before the Composition; and if no passage of the bowels has been effected by the time the Emetic-powder is to be given, better give another dose of purge or an injection, and delay the emetic an hour or two, till the bowels have been opened. When the Sheet bath takes the place of the Vapour bath—which it may do, when much more convenient—the treatment will be the same as when the Vapour bath is given. After the above course of medicine, to maintain a gentle perspiration, promote the secretions, &c., give—

| | | |
|---|---|---|
| Compositon powder | 1 oz. | Mix. |
| Black Cohosh root, pulverized | 1 oz. | |
| Bitter root, pulverized | 1 oz. | |

*Dose.*—A tea-spoonful infused in a tea-cupful of boiling water twenty minutes, sweetened and drank warm three or four times a-day. When the fever is past, Stomach bitters (*which see*) three times a-day, to restore the tone of the system.

## INFLAMMATORY FEVER.

Causes same as the last enumerated, and exposure to the rays of the sun, drying up of old ulcers, and the sudden repulsion of eruptions.

*Symptoms.*—As before mentioned, the skin hotter, the tongue scarlet, the eyes inflamed and unable to bear the light, pulse very hard, beating 90 to 130 in a minute, with stupor and delirium.

*To cure.*—The same means must be used as for the last-mentioned forms of fever, with frequent cold sponging of the head and hands with vinegar and water. The course of medicine may be repeated in twelve or twenty-four hours, and to the dose of Common purge, a quarter of a tea-spoonful of American Mandrake, pulverized, may be added. Also give Clivers and Bogbean, 1 oz. each, infused in a pint and a half of boiling water till cold.

*Dose.*—A tea-cupful two, three, or four times a-day.

## GASTRIC, NERVOUS, AND TYPHUS FEVER.

These forms of fever are nearly alike, and very frequently merge one into the other. Typhus is the worst form. The only difference in them is the degree of stupor, arterial action, general prostration, delirium, and more complete suppression of the secretions and excretions—saliva, mucous, urine, perspiration, &c. For these forms of fever more good can be done during the first twelve hours of their commencement, than during the whole subsequent time of their continuance.

*Causes.*—Similar causes produce these forms of fever, that produce the previously mentioned, operating upon weakly or debilitated constitutions.

*Symptoms.*—The distinguishing symptoms are stupor, partial or total insensibility to moral impressions, staring with glazed eyes, dark flush on the face, and subsequently, dark brown, or black matter gathering on the lips, teeth, and about the mouth. The patient often obstinately and spasmodically closes his mouth, and refuses to admit any medicine or drink. When these symptoms occur, there is but little chance of recovery.

To prevent them, and to cure promptly, give Composition, Emetic, Vapour bath, and Common purge, with Mandrake, which repeat once more in twenty-four or thirty-six hours, giving in the interval an infusion of Bogbean, Clivers, Cohosh or Boneset, and Catnip, 1 oz. each to three pints of boiling water—sweeten with sugar.

*Dose.*—For a man, a tea-cupful every three hours; half the dose for a youth of ten years. Sponge over with tepid alkaline water, every twenty-four hours; keep the feet warm with hot bottles or bricks, and damp vinegar cloths; sponge frequently the head and hands with equal parts of Vinegar, Spirits, and water, or camphorated water 12 oz., Liquor Ammonia, 1 oz. When the patient is in a very low

state, a tea-spoonful of Anti-spasmodic tincture or Hot-drops may be given in a little warm water and sugar, once in three or four hours. The expressed juice of House-leek, simmered with equal parts of loaf sugar.

*Dose.*—For an adult, two table-spoonfuls every three hours, renders great assistance in cooling and allaying thirst. The mucilage of Slippery Elm may be given for the same purpose.

For great pain in the head, mustard poultices may be applied to the soles of the feet and nape of the neck. To prevent putridity, and keep the bowels gently relaxed, a tea-spoonful of the best purified charcoal, made from lignum-vitæ wood, may be given in a cupful of warm infusion of Bayberry, once every twelve or twenty-four hours; or a wine-glassful of brewer's fresh barm, may be given every three hours during the day.*

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## REMARKS ON NAMES OF FEVERS, CONTINUANCE, AND CONTAGION.

Doctors differ with regard to the names they give to the same form of fever; what would be called typhoid by one, another would call congestive, another low bilious, another gastric or nervous, and so on. Continued fever occurs in every grade of malignancy, varying in this respect on account of the extent and nature of the cause, and the vigour of the constitution that endures it. Whatever name the fever may receive, similar treatment is required for the cure of it; the worse the form of the fever the more energetic the treatment in the commencement of it, and the greater the care and attention during its continuance are required. All continued fevers terminate, at the end of three weeks, either in convalescence or in the death of the patient. Many people suppose that fever *must* run its course. This is a mistake; by prompt, efficient treatment in the first stages of fever it may be *checked*, *turned*, and *cured* before the time arrives for it to come to the *height*. Continued fever is generally considered contagious, and no doubt it is;

* In all cases of fever, be very careful to keep the air of the room pure, and the person of the patient clean, and attend to his calls for drink. For the kind, see Simple Fever.

but not necessarily so; cleanliness, prudence, and personal attention are sufficient to avoid it. It is well to breakfast, before visiting the sick-room of a fever patient; expectorate and blow the nose after leaving it, and wash the hands and rinse the mouth before eating or drinking. When scarlatina, measles, small-pox, or any eruptive fever, to which young persons are only once liable, enters a family, it generally affects most or all of those who have not previously experienced it; this may in some cases be prevented by cutting off communication between the healthy and the sick, but not always.

### INTERMITTENT FEVER OR AGUE.

This form of fever consists of a succession of paroxysms or periods of fever, between each of which there is a perfect intermission of febrile symptoms. It is divided into three stages:—1st, The cold, chilly, shivering, shaking stage. 2nd, The hot, burning stage. 3d, The sweating stage.

*Causes.*—Marsh miasma, the effluvia which arise from stagnated water, and decaying vegetable and animal bodies in warm weather, are believed to be the most frequent exciting causes of ague. It sometimes occurs in cities far removed from marshes, exposure to cold and damp, in connection with poor diet or a weakly state of the body, will produce it. Sometimes intermittents degenerate into continued fevers, or leave particular organs of the body affected, as the liver, spleen, &c.

*Symptoms.*—The premonitory symptoms usually experienced before a fit of ague comes on, are general debility, yawning, stretching, loss of appetite, distress at the pit of the stomach, dejection of spirits, aching in the limbs and head, and increased sensibility to cold.

*Cold Stage, or Chill.*—This comes on with creepings of cold along the back, weariness of the limbs, irresistible yawnings and stretchings. The skin is cold and contracted, and rough like goose skin; the spirits dejected, the pulse small, contracted, frequent, and firm; respiration is short, frequent, and anxious. Then the jaws chatter, and the whole body shivers and shakes. The chill continues in some cases only a few minutes, in others as long as two hours; vomiting often occurs towards the close of this stage. As a reaction takes place flashes of heat are experienced throughout the body, and gradually fever commences.

The blood returns from the centre to the surface of the body; where the blood is determined, heat is experienced, the skin becomes hot and dry, the countenance flushed, and the pulse rises and becomes full and strong.

*The Hot Stage.*—The skin is hot, the face flushed, the brain excited, ideas crowd upon the mind, the patient becomes what is called light-headed or slightly delirious. There is pain in the head, back, and extremities; the urine is high-coloured but without sediment. The fever continues various lengths of time, but finally effects a crisis by a restoration of the secretions of the kidneys and skin, and thus terminates in

*The Sweating Stage, or Crisis.*—As perspiration takes place the breathing becomes easier, the pulse softens, and there is a general abatement of the fever symptoms. As the sweating continues the symptoms of disease continue to lessen, till finally the patient appears free from disease, till the next paroxysm comes on. This may be every day, about one hour, when the fever is called a *quotidian* ague; every second day, when it is called *tertian;* every third day from the last, when it is called a *quartan* ague. When persons of shattered constitution are the subjects of ague, the various stages are not so distinct, the *reaction* not being so perfect. This condition is called *congestive* intermittent. When the liver is chronically affected, a bilious appearance of the skin and eyes is exhibited; this is called *bilious* intermittent.

*To cure.*—Break the cold stage up; overcome it by stimulating Composition powder; a tea-spoonful infused in a cupful of boiling water, drank warm, and a tea-spoonful of Anti-spasmodic tincture or Hot-drops, added before drinking it, taken every ten minutes, and the Vapour bath applied at the same time, are as good means as any known.

In the hot stage give warm tea of Cohosh, Clivers, or Boneset, and an Emetic if the case be a severe one. Sponge the body with alkaline, slightly tepid water, or vinegar and water; to allay thirst give any of the fever beverages, or cold water in small quantities, repeated. When the sweating stage comes on, stop cold drink, and give warm tea of Pennyroyal, Balm, or Catmint to keep up the perspiration. When the sweating is over, the vapour bath may be repeated, or the surface of the body bathed with No. 6. During the intermission, Composition and Lobelia pills; a dose of each, two, or three times a day. (*See* PILLS).

When the tongue begins to clean, and there is no fever present, tonics may be given. Peruvian bark, Poplar, Balmony, Gentian, Virginia snake root, or Stomach Bitters in infusion; a tea-spoonful of the powder of either, to a cupful of boiling water, two or three times a-day. Quinine is highly prized as a tonic for patients recovering from fever. As recovery is often very slow when the fever has been long continued, tonics require to be changed occasionally.

*Injections.*—Where costiveness prevails, either during the continuance of the fever or during recovery, injections should not be omitted. (*See* INJECTIONS).

### REMITTENT FEVER.

A remittent fever is a modification of fever which abates at regular intervals, but does not go off entirely, before a fresh attack ensues; or, in other words, one paroxysm succeeds another so quickly that the patient is never entirely free of fever.

*Causes.*—Marsh miasma, moist air, laden with the exhalations from decaying animal and vegetable bodies; also from over-crowded work-rooms, ill-ventilated dwellings, and badly-drained neighbourhoods, exposure to damp, night air, &c.

Treatment same as for intermittent.

The great object in the treatment of all fevers is to equalize the circulation, and remove the immediate cause of irritation and distress; and when that condition is obtained, to maintain it.

Favourable symptoms of recovery are—improved condition of the mind, a more natural expression of the countenance, a general warm moisture on the skin, ability to sleep, cleaning of the edges of the tongue, and a relish for some kind of food; a little of anything that is desired, may be given; beef-tea, well seasoned with cayenne, is good.

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## ERUPTIVE DISEASES.

### SMALL-POX (VARIOLA).

THIS seldom occurs more than once in the same person; it used to be very fatal; it is now rendered comparatively harmless by vaccination. Honour to Jenner for it!

*Cause.*—A specific poison, inhaled, or otherwise introduced into the blood. There are two varieties of it, alike in nature, different only in degree of severity. When the pustules appear separate from each other, it is the *distinct* variety; when they appear in clusters, running together, it is the *confluent* variety; this latter is the worst.

*Symptoms.*—Chilliness and languor, aching pains in the back and limbs, loss of appetite, thirst, nausea and vomiting, with pains at the pit of the stomach, are the usual symptoms in the forming stage of small-pox. In the course of a few hours, fever comes on, and the peculiar eruption appears. "Bleeding from the nose often occurs during the first and second day. The mind is dejected and confused, and towards the end of the third day, the tongue usually acquires a bright red colour."

The hands and feet tend frequently to coldness; in adults, before the eruption appears, an unusual tendency to perspire often occurs, with much drowsiness or stupor; in children, at this period, convulsions often take place; in other respects, the fever is like that in other cases. The eruption first appears on the face; at first it consists of red points; by the middle of the second day they appear slightly elevated vesicles with inflamed bases; on the third day these become depressed in the centre; about the fourth day, they assume a whitish colour, surrounded by a pale red areola. When the eruption is fully out, the fever abates. By the fifth or seventh day, the fluid contained in the pustules begins to change colour—this marks the stage of suppuration; as this proceeds, the pustules acquire a spherical form. By the eighth day, the face begins to swell, and the fever usually returns. Soreness of the throat and copious saliva, usually attend the suppurative stage. The pustules arrive at full maturity about the twelfth day. Generally about this time, or a day or two later, small brown spots appear on the centre of the pustules, which now look rougher and of a deeper yellow; shortly after this, they shrink, gradually become drier, darker, and harder, forming a brown crust or scab. When the scabs fall off, purplish-coloured spots are left, which slowly acquire the colour of the skin.

Sometimes, this disease assumes a malignant character; the pustules, instead of yellow, become red, purple, or blue, constituting *bloody* small-pox, a fatal form of the disease.

*Treatment.*—A course of medicine, if the case seems likely to be a severe one, will greatly mitigate the severity. (*See* COURSE OF MEDICINE.)

If not severe, Composition and black Cohosh Root, pulverized, equal parts, mixed. A tea-spoonful infused in the ordinary way, three or four times a-day, with a dose of Common-purge once in two or three days, to relieve the bowels. Or take Bayberry, Pinus, Boneset, and Bitter Root, all pulverized, one ounce each; Cayenne, one-half ounce—mix. *Dose*—a tea-spoonful, two, three, or four times a-day. When the throat is sore, gargle with Fever-gargle (*which see*). When the eyes become blind with swelling, and uneasy with inflammation, lay on a poultice of Slippery Elm. This poultice will draw the pox matter clean out, and leave the part to which it is applied fair and cool. This treatment will be sufficient for adults, with *tepid sponging*, moderate warmth, and proper ventilation and cleanliness. Food—light and nourishing, chiefly farinaceous; crust-coffee, barley-water, Elm mucilage, milk porridge, toast and milk. Drink as in fevers.

For children, Pennyroyal, Rasp-leaves, Bayberry, and Bitter Root, equal parts, all pulverized and mixed; infuse, one ounce to one pint of boiling water, sweeten with Golden Syrup. *Dose*—half, to a wine-glassful, warm, three times a-day.

To allay itching of the skin, sponge with tepid Bayberry tea or alkaline water.

## CHICKEN-POX.—SWINE-POX.

This, in some respects, resembles small-pox, but is shorter of duration, and much less severe. It is mostly confined to children; occurs in the same person only once; having had it, does not protect a person from the small-pox, neither does having had the latter, protect a person from it.

*Cause.*—Supposed to be a specific poison.

*Symptoms.*—Slight fever for one or two days; then a peculiar vesicle, filled with a pellucid fluid, appears first on the neck and back, which dries away and disappears on the seventh, or eighth day, "before small-pox passes through its first stage;" the eruption comes out in successive crops, some dying away whilst others are growing; this continues for some days. Like other forms of disease, it assumes various modifications, but it is very seldom attended with danger.

*Treatment.*—The same as for small-pox, less energetically applied.

## MEASLES (RUBEOLA).

This disease is contagious, it may be contracted at any period of life, but it mostly occurs in childhood or youth. The disease is usually developed on the fifth, or seventh day after exposure to contagion; but occasionally, not till two or even three weeks after that time.

*Cause.*—A specific poison inhaled.

*Symptoms.*—Chilliness, shivering, restlessness, pain in the head, tenderness of the eyes, copious flow of tears, and a discharge of watery humours from the nostrils. To these symptoms fever succeeds, the throat becomes sore, there is hoarseness and a dry cough, thirst, nausea, and vomiting; quick, oppressed breathing, and pain in the loins and back; sometimes also profuse sweating. About the third day from the commencement of the fever, when it is a violent case of the disease, delirium often occurs, and in children, convulsions are not unfrequent a few hours before the eruption appears. The eruption comes out in small red spots, very like flea-bites, first on the face, and then on the body and limbs. As these spots enlarge, they unite and form red patches, leaving neighbouring portions of the skin unaffected. The eruption on the face, attains the height on the second day after its first appearance, and on the following it begins to fade and disappear. The eruption on the body fades away in a similarly progressive manner; about the eighth day from the commencement of the fever it finally disappears, from the back of the hands, last. Measles sometimes resemble scarlet fever so closely, that it is difficult to tell one from the other in the first stage of the disease. This is of little consequence, as both require similar treatment. Although measles are not generally dangerous, they carry off great numbers annually in our country; in Scotland especially, the treatment usually applied by the surgeons is most destructive. This disease assumes the congestive or typhus form in weakly children and persons of delicate constitution; it is then dangerous.

*Treatment.*—Carefully keep the patient warm, and the room properly ventilated; exclude the light from the patient's face; if two or more of a family be sick of the disease at the same time, keep them separate if possible. Vapour baths, warm salt baths,

or slightly tepid sheet baths, may be given when the fever is established; the warm salt, or vapour baths, may be given at any stage of the disease; they are of great benefit about the time the eruption appears and disappears. An Emetic may be given at the same time, followed by a warm tea of Composition, or, of Yarrow, Bayberry, Ginger, and Clivers, equal parts, all pulverized, one ounce to a pint of boiling water. *Dose*, for an adult—a tea-cupful, three or four times a-day. Cough Syrup, to ease the cough, or small doses of the acid, or Tincture of Lobelia, in Honey or Golden Syrup.

Strong purges must be avoided in this complaint. To open the bowels, give once a-day, or every second day if needed, a dose of *Black-powder*—Bayberry and Charcoal, equal parts. A tea-spoonful in a tea-cupful of warm water, sugar, and milk; for a child of four or five years. Medicine for children—the same as for simple fever: or the above: or, Agremony, Clivers, Bayberry, and Penny-royal, all equal: one ounce to a pint of boiling water. *Dose*, for a child, of from four to six years—half a wine-glass three times a-day.

*Subsequent affections.*—This disease leaves the system morbidly susceptible of cold, and much debilitated, from which, the diseases liable to follow it are more dangerous than itself; dropsy, coughs, consumption, inflammation of the lungs and of the eyes, ulceration of the ears, eruptions about the head and face, and rheumatism, are all liable to follow after measles have departed; but the botanic treatment greatly lessens this liability; no such disease ever followed any case I ever treated, though I have often had to treat such that have followed other treatment. Avoid exposure to cold and damp, till the body has regained strength by the help of a little tonic medicine and nourishing food, and there is not much danger. Tonic—Horehound, Agremony, Centaury, and Bogbean, one ounce each, Cayenne, one tea-spoonful; pour on the whole three pints of boiling water, keep hot for one hour, strain without pressing, sweeten with honey, syrup, or sugar. *Dose*, for an adult man —a wine-glassful three times a-day; for a female, two-thirds; a child of seven, half; and less according to age.

Stomach Bitters, may be taken in place of the above.

## SCARLET FEVER.

This disease derives its name from the colour of the rash, or eruption, which is a scarlet, or fiery red. Children, and young

persons are most subject to it. It is divided into three varieties; simple *scarlatina*, when it is mild, and the throat is not affected; *scarlatina anginosa*, when the throat is affected; and *scarlatina maligna*, when accompanied with symptoms of putrescency and malignancy. The latter is also called, *cynanche maligna*, or, putrid sore throat.

*Cause.*—A specific contagious effluvia.

*Symptoms.*—This fever commences with a chill and shivering, like other kinds of fever, more or less nausea and vomiting, heat, thirst, and headache. The pulse is quick, the breathing frequent and interrupted, the eyes red, and eyelids swollen. In two or three days the flesh swells, and an eruption like a red stain appears on the face, breast, and arms, and subsequently on the whole body. In about three days perspiration takes place, the eruption disappears, the cuticle peels off, and there is seen a kind of scale dispersed over the whole body.

*Treatment.*—When it appears in a mild form, any of the simple medicines before mentioned for fever and measles will be found sufficient.

## SCARLATINA ANGINOSA.

This form of disease comes on violently, with coldness, shivering, langour, debility, and sickness, followed by heat, nausea, vomiting of bilious matter, inflamed sore throat, ulceration of the tonsils and uvula, frequent laborious breathing, and a quick, small, depressed pulse. When the scarlet rash appears about the third day, the patient becomes even worse. As the disease progresses, a universal redness covers the body, but there is no pustular eruption. The eyes and nostrils become inflamed, delirium prevails, the breath becomes fetid, and the patient is often cut off in a few days. Unless the treatment of this disease be very good, the patients that live through it recover very slowly—dropsical swellings and tumours of the parotid glands are very apt to succeed the disease, in consequence of the debility induced by it and morbid humours left in the system.

*Cause.*—The same as the preceding.

*Treatment.*—Same as for *scarlatina maligna*, into which it not unfrequently degenerates.

## SCARLATINA MALIGNA (PUTRID SORE THROAT).

*Cause.*—Same as preceding.

*Symptoms.*—It commences in the same way as *anginosa*, with even more dejection of spirits, pain in the head, sickness, vomiting, and general oppression.

The fever is intense, augments in the evening, and slightly remits in the morning. There is great determination of the blood to the head, producing pain, throbbing, redness of the eyes, intolerance of light, and delirium, or stupor. The eruption appears of a purplish or livid hue, scattered over the body in blotches. Sometimes no eruption appears at all, the energy of the disease being concentrated inwardly—sometimes the eruption suddenly recedes, then follows an alarming train of symptoms—at other times it assumes a very pale, livid appearance, which is equally alarming. The pulse is small, indistinct, and irregular. The sloughs about the mouth are of a dark colour; they spread over the whole internal surface of the mouth and throat, and sometimes even extend throughout the whole of the intestines; when they fall off they leave deeply-seated ulcers.

The *symptoms*, called putrid or malignant, are an inky colour of the blood-vessels, oozings of black gore from the nostrils, gangrene of the throat, spots upon the skin, and hæmorrhages from various parts of the body. This disease arrives at the height about the fifth or sixth day, but it often proves fatal by the third.

*To cure.*—Remember the principles laid down in this work, and govern the circulation and irritated powers of organic life, to the elimination of the irritant poison, that has entered the life-stream.

Sweat, vomit, excite the liver and kidneys to secrete bile and urine, and evacuate it.

*Means.*—Infusion of equal parts, Boneset and Composition, two or three doses within ten minutes of each other. Then an Emetic, followed by Common-purge, or Anti-bilious purge, and cold sponge bath. A few hours afterwards, apply the cold sheet for two, three, or four hours. These may all be repeated every day—for two, three, or four days—as the symptoms indicate their requirement.

Use the Fever gargle, Fever powder, and Diaphoretic powder.

Give mucilage of Slippery Elm to drink, as freely as the patient will take it.

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## INFLAMMATORY DISEASES.

### INFLAMMATION OF THE THROAT, SORE THROAT, QUINSY.

THIS is an inflammation of the tonsils, or the mucous membrane lining the pharynx, or throat. It generally affects the young and sanguine.

*Causes.*—The most common are, sudden check of perspiration, or cooling too fast after being hot with exercise, wet clothes or feet, damp beds, moist air, or lying on the damp ground. Exposure to a draught of cold air, or omitting the usual neck-tie, may produce it; and it is sometimes epidemic and infectious.

*Symptoms.*—Hoarseness, dryness of the throat, pain on swallowing, and difficulty of breathing. The throat is red, sore, and swollen, the face flushed, the system feverish, and the pulse full, hard, and frequent. It sometimes terminates in suppuration.

*Treatment—To cure.*—The first object is to lessen the inflammation by local applications, and by equalizing the circulation, and producing perspiration.

*Means.*—Vapour bath or sheet bath, warm foot bath, cold Compress round the throat, repeated as often as it becomes dry; warm bricks to the feet, and sudorific medicine. A warm decoction, of Hyssop, Yarrow, Sage, and Catnip, or of two or three of them, two ounces to a pint when boiled for half an hour, sweetened with honey or syrup, and drank freely, from a wine-glass to a teacupful, three or four times a-day, will soon remove it. Attend to the bowels—if costive, purge with Common-purge. If the stomach be foul, take an Emetic.

### INFLAMMATION OF THE STOMACH (GASTRITIS).

*Causes.*—Acrid substances taken into the stomach, such as antimony, arsenic, and mercury; overloading of the stomach by indigestible food; drinking ardent spirits, drinking cold water whilst in a state of perspiration, or sudden exposure to cold whilst in that state.

*Symptoms.*—Heat, pain and swelling of the stomach, pain felt in the organ on pressure, hiccough and vomiting, cold feet, great thirst, difficulty of swallowing, or of getting anything completely into the stomach, restlessness, continued tossing of the body, great prostration of strength, and sometimes fainting. The pulse is hard, quick, and tense.

*Treatment—To cure.*—Cleanse the stomach of the cause of irritation, and equalize the circulation; then give cooling, healing, mucilaginous drinks.

*Means.*—A gentle emetic of Boneset and Lobelia herb, equal parts. *Dose*—a tea-spoonful in a cupful of an infusion of Bayberry, repeated every half-hour till it operates. Relieve the bowels by Common-purge, or injection. Then give Slippery Elm, pulverized fine, one tea-spoonful in a half-pint of warm or cold water, two or three times a-day. An ounce of sweet oil once a-day, a poultice of hot porridge, covered with Cayenne or mustard, over the stomach; and afterwards between the shoulders. A warm foot bath every night, or hot bricks to the feet in bed.

If the vomiting does not cease with this, take Mint water, or tea, half-pint; Bicarbonate of Potash, one tea-spoonful—mix. *Dose*—a dessert spoonful, whenever the vomiting returns.

When the special symptoms are removed, give a mild tonic. Golden Seal pulverized, a tea-spoonful infused till cold, in a cupful of hot water twice a-day.

There is a chronic form of this disease sometimes established, which baffles the regular practitioners entirely; its symptoms are milder than those of the acute form; whenever vegetables or broth is taken they are aggravated, and often violent diarrhœa comes on.

*To cure.*—Give, Golden Seal, Bayberry, and Slippery Elm, one ounce each; Ginger and Myrrh, one-half ounce each; all finely pulverized and mixed. *Dose*—a tea-spoonful in a cupful of warm water; take the sediment, two, or three times a-day. Food in both cases should be light; toasted bread and milk, milk porridge, rice and milk, sago, arrow-root, boiled rice, and cold water.

## INFLAMMATION OF THE BOWELS OR INTESTINES (INTERITIS).

The mucous membrane lining the intestines is the seat of this dangerous and painful disease.

*Causes.*—Exposure to cold and wet, especially of the feet and lower portion of the body. Long-continued costiveness, or hardened feculent matter retained in some portion of the intestinal canal, preceding cholic; eating unripe fruits, scirrhous tumours of the intestines, or strictures.

*Symptoms.*—Acute pain in the bowels, which shoots round the navel, obstinate costiveness, tightness of the belly, vomiting of bilious matter, or of the stools. The urine high-coloured, the pulse quick, hard, and contracted.

*Treatment—To cure.*—Equalize the circulation, relax the constriction, cool and soothe the affected parts.

Emolient injections repeated three or four times a-day (*see* INJECTIONS), a Warm Bath, or a Vapour Bath; fomentations of Camomile, or of Wormwood, Tansy, and Hops, which are bitter, to the abdomen; hot bricks, or water bottles wrapped in cloths, damped with vinegar, to the feet. To allay sickness give Mint tea and Bicarbonate of potash, as in inflammation of the stomach; and as soon as it will remain on the stomach, mucilage of Slippery Elm, as given in that complaint. To purge, an ounce of Castor-oil or Olive-oil.

Give also an infusion of Clivers, Hyssop, and Catnip, one ounce each to one quart of boiling water; a tea-cupful three or four times a-day.

## INFLAMMATION OF THE PERITONEUM (PERITONITITIS).

Inflammation of the membrane which surrounds, and is attached to, the organs contained in the cavity of the abdomen, and which protects them from misplacement. This form of disease arises from similar causes as the preceding, is accompanied with nearly similar symptoms, and requires similar treatment.

## INFLAMMATION OF THE LIVER (HEPATITIS).

Either the membranes, or substance of the liver, is the seat of inflammation.

*Causes.*—Sudden exposure of the heated body to cold, external violence, hot climate, the taking of mercury, over-rich food, and drinking spirits and wines.

It is either acute or chronic.

*Symptoms of the Acute Species.*—Severe pain in the right side immediately under the lower rib, extending up to the shoulder, which is increased by pressure upon the part; short, dry, frequent cough, oppressed breathing, and difficulty of lying on the left side, sickness, no appetite, great thirst, and sometimes vomiting of bilious matter. The urine is high-coloured and small in quantity; the skin and eyes yellowish.

*Treatment—To cure.*—Equalize the circulation, produce free perspiration, and evacuate the intestinal canal, Vapour, Warm-salt, or Sheet-bath, hot bricks or bottles to the feet, poultice of hot porridge, covered with Cayenne, over the seat of pain, kept on as long as it can be borne, and afterwards fomented with flannels wrung out of hot water or decoction of bitter herbs. Give infusion of Yarrow, Catnip, and Pennyroyal, or of Sudorific powder, a tea-cupful every two hours till perspiration is produced. Give also Anti-bilious purge (*see* PURGES), once a-day. When the violent symptoms are removed, Anti-bilious powder, two or three times a-day.

## CHRONIC INFLAMMATION OF THE LIVER (LIVER COMPLAINT).

*Causes.*—Salivation for, and other improper treatment of, the acute form of the disease, long-continued intermittents, chronic dyspepsia, long confinement to impure air, &c. It is always accompanied with more or less of dyspepsia, cough, with but little expectoration, flatulence, headache, lowness of spirits, despondency, general debility, morbid sensibility and irritability, costiveness, sallow skin, coated tongue, clay-coloured stools, and pinky urine, depositing a red sediment and ropy mucus. This disease is often mistaken for consumption of the lungs, whereas it is really consumption of the liver, for the organ becomes the seat of scirrhous tumours, abcesses, &c.

*Treatment.*—Alterative pills, No. 1, two twice or three times a-day, or Anti-bilious purge once a-day, or every second day for a time, and then omitted; a decoction of Dandelion, four ounces; Burdock, two ounces; or Yellow Dock, two ounces; Sassafras Bark, two ounces; Sarsaparilla, four ounces. Bruise and boil all for two hours in a gallon of water down to half a gallon, add two pounds of Golden Syrup, and four ounces of Rheumatic Drops; of this take a wine-glassful three times a-day; when this quantity has been

taken, use the Anti-bilious powder for a few weeks. Be patient and persevere. Take open-air exercise, vegetable food, no soups nor fats, coarse bread, cold water, thin cocoa, milk, and fruit.

## INFLAMMATION OF THE SPLEEN (SPLENITIS).

*Causes.*—Same as those which produce inflammation of the liver, to which it bears a great resemblance, only the pain is seated in the *left* side instead of the right.

*Symptoms.*—Shivering succeeded by intense heat and thirst; severe coldness of the extremities on going into the open air; sometimes bleeding from the left nostril. In other respects the symptoms are the same as in hepatitis. This disease is also subject to a chronic form.

*Treatment.*—The same as for inflammation of the liver.

## INFLAMMATION OF THE KIDNEYS (NEPHRITIS).

*Causes.*—Sudden check of perspiration after being warm with exercise, strains of the back, over-exertion of the body, unusual bodily labour, acrid substances conveyed to the kidneys by the circulation, and calculous concretions lodged in the kidneys or ureters. Some people have a constitutional predisposition to be affected by this complaint.

*Symptoms.*—Sharp pain in the back in the region of the kidneys, which is felt more severely on attempting to straighten the body after stooping; the pain frequently runs down to the small of the back, and is sometimes rather dull than acute. There is an inclination to frequently void urine, which is small in quantity, high-coloured or red, yet watery and limpid. There is pain in the groin and testicle on the side of the inflammation, and the thigh feels benumbed. Eructations arise from the stomach, sometimes bilious vomitings, and there is feverishness and considerable debility. This disease also assumes a chronic form.

*Treatment—To Cure.*—Equalize the circulation and relax the inflammatory constriction.

*Means.*—Fomentations, as for inflammation of the liver, and the same means in order to produce perspiration. Open the bowels with Anti-bilious purge, infuse Clivers or Pelatory of the wall, or equal parts of both, one ounce to one pint of boiling water, for half

an hour; to a cupful of this warm infusion add a tea-spoonful of pulverized *Pinus Canadensis.* Stir up, drink it, whilst moderately warm, three times a-day; about two-thirds of this dose for a woman.

Drink freely also of the mucilage of Slippery Elm, or a decotion of Marshmallow herb or root, or drink Mint tea.

*Treatment for the Chronic Form.*—Rub the back briskly with Rheumatic Drops, a strengthening plaster may also be applied, and the Clivers and Pinus taken as above.

## INFLAMMATION OF THE BLADDER (CISTITIS).

*Causes.*—Cold, &c., as of other local inflammations, and the use of improper medicine, severe costiveness, the lodgment of a stone in the bladder, or other sources of irritation; inflammation extending from the urinary canal, and from a diseased state of the prostate gland. Also from too long retention of urine.

*Symptoms.*—Burning pain and tension at the bottom of the abdomen, where the bladder is situated; a constant desire to void urine, without the ability to do so, or with great difficulty; also a frequent inclination to go to stool, with heat, uneasiness, and general feverishness. The pulse is hard and quick. This form of disease also sometimes becomes chronic; the symptoms are less violent, and the urine is mixed with blood and mucous.

*Treatment.*—The warm sitz or hip bath once a-day, fomentations as for the kidneys and liver, and a poultice of warm porridge and ginger applied to the bottom of the belly.

*Medicine.*—The same as for inflammation of the kidneys.

## INFLAMMATION OF THE WOMB (HYSTERITIS).

*Causes.*—The chief cause is exposure to cold or a draught, or lying on a damp bed after confinement. Another prevalent cause is the use of surgical instruments during delivery. External injury and the common causes of inflammation may also produce it.

*Symptoms.*—Pain in the lower portion of the belly, which is increased by pressure with the hand; swelling and tension of this region, feverishness, depression of strength; change of countenance, great thirst, nausea, and vomiting. The bowels are costive, the urine high-coloured and small in quantity, and the lochial discharge partially or wholly suppressed.

*Treatment.*—Produce perspiration by vapour bath, give an injection of Common-purge and Lobelia, and an Emetic with common Emetic powder; if necessary repeat this within twenty-four hours. Keep the bowels gently open with Common-purge. Foment the part with hot flannels, or put on a poultice of porridge and ginger. Keep the feet warm. Give Ginger, Pinus, Beet-root, and Unicorn root all pulverized, half ounce each. *Dose*—a small tea-spoonful in a cup of hot water with sugar; let stand a few minutes, stir up before drinking, three times a-day.

## COMMON COLDS AND COUGHS (TUSSIS).

From these common things, when neglected, arise the most serious consequences. The very robust and constitutionally strong, may neglect to take proper measures for relieving themselves of cold, and for a time the constitutional energies may overcome them; but as certain as the sun shines they will suffer in the end, by having their constitutions weakened, and will become subject to some chronic disease, or suffer a serious attack of a violent acute one. Delicate people should be especially careful to avoid taking cold, and when by chance it is taken, lose no time in having it expelled. Half the diseases that mankind suffer from, are the results of taking cold; therefore as you value life and the interests of your family, neglect not your colds and coughs; they are the forerunners of consumption.

*Causes.*—Cooling too fast after perspiring, sudden change of temperature, damp clothes and beds, insufficient clothing and sudden changes from heavy warm to light cool clothing, exposure to cold draughts of air, &c. &c., all which produce a chill or a check of perspiration.

*Symptoms.*—Pain in the head, stoppage of the nose, difficult breathing, watery eyes, pains in the chest, soreness of the throat, cold shivers and feverishness, increased flow of mucous from the nose, lungs, and throat, in consequence of slight inflammation of the mucous membrane lining these parts, sneezing and coughing.

*Treatment—To cure.*—Take a vapour bath, or a warm salt foot bath, and a dose of Composition powder at night, and repeat the Composition two or three times a-day; or take equal parts of Composition and Horehound pulverized—mixed. *Dose*—as of Composition alone, with warm foot bath at night; or, take Horehound,

Hyssop, and Yarrow, of each one ounce. Boil them in three pints of water half an hour, strain whilst hot, add a tea-spoonful of Cayenne Pepper, sweeten with Syrup, put the feet in a warm bath, and drink one-third of the decoction; or put hot bricks or bottles to the feet, and drink it in bed; take the remainder during the next day, and if you are not rid of the cold in thirty-six hours, it's what my boy calls a *stunner*. After you have perspired in bed during the night, the body should be sponged all over with cold salt water. If after taking a proper sweat or two, a cough remains, take Cough Syrup, or Thomson's Cough Powder; or take a decoction of Horehound, Linseed, and Liquorice. Diet should be abstemious; no spirits, wines, nor beer, unless it be a posset of hot ale, ginger, &c., or half an ounce of Elicampan root boiled in a pint of old ale, and well sweetened, and drank warm on going to bed. These latter are only fit for the robust and strong.

### CATARRH OR INFLUENZA (TUSSIS EPIDEMICUS).

This is an epidemic cold, which occasionally prevails in Europe and America, and affects nearly the whole population.

*Causes.*—Besides exposure to cold, it is supposed that the air is impregnated with a specific poison, which produces this disease in its epidemic form; perhaps it is only repeated and rapid changes of weather.

*Symptoms.*—Excessive discharge of mucous from the membranes of the nose, mouth, and bronchia, attended with sneezing, coughing, thirst, lassitude, feverishness, and want of appetite.

*Treatment.*—Vapour bath, and same in other respects as for common cold.

### CROUP (CYNANCHE TRACHIALIS).

This is an acute inflammation of the trachea or windpipe. It prevails chiefly in winter and spring.

*Causes.*—Exposure to cold, moist atmosphere, &c.

*Symptoms.*—Difficulty of breathing, which is accompanied with a peculiar whistling noise. Severe fits of coughing, which usually increase in severity till they become very troublesome, and agitate the whole frame. Great thirst, restlessness, inclination to change from place to place, and sometimes great nausea and retching. The cough is dry and spasmodic, and what mucous is raised,

comes up with difficulty, and has either a purulent appearance, or seems to consist of portions of membrane. The head is thrown back to escape the pain attending coughing, and tears start to the eyes.

This disease sometimes comes on very suddenly, and has, in some instances, terminated fatally within twenty-four hours; this occurs from suffocation; great quantities of lymph are poured out into the larynx, windpipe, and bronchial tubes, which arrest the process of breathing.

*Treatment—To cure.*—Equalize the circulation, as in all other cases of local inflammation, call down the blood to the feet with a warm Ley (alkaline) or salt and Cayenne, or Mustard foot bath. Give infusion of Cayenne, or Anti-spasmodic Tincture, in warm water; or a warm infusion of the Emetic powder in small doses, a tea-spoonful of the infusion for a child of one year, and more in proportion to age. After the Emetic has operated, Common-purge; keep up a gentle perspiration, and give Cough Syrup, or acid Lobelia in golden syrup or honey. *Dose*—from ten drops to half a tea-spoonful. Bathe the throat and chest with Tinc. of Cayenne, or Rheumatic Drops.

## CHRONIC INFLAMMATION OF THE TRACHEA.

This is a form of disease which is often mistaken for consumption; it is very irritating, and attended with symptoms common to consumption and asthma. It chiefly attacks those of a nervous-bilious temperament, and if it be not removed in a reasonable time, it produces wasting of the body, and finally consumption.

*Causes.*—Cold, over-exertion, indigestion, and debility.

*Symptoms.*—A constant irritation in the windpipe, about the middle of the neck, from one to two inches below the *thyroid* cartilage, the prominence in the neck called Adam's apple, with a hard-sounding dry cough, and a slight expectoration of a tough saltish mucous. Quick pulse and cold feet.

*Treatment—To cure.*—Strengthen the system, produce gentle perspiration, correct digestion, and avoid all causes of irritation and debility.

*Means.*—A warm salt foot bath every night on going to bed, and a dose of Composition last thing. At night, apply the hot

flannel Compress, with Cayenne on it, to the neck, which endure as long as possible, and when it is removed, apply a dry flannel. Every night and morning rub the throat and chest with Rheumatic Drops and Camphorated Oil, equal parts—mixed. Take ordinary Bitter Decoction fourteen ounces, best solid Extract of American Sarsaparilla, prepared *in vacuo*, 1½ ounce, and one ounce of Rheumatic Drops ; add the latter to the former. *Dose*—a wine-glassful half an hour before breakfast and dinner. Take also a cold, salt, sponge bath every morning on rising. Take gentle exercise in the open air, and a light nourishing diet.

## INFLAMMATION OF THE BRONCHIAL TUBES (BRONCHITIS).

This is inflammation of the mucous membrane of the tubes which convey the air to the lungs, branching off from the windpipe. It is either *acute* or *chronic*. It very much resembles inflammation of the lungs.

*Causes.*—Cold and over-exertion of the voice and lungs. All inflammations arise from similar causes.

*Symptoms.*—It commences like a common cold, with tightness of the chest, and feverishness. As the disease continues, the symptoms increase in severity, respiration becomes laborious, and and there is a wheezing or rattling noise in the upper part of the chest. The cough is at first dry, then an expectoration of viscid, transparent mucous, occurs; afterwards it changes to a greenish colour. The tongue is white, and covered with mucous; the skin dry, and the nerves very irritable, and morbidly sensitive.

*Treatment—To cure.*—Equalize the circulation as before; use sudorifics and expectorants; Vapour-bath, Emetic, Common-purge —poultice of porridge and Cayenne to the upper part of the chest and neck, warm bath to the feet, rest, and good living. Expectorant Tinc.—Tincture of Lobelia Inflata, one ounce; Tincture of *Sanguinaria Canadensis*, one ounce ; Tincture of Horehound, one ounce—mix. *Dose*, for an adult—half to a spoonful in honey or syrup every three hours. Or give double doses of Cough Syrup. Also, a glass of the following bitters three times a-day :—Agremony, Horehound, Hyssop, Yarrow, and Coltsfoot flowers, one ounce each, to four pints of water, boiled down to three pints, sweetened with Spanish juice.

## CHRONIC BRONCHITIS.

*Causes.*—It is often the result of acute bronchitis, and very frequently it is the consequence of neglected catarrh or common cold, sometimes of dyspepsia, and sometimes of measles, and sometimes from irritating vapours and substances floating in the atmosphere.

*Symptoms.*—Similar to the acute form, with less violence, and more general debility and emaciation.

*Treatment.*—The same as for the acute form of the disease. A course of medicine once a week or fortnight. The Cough Syrup, or Expectorating Tinc., warm foot bath, and Composition at night; and take the Bitters one week, and the alterative decoction (S.) (*which see*) another; with one ounce of No. 6, added to fifteen ounces of the latter. *Dose*—a wine-glassful two or three times a-day, an hour before meals.

## WHOOPING COUGH (PERTUSSIS).

A convulsive cough, interrupted by a full and sonorous inspiration or whooping, from which it takes its name. Children are mostly subject to it, and it affects them but once in their life. It sometimes prevails epidemically.

*Cause.*—It is believed to arise from a specific contagion. I think it is an inflammation of the epiglottis and glottis (head of the trachea).

*Symptoms.*—It comes on with slight cough, difficulty of respiration, thirst, and slight feverishness, which are followed by hoarseness, cough rapidly repeated, and difficult expectoration, gasping for breath, and a whooping noise as it is inhaled. The cough continues until either mucous is raised, or the contents of the stomach are vomited. When the fit has passed, the child returns to its food or play as if nothing ailed it. It seems to arrive at a height, continue for some weeks, and then go off gradually. I have had children to treat for this complaint, that have had it many months. Many people in this country believe there is no cure for it. I never saw a case that was not quickly cured by the botanic treatment, or so far relieved that it did not annoy them.

*Treatment.*—Warm salt bath every second, third, or fourth night: also infusion of Pennyroyal and Bayberry bark; give it freely—children like it when sweetened. When perspiration ap-

pears, give an Emetic, with acid of Lobelia, or with common Emetic powder. Give a dose of *Black-Powder* (*which see*) every morning; and a dose of acid of Lobelia, from ten drops to half a tea-spoonful, in syrup, or honey, two, three, or four times a-day, according to the violence of the complaint; or give Cough Syrup: or Expectorant Tincture: or Tincture of Cohosh:—*Dose, for a child of one year*—from fifteen to twenty drops, four or five times a-day.

## INFLAMMATION OF THE LUNGS (PNEUMONIA).

This is inflammation seated on the mucous membrane lining the lungs, or on the substance of the lungs.

*Causes.*—Sudden application of cold, which causes the capillaries and pores of the skin to contract, and the blood to recede to the centre. People are most subject to it after speaking or singing in warm rooms, and then quickly leaving them. One lung or both may be the seat of the inflammation.

*Symptoms.*—It comes on with great difficulty of breathing, obtuse pain in the side affected, or across the chest, inability to lie on the side affected, a dry painful cough, thirst, heat, dryness of the skin, and anxiety. At first the pulse is generally full, strong, hard, and quick, but when the disease has been established some time it becomes weak, soft, and even irregular. The expectoration is sometimes streaked with blood. "If relief is not afforded in time, and the inflammation proceed with such violence as to produce suffocation, the vessels of the neck will become turgid and swollen, the face will alter to a purple colour; an effusion of blood will take place into the cellular substance of the lungs, so as to impede the circulation through that organ, and the patient will soon be deprived of life."

If the inflammation be not subdued in proper time, suppuration may ensue, which change may be known by slight shiverings, and an abatement of the pain. When it terminates by resolution, some very evident evacuation takes place, as a copious flow of urine, diarrhœa, sweat, or bleeding from the nose, "but the evacuation which most generally terminates the complaint is a very copious expectoration of white or yellow mucous streaked with blood; by this the disease is carried off, in the course of ten or twelve days."

*Treatment—To cure.*—Means must be promptly applied to re-

duce inflammation. Produce perspiration by Vapour bath, and an infusion of Boneset, Catnip and Cohosh, or Sage; give it warm and freely, put hot bricks in vinegar cloths to the feet, when in bed, and apply a large poultice of warm porridge, the surface covered with Cayenne, to the chest, or foment with flannels wrung out of hot water and lightly covered with Cayenne. An injection of Common purge and Lobelia, and an Emetic with Emetic powder. Next day give a dose of Anti-bilious purge, and if necessary repeat the Vapour bath; at any rate keep up a free perspiration for twenty-four hours, unless the patient be relieved before the end of that time. Then let down the perspiration gently, keeping a little moisture on the skin. Food—rice, sago, arrow-root, &c., as in fever. When the violent symptoms are removed, keep up digestion with Bitters.

## INFLAMMATION OF THE PLEURA, PLEURISY (PLEURITIS).

This is inflammation seated on the membrane which encases the lungs like a double sack.

*Causes.*—Same as of all other inflammations—cold, variously applied, especially after drinking spirits. The stopping of any customary evacuation, as the sweating of the feet, or the sudden drying up of running ulcers, &c.

*Symptoms.*—This, like other inflammations and fevers, begins with chilliness and shivering, followed by heat, thirst, restlessness, &c. In the course of a few hours a violent pricking pain comes on in one side, about the short ribs, which extends towards the spine, the shoulder-blade, or the breast-bone, which is attended by frequent coughing. The matter spit up at first is generally thin mucous, streaked with blood; as the disease advances, the matter becomes more purulent; sometimes there is no expectoration, in which case it is called dry pleurisy. The pulse is remarkably strong and vibrating.

*Treatment.*—Precisely the same as for inflammation of the lungs. To produce perspiration with an infusion of sudorific herbs, the warm foot bath, and the porridge and Cayenne poultice to the side; make the poultice large enough, and keep it on as long as it can be borne. When perspiration is produced, take the purge.

## INFLAMMATION OF THE DIAPHRAGM (PARAPHRENITIS).

This is inflammation of the muscular membrane which divides the thorax from the abdomen, usually called the *midriff.*

*Causes.*—Same as those of pleurisy.

*Symptoms.*—Violent deep-seated pain under the short ribs, which strikes through to the back. Respiration short, quick, and difficult; sickness and hiccough; the pulse small, hard, quick, and irregular.

*Treatment.*—The same as for pleurisy.

## INFLAMMATION OF THE HEART (PERICARDITIS)

This is an inflammation, not of the substance of the heart, but of the membraneous bag in which it is inclosed, called the pericardium.

*Symptoms.*—Pain in the region of the heart, violent palpitating motion of that organ, sense of suffocation, irregular breathing, which is rendered worse by exercise. Pulse frequent and bounding, the countenance pale and haggard.

*Treatment.*—Relax the system by sudorifics and anodynes; ten grains of Lobelia, in an infusion of Catnip and Valerian. Warm foot bath, or vapour bath, and then Common purge. Keep up a gentle perspiration, and procure sleep by the Diaphoretic powders. A mustard poultice may be put over the region of the heart, or a tepid compress from below the arms to the hips. The diet should be light, free from fat, and consist chiefly of bread, rice, sago, fruits, vegetables, and milk; nothing that is stimulating should be taken as food or medicine. Rest and quietness must be insisted on. There is a chronic form of this complaint; the symptoms are similar to those of the acute, but less violent, and the treatment must be the same.

## INFLAMMATION OF THE BRAIN (PHRENITIS).

This is an inflammation of the membranes of the brain, or of the brain itself. It is *primary*, when it occurs not in connection with any other disease; *symptomatic*, when it occurs in connection with, or as the consequence of, some other complaint.

*Immediate or Proximate Cause.*—Determination of blood to the brain. (*See* article on CIRCULATION).

*Remote or Exciting Causes.*—Fits of passion, continued intense mental excitement, external violence, intemperance, exposure to great heat of the sun, and suppressed evacuations.

*Symptoms.*—The patient experiences a sense of heat and fulness in the head, and a throbbing of the temporal arteries; headache, watchfulness, intolerance of light and sound; he talks incoherently, and delirium gradually comes on, and increases till it arrives at a state of complete phrensy. He experiences a strong disposition to injure himself, which he will do, if not prevented.

Respiration is generally *deep* and *slow*, and sometimes difficult. There is tremor of the joints, grinding of the teeth, twitching of the muscles of the face, sudden change of countenance, and a general derangement of all the functions of the system.

*Treatment—To cure.*—Equalize the circulation, divert the blood from the head by the means before described, put the feet into a warm alkaline or salt bath, with Cayenne pepper in it. Cut off the hair, bathe the head with equal parts spirits, vinegar, and water, or camphorated water and ammonia. Give Common purge, and excite perspiration, or, give Boneset and Bitter Root, one ounce each, Cayenne and Lobelia herb, quarter ounce each, all pulverized and mixed. *Dose*—a tea-spoonful infused in a cupful of hot water. Repeat it as often as every half hour, if you can get the patient to take it, until perspiration, vomiting, and relaxation takes place. If the patient cannot be got to take medicine, lay him on his belly by force, put hot mustard poultices to his feet, and give an injection of half an ounce of Anti-spasmodic Tincture in half a pint of warm water, repeated every two hours, three or four times. A small tea-spoonful of the Diaphoretic powders may be given in a cup of Catnip tea, and if the patient will drink, give him a tea of Catnip, or Catnip and Skullcap, as freely as he will take it.

Cooling diet, as in fevers and other inflammations.

## INFLAMMATION OF THE EYE (OPTHALMIA).

*Causes.*—Exposure to bleak winds, sudden change from heat to cold, contact with foreign bodies of an irritating nature, the introduction of dust, steel-filings, and other substances, underneath the eyelid, &c., &c.

*Symptoms.*—Sharp pain in the organ, heat, redness, and swelling of the eye and eyelids, effusion of hot, excoriating tears, and morbid sensibility to light.

*Treatment—To cure.*—First remove the cause, if it be a foreign body; to do this, raise one eyelid up and put the lashes of the other lid beneath it, move the eye about, and then open it; if this does not effect it, dip the face into clear tepid water, and open and shut the eyes; if this is not sufficient, inject a little clear mucilage of Slippery Elm into it; if this does not remove it, and it is supposed to be iron or steel, hold the eye near to a strong magnet. When the cause of irritation is removed, apply a poultice of pulverized Slippery Elm; let it enter the eyelids if it will; it should be mixed with slightly tepid water, or milk and water. Repeat it every three or four hours till cured.

There is nothing, rest assured, yet discovered, equal to Slippery Elm for acute inflammation of the eye, or any other part it can be applied to.

For chronic inflammation of the eye, arising from any cause, use the same poultice and the eye-wash (*which see*).

*Weak Eyes.*—Some children and older people have constitutionally weak eyes, or a tendency to soreness. I have always found that putting the face into a bowl of clear, cold, spring water, and at the same time opening and shutting the eyes several times—morning, noon, and night, has strengthened them, and has cured some bad cases of inflammation of the eyes.

*Chronic Opthalmia.*—I have cured very bad cases of chronic inflammation and ulceration of the eyes, by using the Elm poultice at night, the eye-wash three times a-day, and the Alterative or Anti-scorbutic powder, or the S., two or three times a-day.

Excrescenses may be removed by the *sanguinaria canadensis*, pulverized, applied with a wet hair-pencil.

If there be constitutional disease, it must be removed by proper treatment. Cataract and amaurosis, both require constitutional treatment as well as external applications; at least I never succeeded with any without it; they are very difficult to cure. The above treatment may be applied in some cases with considerable benefit.

## INFLAMMATION OF THE EAR (OTITIS).

This is inflammation seated on the vasculo-nervous membrane, which lines the internal cavity of the ear.

*Causes.*—Cold, &c., the same as of other inflammations.

*Symptoms.*—Acute pain in the organ, attended with feverishness, and sometimes with delirium. Sometimes the external portions of the ear become red and swollen, suppuration often occurs, and a quantity of matter is discharged; this sometimes continues for years.

*Treatment—To cure.*—Reduce the inflammation by local steaming, or fomenting with hot decoctions of Wood sage, Wormwood, or Hops. Promote perspiration in the usual way, and take

| | | |
|---|---|---|
| Oil of Sassafras | ½ ounce. | Mix. |
| Oil of Olive | 1 „ | |
| Gum Camphor, pulverized | 1 drachm. | |

Warm this liniment, and pour a small quantity on a pledget of cotton, which bind over the ear. If the pain still continues, drop it into the ear.—*Beach.* Or, take camphorated oil and chloroform, equal parts; apply in the same way.

## MUMPS (CYNANCHE PAROTIDEA).

This is a painful swelling of the glands of the neck, with more or less inflammation and soreness. Children are more subject to it than adults. It generally occurs in spring.

*Cause.*—Supposed to be contagion.

*Symptoms.*—The parotid glands become enlarged, with hard swelling, more or less painful, which sometimes increases to such an extent as to impede respiration and swallowing. "The swelling is sometimes translated to the testicle, and becomes dangerous, increases for two or three days, and then subsides." There is feverishness, and other sympathetic affection. Sometimes suppuration takes place internally, and the contents of the tumour being discharged into the larynx, produce suffocation. This is rare.

*Treatment.*—Keep the patient warm. Bathe the feet, and pro-

duce perspiration; if costive, give Common purge. Bathe the parts with the following :—

| | | |
|---|---|---|
| Oil of Sassafras | ½ ounce. | Mix. |
| Oil of Olive | 1 „ | |
| Gum Camphor, pulverized | 3 drachms. | |
| Castile Soap, scraped | 1 „ | |

and apply warm three times a day.—*Beach.*

If suppuration ensues, make a poultice of oatmeal or Indian meal with beer, which apply constantly till it is improved.

## INFLAMMATION OF THE BREAST—MAMMARY ABSCESS (MASTODYNIA).

The breasts of women are subject to this form of disease, from the common causes of inflammation.

*Treatment.*—Poultice with the Slippery Elm; rub with equal parts of No. 6 and Camphorated Oil. Take Composition, and warm foot bath to produce gentle perspiration, and take Common purge.

## ST. ANTHONY'S FIRE, OR ROSE (ERYSIPELAS).

*Causes.*—Cold, and morbid or acrid secretions retained within the system; in common language, impurity of the blood acted on by cold, &c. It occurs on various parts of the body.

*Symptoms.*—Shining inflammatory redness and swelling of the parts affected, which are hot, painful, stinging, itching, and smarting. From the inflamed surface, serous or watery effusion frequently takes place, elevating the skin into various-sized vesicular blisters, or raising it by a soft, yellowish, jelly-like deposit, which remains slightly adherent to both the cutis and cuticle. Sometimes these vesicles are of a bloody or livid colour. In a little while this fluid escapes, and incrustations form, which fall off in scales, leaving the skin sound, or else superficial ulcerations form. These ulcerations are red, deep-seated, and distressing. In this disease, there is always more or less constitutional disturbance, which must be corrected to effect a permanent cure.

*Treatment—To cure.*—Correct digestion, secretion, and excretion.

*Means.*—Anti-bilious purge, once in two or three days. Alterative, or Anti-scorbutic powder, or S., three times a-day. Poultice with common poultice (*which see*), or Slippery Elm, pulverized, three ounces, Lobelia herb, pulverized, one ounce—mixed. Mix up with a warm tea of Bayberry or Yellow Dock.

Wash at intervals, when the poultice is changed, with Tincture of Garden Selandine, one ounce to one pint of whisky, steeped for a few hours; or this may be omitted. When the ulcers are cooled and improved, apply Burn-salve.

## ASTHMA (ASTHMA).

This is an affection of the vessels and tubes of the lungs, or rather of the mucous membrane lining them. It is either *humid* or *dry*.

Persons of a plethoric habit of body, and of lymphatic-nervous temperament, are subject to the humid variety, which is attended with considerable expectoration from the lungs.

The dry variety is found mostly in connection with a thin, spare habit of body—temperament, nervous-bilious. This is also called spasmodic asthma, because of its spasmodic symptoms.

*Remote Causes.*—Cold, moist atmosphere, exposure to heats and colds, which cause a check of perspiration; irritating vapours and substances floating in the atmosphere of workshops and factories; over-exertion, and whatever has a tendency to exhaust the system; drinking spirits, neglecting to take proper rest, night-air, and all other causes which produce irritation of the lungs.

*Proximate or Immediate Cause.*—Congestion of the arterial and venous capillaries of the mucous membrane of the lungs, by which the nervous filaments ramified in that membrane are rendered morbidly sensitive. This causes the secretion of the mucous as a means of protection, which we see expectorated in humid asthma, and it is also the cause of that spasmodic cough, which is a resistance to the immediate cause of irritation, exhibited in the spasmodic variety. The reason that this cough comes on worse at night, when laid down in bed is, that at such time the general nervous system is more relaxed, and consequently more irritable.

*Symptoms.*—It very often comes on first by an affection of the

mucous membrane of the stomach, or indigestion, with heart-burn, flatulence, itching of the skin, pain over the eyes, and sleepiness. The spasmodic cough comes on at night, often whilst asleep; it is most distressing. The patient feels a tight oppression across the chest, with great difficulty of breathing; he gasps and wheezes, and fights for air as if he were choking; and when the fit goes off, which is slowly, there is generally an expectoration, more or less, of mucous, which, as the disease advances, becomes yellowish and purulent. I have seen as much as a quart of this discharged in twelve hours. Whilst the patient is suffering only a slight attack or condition of the disease, the symptoms are always increased by ascending hills, or doing any other thing which excites increased respiration.

*Treatment—To cure.*—Equalize the circulation, produce gentle perspiration by sudorifics, and excite the kidneys and bowels to proper action. Then use expectorants and tonics.

*Means.*—To reduce urgent symptoms, put the feet into a warm, salt, ley, or mustard foot bath. Rub the chest with Tincture of Cayenne, or the acid of Cayenne, or with No. 6; and give infusion of, Boneset, Cohosh, and Skunk Cabbage, equal parts, all pulverized and mixed. *Dose*—a tea-spoonful to a cupful of boiling water sweetened, every ten or fifteen minutes, till perspiration is produced. To each dose of this may be added from half to a tea-spoonful of the Tincture of Lobelia, immediately before it is drank. Keep the patient warm whilst taking the above medicine, or put him, if convenient, into a vapour bath at once, with his feet in the warm bath at the same time. The above means will certainly and speedily relieve. To effect a permanent cure, take Anti-bilious purge every second or third day. Also—

| | | |
|---|---|---|
| Syrup of Squills | 4 ounces. | } |
| Cough Syrup | 4 „ | } Mix. |
| Oy. Decoction | 8 „ | } |

*Dose*—a small wine-glassful three times a-day, before meals, for an adult man; for a woman, two-thirds of the dose.

Take a warm foot bath every night on going to bed; sleep with hot bottles or bricks to the feet. Before lying down, drink a cupful of Infusion of Composition and Horehound, pulverized, equal parts; a tea-spoonful to a cupful; sweeten with Golden Syrup.

A vapour bath may be taken once a-week at bed-time. Boiled carrots for dinner every day, along with a little lean chop or steak. No heavy pastry or fat meat, nor soup must be taken. Flesh meat is not necessary, if the patient can do without. If the case be a severe one, when the above medicine has been used for two or three weeks, change it for Sp. one ounce, Oy. seven ounces, S. seven ounces, No. 6, one ounce. *Dose* as before, three times a-day. Use Bread of Life when in the open air.

## CONSUMPTION (PHTHISIS PULMONALIS).

Some authors enumerate as many as thirty different species of this complaint.

What is popularly known as consumption is wasting of the substance of the lungs. There is, however, a wasting of the body, the consequence of general debility and relaxation. This latter is characterized by symptoms somewhat different to the former—there are always symptoms of indigestion in connection with it, whilst in cases of true consumption of the lungs, the appetite is often very good.

The constitution, or temperament, of persons most liable to consumption of the lungs is nervous-sanguine, and is distinguished by long neck, sloping shoulders (prominent behind), narrow chest, fine clear skin, rosy complexion, large veins, thick upper lip, weak voice, and great sensibility, and general want of stamina. Consumption is excessive capillary action in the mucous membrane of the lungs, and deficient capillary action in the skin.

*Causes.*—Besides constitutional tendency, acted upon by cold, debility (the consequence of other diseases), such as measles, small-pox, scrofula, and venereal, or rather, mercurial salivation performed for the cure of the latter disease; irritating particles of dust floating in the air of some workshops, the fumes of metals and minerals, &c.; violent and long-continued passions or affections of the mind, as anxiety, grief, disappointment, and close application to study, without taking sufficient bodily exercise; damp, cold feet, and sedentary employment; drinking spirits, and debaucheries; great evacuations, as occur in diarrhœa, diabetes, and menstrual flux; suckling children too long, or when in a

weakly state, tight lacing, and improper clothing. This disease is generally supposed to be incurable. I was of this opinion till I witnessed several cases of cure, which were considered hopeless. And when we consider the wonderful efforts which the conservative power of life puts forth on some occasions to conserve and repair the tenement in which it dwells, we cannot find any insurmountable obstacle to the cure of this complaint. Why should not ulcerated lungs be cured as well as ulcerated stomach, intestines, liver, kidneys, or any other organ? It is argued because they are always in motion; so must the stomach be almost constantly active to support the body, and the function of the lungs can be somewhat relaxed, and the circulation in a measure abstracted from the tissues of the lungs as well as from the tissues of other organs, if proper means are employed. "The fact that cicatrices or scars have been discovered in the lungs of persons on *post mortem* examinations, who had been cured of consumption, and who subsequently died of some other complaint, proves beyond dispute that the disease is curable."

*Symptoms.*—These vary somewhat, on account of the condition of the organ chiefly affected. There is either inflammation of a chronic character of the mucous membrane of the lungs, or tubercles (small hard round knots or tumours) lodged in the substance of the lungs. The symptoms also vary with the remote cause, but when tubercles are formed in the lungs, it usually begins with a short dry cough, which after a time becomes habitual, which does not seem to distress the patient much, and along with which nothing is expectorated except a little frothy mucous. Respiration is impeded, and is much hurried in consequence of bodily motion, except the easiest possible, and a sense of straitness or oppression at the chest is experienced. The body soon begins to lose flesh, and langour, debility, and dejection, with loss of appetite prevails. This state continues for a longer or shorter period, the patient being sensibly more easily affected with cold; he seems to take cold in spite of the best precautions, when the cough becomes more troublesome and severe, particularly at night, and the expectoration becomes more copious and free. By degrees the expectorated matter becomes more viscid and opaque, and assumes a greenish colour and a more purulent appearance; and on some occasions is streaked with bright red blood. On other occasions a quantity of frothy mucous and matter, mixed with a considerable quantity of blood, is spit up. Breathing

becomes more difficult, emaciation and weakness increase, the pulse is rapid and feeble, and a pain is felt in some part of the chest, on one side usually, at the upper or middle portion, and the patient is unable to lie on that side without much suffering.

*The Hectic Fever.*—This is evidently of the remittent kind, and comes on twice a-day, the first about noon, usually after dinner. The palms of the hands and the soles of the feet are affected with burning heat, the pulse is quicker and respiration difficult; a slight remission takes place about five o'clock, which is followed shortly afterwards with another accession of fever, which gradually increases till past midnight; and then remission takes place about two in the morning, which becomes more apparent as the morning advances. During the exacerbations of fever the patient is exceedingly sensible to any coolness of the air, and feels chilly, whilst his skin is unnaturally warm. The fever is worst at night. During the exacerbations of fever, a florid redness appears upon the cheeks. At the commencement of the hectic fever the bowels are usually costive, and the urine high-coloured, and deposits a branny red sediment; the tongue appears clean, the mouth moist, the appetite tolerably good, and thirst more than usual. As the feverish symptoms abate, perspiration breaks out, and the patient finds himself in the morning covered with a cold night sweat.

In the last stage of the complaint, the patient is reduced to a mere skeleton, and diarrhœa comes on to exhaust what little strength remains.

"Coughs, purulent expectoration, hectic fever, and wasting, do not necessarily constitute true consumption of the lungs; though they may prove equally fatal. On the contrary, facts have proved that all these symptoms often proceed from various other morbid affections, some of them as untractable as the true consumption, but others affording a much more favourable opinion, and that all of them may be fatal, with the usual symptoms of consumption, and yet the *substance of the lungs be found* entirely *free from disease.*" These facts clearly show the importance of considering the general constitution in the treatment of disease of any form, and of using such treatment as will benefit it, and through it, by sympathy, every part, whether a specific is known for the special form of disease or not: for the true specific for all forms of disease is to obtain and maintain integrity of the circulation.

*Treatment—To cure.*—I must repeat the oft-reiterated injunc-

tion, equalize the circulation, and by every means within your command keep it equalized.

*Means.*—Rest, and peace of mind and body, and an equal temperature of the air, are indispensable to the cure of this complaint. Whatever stage the patient be in when the botanic treatment is applied, and I regret to say that patients seldom think of applying it till everything else has been tried, and they have been given over as incurable by the regular doctors, commence by giving medicine gently; if the bowels are costive, open them with Common purge, or Black Powder, or Rhubarb Pills, or Yellow Dock pulverized, and infused. Every night the warm salt foot bath, and a dose of Composition and Horehound, equal parts—mixed. A tea-spoonful, infused in a cupful of boiling water for thirty minutes, sweetened and drank warm. In two or three days after, if the stomach be foul, give a gentle Emetic (*see* EMETICS), which follow with Hyssop, Horehound, Clivers, Ground Ivy, and Camomile Flowers, one ounce each; infuse for two hours in four pints of boiling water, strain clear and add two ounces of best juice of liquorice or one pound of Golden Syrup. *Dose*—a wine-glassful three times a-day, one hour before meals. Still take the Composition and Horehound at night, with the warm foot bath.

Take also, once or twice a-day, Consumption-food.

| | | |
|---|---|---|
| Finely pulverized Slippery Elm Bark | 1 ounce. | Mixed. |
| Pulverized Jamaica Ginger | ½ „ | |
| Pulverized Turkey Gum Myrrh | ½ „ | |

*Dose*—a tea-spoonful in half-a-pint of warm water, with four or five pieces of lump-sugar dissolved in it. Drink it when thirsty.

In place of the first prescription, or as a change against it, Oy., seven ounces; S., seven ounces; No. 6, half-ounce; Spanish juice, one ounce dissolved in it. *Dose*—a wine-glassful, as before. All the above are good and cheap medicines, and have done a deal of good. For females the dose may be a little less, or only twice a-day. When the cough is troublesome, a little Bread of Life may be taken.

When one medicine has been used a few weeks, it may be necessary to change it; this is the case in all chronic complaints. One of the best medicines I have ever used for this complaint is, Oy. (ordinary decoction) (*which see*), fourteen ounces; Alcoholic Extract of American Sarsaparilla, one and a half ounces; No. 6,

half-ounce—mix. *Dose*—a wine-glassful twice a-day, before breakfast and dinner; Composition, &c., as before.

I have used a variety of similar medicines under different circumstances connected with the disease, but the foregoing are as good, perhaps better, than any known generally amongst medical botanists. Some people have boasted a deal about cures of this complaint, and I have known many botanic and other prescriptions tried with various success, my opportunities for observation having been extensive; but I have never yet known one single prescription, without the aid of the auxiliaries I have here prescribed, effect a complete cure, nor indeed effect any extensive good.

The food should be light and nourishing—no wine, no spirits, nor malt liquors—neither would I advise flesh meat; boiled sole, or whiting, or skate, might be taken, and fruits that agree with the stomach, weather dried, as raisins and figs; or ripe, as grapes, oranges, and apples. Sweet cow's milk, goat's milk, ass's or mare's milk, and, above all, the milk of a perfectly healthy, robust, good-natured woman may be drank.

The fact that the latter has cured consumption by itself, is enough to recommend it to those who may have it at hand.

The surface of the body may be rubbed all over, once a-day, with cod, or ling liver oil, or olive oil, with advantage in many cases. I cannot recommend cod-liver oil as a specific for consumption, for I have often found it doing more harm than good, by deranging digestion; when it agrees with the stomach it seems often to do much good, but I have never seen a complete cure effected by it. A change of air to a warmer climate is often attended with complete success; I was told, however, that in *Lewis*, a very bleak island at the end of the range of the Western Islands of Scotland, where it is much colder in both summer and winter than in England, consumption is unknown among the inhabitants; the air seems light and bracing.

## INFLAMMATORY RHEUMATISM, OR RHEUMATIC FEVER (RHEUMATISMUS).

This painful disease is inflammation, more or less, seated on the muscular membrane or tissue, and locating chiefly about the

larger joints, or the ligaments and cartilages, and coats of the arteries; it seems to be produced immediately by absorption of cold or the retention of irritating matter in the blood, from suppression of perspiration, &c. In fact, it appears to me that in this case, as in many others, the life of some of the particles of the living body have been destroyed by exposure to cold and other causes, and that they have not been removed from the living community, and remaining in the vascular system, constitute a cause of obstruction and irritation to the living powers.

*Causes.*—Exposure to wet and cold, hard living, hard working, abuse of the constitution, and neglecting to remove common colds.

*Symptoms.*—Weariness and shivering, succeeded by heat, thirst, restlessness, anxiety, and pain all over the body, as if the patient, as he often expresses himself, had been beaten with a stick; pulse hard, full, and quick, with all the other symptoms common to inflammatory fever.

*Treatment—To cure.*—This must be in a great measure like that pursued for all previously named inflammations, or rather, locations of inflammation, for inflammation is the same thing, occur in what part of the body it may, and the same general treatment is required to remove it. Stimulation and relaxation are the general effects to be produced for the relief of it; and the special treatment must be directed to the organs or parts of the system most concerned and obstructed in the special case. In this case it is of the highest importance to stimulate the kidneys to increased action, and to excite the skin to active exhalation of perspirable matter, to cleanse the stomach and bowels of any offensive thing retained within them, and by thus relieving the system of the causes of irritation, reduce the inflammatory action. A vapour bath or warm salt bath is indispensable; a vomit if the stomach be foul; an injection if the bowels be very costive, if not, a purge; the Common-purge, diuretics and sudorifics to relax and excite the skin and kidneys, and fomentations and poultices to special parts, to ease pain. After the vapour bath the whole skin may be rubbed over briskly with a stimulating liniment, or oil, or Rheumatic Drops. To moderate inflammation in the joints, take half-a-pint each of vinegar, whisky, and rain water, salt one ounce—mix; dip flannel cloths in it, wring gently, and apply lukewarm to the joints.

As a sudorific, detergent, alterative, and diuretic, the following will be found as good as any thing known; it will never fail to do good, and in nineteen cases out of every twenty effect a speedy cure. It must always be remembered, in giving medicines, that some varieties of constitution and conditions of body require more treatment than others. Black Cohosh, Prickly Ash Seeds or Bark, Pinus Canadensis, and Pelatory, one ounce each; bruise, and boil all gently for half an hour in three pints of water. *Dose*—a wine-glassful three or four times a-day; or Yarrow, Angelica, Wood Sage, and Pelatory, prepared and used in the same way.

### CHRONIC RHEUMATISM.

This differs from the inflammatory kind in not being attended with fever, and in being more distinctly located in special parts, particularly the large joints; when in the loins it is called lumbago; when in the hip joint, sciatica. The causes are the same; the symptoms, severe, deep-seated pain in or about the joints, which in many cases shifts from one place to another. The treatment already detailed, if persevered in, I have never known to fail, with the assistance of poultices and liniments to local parts. (*See* LINIMENTS and POULTICES.)

### MERCURIAL RHEUMATISM

REQUIRES very persevering treatment of a similar kind, and the Anti-bilious purge once or twice a-week, and a change of medicine to the S. and No. 6, and similar detergents, with vapour baths.

### GOUT (ARTHRITIS).

This form of disease is very similar to rheumatism, but in place of the large joints it attacks the small ones, as the joints of the toes and fingers. It is divided into three species:—

1st, Atonic, which is accompanied with all the symptoms of dyspepsia, and in which the inflammation in the joints does not run high.

2d, Retrocedent. In this the pain and inflammation suddenly

cease in, or recede from one part and are translated to another, and to other parts than the joints, as the head, heart, lungs, or stomach.

3d, The misplaced, in which the inflammation does not rest upon the joints at all, but seizes some internal part, as in the retrocedent.

*Causes.*—These are generally the opposite of those which cause rheumatism—high living and intemperance being the chief.

*Symptoms.*—Pain and inflammation in the joints of the feet or hands, accompanied with the usual symptoms of dyspepsia—flatulence, and sourness of the stomach.

*Treatment.*—Local steaming with Yarrow, Wood Sage, Wormwood, or Hops, sudden immersion in cold water, repeated every two or three hours, or the cold water Compress; or poulticing with Slippery Elm simmered in vinegar.

Medicine the same as for rheumatism. Diet simple; vegetables and fruits, and milk and water for beverage. Exercise, active as possible.

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## GASTRIC AND INTESTINAL DISEASES, ACUTE OR CHRONIC, ORGANIC OR FUNCTIONAL.

### INDIGESTION (DYSPEPSIA).

DYSPEPSIA is either the consequence of vitiated secretion, a morbid condition of the gastric juice, arising from a debility of the organ which secretes it, or of bile and other fluids flowing into the stomach, in consequence of irritation of that organ by unsuitable food, or some other cause: it is either primary or symptomatic.

This disease takes various forms, exhibiting a greater variety of symptoms than any other disease I am acquainted with; some forms of it are often mistaken for consumption, others for asthma, and others again for liver complaint. Many people, in consequence of these mistakes, have been astonished at the rapidity with which they have recovered by our treatment. The regular doctors seem to be as far wrong in their treatment of this complaint as of asthma, fever, and consumption; every day am I disgusted with tales and

scenes of salivation, for this and other complaints, which are never cured by it. Indigestion is the most common form of disease prevailing, and it is the forerunner of nearly all other complaints, or a symptom found in connection with them.

*Causes.*—The most common causes of indigestion are intemperance in eating and drinking, long fasting, eating in a hurry, at improper times, and substances unsuited to the habit of body; insufficient exercise in the open air, too close study, anxiety, grief, smoking and chewing tobacco, improper medicine given for other complaints, especially mercury; and exposure to cold.

*Symptoms.*—I think there is scarcely a symptom that can be mentioned to which the dyspeptic is not subject. The most frequent, however, are loss of appetite, fictitious appetite or cravings for things which, when obtained, cannot be eaten; flatulence, and eructations, sometimes sour, and sometimes watery and sweetish, at others, bitterish. The tongue presents various appearances, coated over with a brown or yellowish fur, or rough and indented with cracks, or a red furrow dividing it in the centre. The bowels are sometimes costive, at others relaxed; there is pain at the pit of the stomach, or a little on the left side, pain in the head, dulness, sleepiness after dinner, heaviness and languor on rising from bed in the morning, and difficulty in waking at the proper time. When the disease becomes thoroughly established, it exhibits many symptoms analogous to those of consumption, the skin becomes dry, the countenance haggard, and the body shrinks and wastes.

*Treatment—To cure.*—If cold be the exciting cause, remove it; if over-eating and drinking, cease them; if want of exercise, take it; and so on with every other cause; remove the cause, and the effect will soon diminish. If the stomach be foul, cleanse it by emesis; if weakly, strengthen it by giving it light work or comparative rest, by regulating your diet, and strengthen it with tonic medicines, and by proper exercise, cold salt bathing, &c. As this disease is so varied in its condition and symptoms, it requires somewhat varied treatment. Sometimes the Stomach Bitters taken two or three times a-day, and Common purge once a-day, or once in two days, will effect a complete cure speedily. The Oy. two or three times a-day, with a little Cayenne added, and the Botanic Pills at night, will speedily remove the disease, if not of long standing. I have known the Botanic Pills alone cure some very bad cases of dyspepsia. I have remarked a

poor woman come every few days for a few pills, for a month or two, at the end of which time she has said, "These pills have cured my mother of a stomach complaint, we thought she would never get better of." You can't call this quackery, since I give the prescription for them (*see* COMPOUNDS), and I challenge all the Old Life Pills, or Cockle-doodle-doo Pills in existence, to equal them in general usefulness.

For chronic dyspepsia a Thomsonian course or two, judiciously administered, will be found of immense service. A vapour bath may be taken once a-week; and a cold salt sponge bath every morning on rising, is of great value to the dyspeptic.

Those who are debilitated, and are troubled with cold feet, should take the warm foot bath at night. There is a form of dyspepsia, the prominent symptom of which is sour eructations rising from the stomach, more or less costiveness, and pain about the epigastrium. Doctors order carbonate of soda and other alkalies for this, and patients take them and become worse in a little while, although they feel relief at the time they take them. The following is the cure for it:—

| | | |
|---|---|---|
| Golden Seal, pulverized | 1 oz. | Mix. |
| Bitter root, pulverized | ½ oz. | |
| Cayenne, pulverized | ¼ oz. | |

*Dose*—a tea-spoonful infused in a cupful of boiling water, till cold, or nearly; drink the clear, two or three times a-day, before breakfast, after dinner, and on going to bed. At the same time take no broths, soups, or heavy pastry. This is worth all the quack medicines ever patented for dyspepsia. Water-brash, heart-burn, &c., are all merely symptoms of dyspepsia.

## DYSENTERY (DYSENTERIA).

This is an irritation in the intestinal canal, attended with more or less inflammation, and a very extensive secretion of thick, slimy mucus in the bowels.

*Causes.*—Sudden check of perspiration in spring or summer, morbid humours retained in the circulation, impure air, sudden change of weather, and moisture of the atmosphere. It often appears in an epidemic form in camps, hospital-ships, and jails,

which are ill ventilated, or exposed to effluvium, arising from decaying refuse of animal bodies, &c. The proximate cause is supposed to be a peculiar acid secreted by the liver, which passing into the bowels, irritates their lining membrane; for my own part, I am not certain about the nature of the agent which irritates, but I know it is an irritation, as before stated, and I also know that when the contents of the bowels are evacuated with a proper medicine, and perspiration is restored, the circulation equalized and relieved of morbid matters, the disease is cured.

*Symptoms.*—It generally comes on with loss of appetite, costiveness, flatulence, chills, sickness at the stomach, heat of skin, and full and frequent pulse; then follows severe griping in the bowels, and a constant desire to stool, by which little is passed but thick slime mixed with blood, or an acrid watery fluid mixed with frothy mucus, with a very fetid smell. When this disease does not receive proper treatment at first, and is not of so violent a character as to terminate fatally, it degenerates into a chronic state. Similar treatment is required for both.

*Treatment.*—Take a warm foot bath, or put hot bottles, or bricks wrapped in flannels, damp with vinegar, to the feet in bed; foment the bowels with flannels wrung out of hot salt water. Take a dose of Common purge, or Black Powder, or Neutralizing Cordial, or Anti-bilious purge, every two hours till it freely operates by stool. Then take a dose of Composition and Nerve Powder, equal parts—mixed; prepared in the ordinary way, by infusion. Drank warm, every hour, till a free perspiration is promoted; after this has continued one or two hours, sponge the body over with cold salt water, and renew the doses of Composition and Nerve Powder once in two, three, four, five, or six hours, for the following twenty-four or thirty-six hours. This will cure the worst cases. If it be a mild case, a dose of Common purge, followed by a few doses of Composition and Nerve Powder will be sufficient, and not keep a man from his employment more than a single day. I have cured scores of ordinary cases with Composition and Nerve Powder alone; so also has Dr. R. Johnson, of London, my predecessor in this city. When the case is a severe one, the patient should drink the mucilage of Slippery Elm occasionally when thirsty.

If the above treatment was adopted in the army and navy, it would save thousands of lives, and much money to our country every year; and I consider every government in Europe is bound

by moral gratitude to our system, to grant a charter, and endow a college for the study of Medical Botany, in connection with the principles laid down in this work, on account of the benefit to be derived to mankind from the above treatment alone; for it is not only applicable and unfailing in every case of dysentery, but also in diarrhœa and cholera morbus.

## COLIC (COLICA).

This disease arises from an irritation in the portion of the intestines called the colon.

*Causes.*—The causes of this form of disease are various, such as crude, acescent food, morbid bile, long-continued costiveness, derangement of the stomach, recession of gout or rheumatism, cold and moisture unseasonably applied, worms in the intestines, and metallic poisons, such as lead swallowed, or the fumes of paint, may produce it.

*Symptoms.*—Great pain, seated principally in the region of the umbilicus, and extending to the stomach, attended with nausea, retching, or vomiting, and often a spasmodic contraction of the muscles of the abdomen. It is divided into several species:—

1st, Flatulent colic, attended with costiveness, griping pains, wind, distension of the stomach, with an inclination to vomit, &c.

2d, Hysteric colic, attended with nervous spasms, dejection of spirits, costiveness, sickness, &c.

3d, Bilious colic, when attended with vomiting of bile, thirst, and feverishness.

4th, Painter's colic, attended with symptoms very like the first, and resulting from absorption of lead.

*Treatment.*—This should vary somewhat, on account of the nature of the irritation. Flatulent colic may generally be cured by a dose of Common purge, with a quarter of a tea-spoonful of Cayenne added to it, aided by an infusion of Catnip and Calamus, equal parts; ordinary dose. Those who, from dyspepsia, &c., are subject to colic, may keep ready prepared an aromatic and purgative tincture, as follows:—Cayenne, Cloves, Calamus, Nutmegs, Ginger, and Gum Aloes, all pulverized, quarter ounce each, to which add one pint of best Scotch whisky or Holland gin; when it has stood a few days, strain off, or filter. *Dose*—from a tea-spoonful to a table-spoonful in warm water and sugar, or in tea, or, better still, in Peppermint

or Spearmint tea, repeated every fifteen or thirty minutes, till it acts upon the bowels, or completely relieves, by producing perspiration. The warm foot bath will much assist, and fomentation with hot moist flannel to the seat of pain will also aid. I once cured a very severe case with a single dose of cayenne, a tea-spoonful, and the lady has not had it since. Composition, No. 6, Tincture of Cayenne, or any other stimulating aromatic medicine, is good.

*Bilious colic.*—The sickness should first be allayed by taking Bicarbonate of Potash one tea-spoonful, Cayenne one tea-spoonful, Peppermint, or Spearmint, or Calamus one ounce; pour on one pint of boiling water, infuse ten minutes, and take half a tea-cupful every ten minutes till sickness is relieved; then take a large dose of Common purge, or Anti-bilious purge. The previous mentioned remedies may also be used for this form of the disease.

*Painter's colic* should be treated in nearly the same way as the bilious. If the bowels are very costive, give an injection as soon as something has been given to allay the sickness. If the case be severe, after having opened the bowels, either by an injection or purge, give an Emetic; under any circumstances equalize the circulation, and produce gentle perspiration.

*Hysteric colic* may be treated in the same way as the flatulent species, or take Nervine Tincture one ounce, Essence of Spearmint half-ounce. *Dose*—two tea-spoonfuls in warm water and sugar.

## RELAX OR LOOSENESS (DIARRHŒA).

This is a cold, relaxing, irritation in the bowels, which excites the mucous membrane to pour out lymph to protect itself and wash away the offending matter, which ought to be neutralized by the bile, indeed it may be considered as resulting from a morbid action of the liver, or condition of its secretion.

*Causes.*—Fermentation of food in the stomach and bowels, by which noxious gases are generated; exhaustion by exposure to cold and damp, or by exercise and want of proper food and pure air, a cold, damp, or warm moist atmosphere, relaxing and exhausting the energies of an impure or debilitated system, are the chief causes of this alarming disease.

*Symptoms.*—Frequent stools, with or without pain, which are various in colour, sometimes greenish, at others dark brown, always

very fetid, and sometimes very watery. As the disease continues, sickness, nausea, and prostration ensue; the countenance becomes pale and altered, the skin dry and rigid, the pulse contracted, and the breathing short. It sometimes proves fatal in thirty-six or forty-eight hours, and frequently prevails epidemically, in consequence of the prevalence and neglect of the causes that produce it.

*Treatment—To cure.*—It is necessary to remove whatever morbid matter is lodged in the bowels. This is best effected by either Common purge, or Black Powder; one or two doses of either may be given, the second two hours after the first. To be followed by Composition and Nerve Powder, equal parts. *Dose*—a tea-spoonful in a cup of boiling water, infused from ten to thirty minutes, every hour till perspiration appears on the skin, to assist to produce which, use hot bricks, wrapped in cloths damped with vinegar, to the feet and sides; cover well up with blankets, or give a warm salt or vapour bath. If it be a severe case, use Anti-cholera Powder, in place of Composition and Nerve Powder, in the same way, and give an injection of Composition and Slippery Elm, prepared as follows:—A tea-spoonful of Composition to half a pint of boiling water; infuse ten minutes, pour off the clear, and add half a tea-spoonful of finely pulverized Slippery Elm, mixed intimately with it. To do this, take a little of the Composition tea, and add to the Elm in a cup, mix into a thin paste; add more tea quickly, and then pour it to the remainder of the tea. Inject with a large syringe, or a pump enema after every stool.

If the stomach appears foul, cleanse it by an Emetic at first, after having given a dose of purge, and the usual amount of Composition that is taken before the Emetic powder. (*See* EMETIC.) Diet, on convalescence, sweet milk, rice milk, rice-pudding, sago, arrow-root, and flour gruel; that is, boiled milk, thickened with slightly scorched wheaten flour.

## CHRONIC DIARRHŒA.

This form of disease often becomes chronic; I have had cases to cure that have existed twelve weeks, and have never failed where there was any stamina left in the constitution.

In this form give an Emetic once in three or four days, followed by Black Powder, or Common purge, and then the Anti-cholera Powder

three or four times a-day, and let the patient take an injection as before; and to heal the bowels, a tea-spoonful of Elm gruel with Cinnamon in it, or finely pulverized Slippery Elm three-quarters of an ounce, Cinnamon a quarter of an ounce—mixed. Put a tea-spoonful into a cup of cold milk, to which add a cupful of hot water, sweeten well with loaf-sugar, take as often as liked, or twice a-day on an empty stomach.

Dr. Beach gives a recipe for a beautiful syrup, for children in this complaint, which I transcribe:—Two quarts of ripe Blackberries, one pound of Loaf-sugar; one-half ounce each, Cinnamon and Nutmeg; one-quarter ounce each, Cloves and Allspice. Boil all together for a short time; when cold add one pint of best French brandy. After standing a few days in a close vessel, it may be strained through a cloth. *Dose*—from a tea-spoonful to a wine-glassful, according to age.

A similar syrup may be made from the bark of the root of the Blackberry, when the berries cannot be obtained, which is equally efficacious, though not quite so pleasant.

## CHOLERA INFANTUM.

The above treatment is equally efficacious for this summer complaint, which children are subject to, and also to cholera morbus or English cholera. Remember the doses, except where specially mentioned, are given as for adults. (*See* DOSES.)

## CHOLERA MORBUS AND ASIATIC CHOLERA (CHOLERA ASIATICA).

This disease is prominently connected with the stomach and bowels, which, under its influence, exhibit strong positive symptoms of distress; but these are not the only organs implicated, the skin, kidneys, and lungs are all negatively affected by it; respiration is not perfectly performed, the exhalation of the ordinary, natural, insensible perspiration is suppressed, and the kidneys cease, or almost cease, to perform their office; the secretion of the liver seems to be quite morbid.

*Causes.*—This disease is produced by causes similar to those which produce diarrhœa, and the latter often terminates in, or pre-

cedes the former. It seems to me that the relaxing influences of climate and season, together with the unfavourable conditions and circumstances in which people live, in manufacturing and commercial towns, the insufficient ventilation of houses and sewerage of towns, and the improper habits which people practise, with regard to eating, drinking, and personal cleanliness, are sufficient to account for both Cholera-morbus and Asiatic-cholera, appearing and reappearing among us. I am not prepared to deny that there is a specific poison floating in the air, but this I feel certain of, that if in its passage it finds no kindred, it will not germinate and reproduce itself. The predisposing causes of these complaints are costiveness or looseness of the bowels, indigestion, liver complaint, nervous debility, and all impurities of the blood.

*Symptoms.*—Sickness, nausea, vomiting, and purging a rice-watery fluid, cramps, coldness of the body, quick and feeble pulse, and general prostration. In the commencement of cholera we find uneasy nervous sensations running through the whole body, and especially locating about the stomach and bowels—meal-time comes, but no appetite—the mouth is colder than usual, and the mucous membrane lax, and from it oozes quantities of cold thin fluid; similar fluid is oozing into the cavity of the stomach and into the bowels—the stomach feels disturbed, there is slight pain and a deal of uneasiness about what is called the *pit* of the stomach (immediately below the breast bone)—much cold wind or gas is belched up, and a feeling of general langour, prostration, and undefined alarm creeps over the body. As the disease proceeds, vomiting and discharge by stool of a blue-grayish thin fluid (called rice-watery) takes place—the surface of the body is colder than the atmosphere, and covered with a clammy damp; the lungs inhale the air slowly, not fully, and it returns, or is expired, as cold as it is inhaled—the oxygen does not combine with the elements of the blood to half the extent as in health—animal heat is not generated—motion almost entirely ceases—the extremities become perfectly cold—no pulse is perceptible in them—the eyes turn up—there appears to be no pain except the pains of cramp—no sighing, struggling, or signs of oppression, as in fever, which indeed there is not, for this disease is the opposite of that; and so the patient cools out as does a fire from which is excluded oxygen, the grand supporter of combustion. In severe cases no urine whatever is passed, and there is great thirst.

From consideration of these symptoms, we perceive the nature of this disease to be—

First, A loss of vital heat.

Second, Nervous prostration and organic inaction.

Third, A diminished capacity for the absorption of oxygen from the atmosphere, which is in an unfavourable condition for supplying it; or insufficient action of the lungs, and—

Fourth, A deficient oxydation of the blood.

Fifth, A deficient arterial circulation, specially manifested in the capillaries of the mucous membrane and skin.

Sixth, Suppression of perspiration, urine, and proper bile.

Such is the nature of this disease, and the manner in which the body is affected by it. And having seen what condition the body is in under its influence, we may turn our attention to the means of cure:—

First give a cupful of an Infusion of Cayenne, Composition, Ginger, Cohosh, or Pennyroyal; the first named is best, the second next, and so on. At the same time put the patient on a mattress or squab, within a comfortable distance of the fire; or, better still, into a warm salt bath, or his feet in one, and set him near the fire; or put him into a vapour bath—use that which is most convenient, and lose no time about it; or if he be in bed, and the room comfortable, and he have clothing enough about him, put hot bricks wrapped in cloths, damp with vinegar, to his feet and sides; and keep the steam in upon him; wring flannel cloths out of hot water, sprinkle Cayenne on them, and apply them over the stomach and belly; or put on a large porridge poultice, covered with Cayenne, as hot as can be borne. If the medicine first given be vomited, repeat it in ten minutes. If there be much retching when it has been repeated two or three times, give, in another dose, a tea-spoonful of the Emetic Powder; when this has operated, the vomiting will cease; follow with a tea-spoonful of finely pulverized, purified charcoal, in a cup of Infusion of Cayenne, or Pennyroyal, or Mint, or Angelica, or Cohosh: a dose of Common purge is equally good, with a quarter of a tea-spoonful of Cayenne added, either of which repeat in from one to two hours; follow this with Anti-cholera Powder, one dose, drink warm, every hour, till the purging ceases. Give for the constant thirst, tea of Mint, Pennyroyal, Rasp leaves, or China tea, with milk, drank warm; and also scorched flour gruel with Cinnamon in it, or rice milk, or rice gruel spiced with

cinnamon, or cloves, or ginger. One of the worst cases I ever knew to be cured, was laid before the fire on a mattress, had hot bricks, &c., to her feet and sides, poultice as above to the abdomen, Anti-cholera Powder and Neutralizing Cordial every fifteen minutes, alternately with the flour gruel, &c., to drink. I stayed with her three hours, when she was free from danger. If the patient be very low when the treatment is begun, give the injection, as for diarrhœa, after every stool, or every half hour; raise perspiration as quickly as possible, and then give an Emetic, followed by Anti-cholera Powder.

This treatment will cure all that can be cured. Persons who have been affected for a length of time with a chronic disease of the liver, stomach, or bowels are very difficult to cure, and require the utmost care and attention to succeed with them if they are attended in the first stages; if they are in the last stages of the complaint before the means are employed, it is impossible to effect their recovery. There is a point of disease and exhaustion of the vital conservative power of life, at which no human assistance can be available. One thing, however, is certain, that with the botanic treatment more than fifty per cent. can be saved, over what has been, by any of the numerous modès of treatment adopted by the faculty in this country.

A working man, with a brave heart and a willing mind, his name is John M'Laren, residing at Camlachie, near Glasgow, was taught by me in four hours' practice and a few hours' conversation, how to cure this disease on the principles above laid down; and during the last visitation of the cholera he attended forty-two patients, out of which he had thirty-six recoveries, actual ones, who are living at this time (January 13, 1855), and who signed their names in a list, that they might be called upon by any inquirer who doubted the fact; whilst, in the same neighbourhood, the medical men appointed to visit the sick, by the parochial board, lost ninety out of one hundred.

# DROPSICAL DISEASES.

THIS form of disease results from imperfect circulation, debility of the absorbent system of vessels, torpidity of the liver, kidneys, and skin. It is a collection of foul water in various parts of the body; when in the membranes of the brain it is called hydrocephalus; when in the membranes of the chest, hydrothorax; when in the belly, ascitis; in the scrotum, hydrocele; in the ovarium, *ascitis ovarii;* in the uterus, *hydro-utera;* and when it is diffused through the general cellular membrane of the body, it is called anasarca.

## DROPSY OF THE HEAD (HYDROCEPHALUS).

This variety is peculiar to children. The water is either collected in the ventricles of the brain, or in the membranes covering the brain, between it and the skull; this latter is generally chronic. Children of a delicate, lax, or scrofulous habit of body are most subject to dropsy in the head; it mostly comes on before eight years of age, and is rarely seen after twelve.

*Causes.*—Cold, and debility, resulting from excessive evacuations, or from indigestion, or from over-excitement of the brain, or irritation of the nervous system.

*Symptoms.*—Feverishness, headache, sometimes diffused and sometimes confined to a small spot, impatience of light and noise, a flushed countenance, unnatural redness of the eyes, contracted pupil, throwing up the arms to the head, and occasionally shrieking, without any apparent cause. In fact, the disease commences with inflammation, though seated upon a different portion of the contents of the cranium to that which is called inflammation of the brain. As the disease progresses, the pulse changes from quickness to slowness, and becomes irregular; the pupils of the eyes become permanently dilated, and cease to contract on the approach of light. The child falls into a state of stupor or insensibility to things around him; he moans almost constantly, and the shriekings recur more frequently, and vomiting sometimes occurs on his being raised to an erect posture. Any sudden exertion brings on convulsions, in which the patient expires. In other cases the

attack comes on suddenly, and in some the pulse never becomes slow; occasionally there is neither permanent contraction nor dilation of the pupil of the eye; and in some cases the patient continues sensible to the last moment. The duration of the complaint is from one to eight weeks.

*The Chronic Form of the Disease.*—This form of the disease is not attended with the inflammatory symptoms that the other is; it commences very early in life, and the faculties of the mind seem almost unimpaired; the head attains an enormous size. It is thought that this is incurable.

*Treatment—To cure.*—As in all other cases of disease, the circulation must be equalized, the blood that is concentrated upon the oppressed brain must be drawn towards the extremities and skin. Promote perspiration in the same way as for other varieties of inflammation; open the bowels with Common purge, and promote a free discharge of urine, that the water effused upon the brain may be absorbed and evacuated.

Infuse, for one hour, Hyssop, Clivers, and wild Carrot Seed, one ounce each in one quart of boiling water, strain and sweeten with syrup. *Dose*—for a child of two years, half a wine-glass, three times a-day before meals. Sponge the head with equal parts vinegar, water, and spirits, and keep the feet warm; use the warm foot bath frequently.

## DROPSY OF THE CHEST (HYDROTHORAX).

This is a collection of water in the membranes inclosing the heart, or lungs, or lining the chest.

*Causes.*—It often succeeds dropsy of the belly or womb, or constitutes a part of general dropsy, and sometimes it is primary in itself; the consequence of inflammation of the lungs, liver, pleura, &c. It is frequently the consequence of debility, induced by bleeding and salivation, performed for such diseases as above-named, and others.

*Symptoms.*—Hydrothorax often commences with loud beating of the heart, and slight pain at the lower end of the breast-bone or sternum, with difficulty of breathing, much increased by exertion. The face looks pale, and swollen of a morning, and the eyes have a bluish mark around them; at first there is a slight dry cough, afterwards it is followed by some expectoration of thin

mucus, and there is a diminished flow of urine. These symptoms increase slowly, the difficulty of breathing becomes excessive as the disease assumes its worst stage, and the patient seems in danger of being smothered when laid down. The countenance is ghastly and anxious, the pulse irregular, the expectoration bloody, and the heart violently palpitating. The patient seems in the utmost distress, and the anxious observers expect death every instant; syncope occurs frequently, and in a few days the patient ceases to live.

*Treatment—To cure.*—Equalize the circulation, evacuate the water, and prevent its return.

*Means.*—I do not think there is known a more efficient agent than the Thomsonian course of medicine, which consists of a vapour bath, an Emetic, and an Injection, followed with Bitters. Or give a vapour bath, Infusion of Boneset, and the Emetic, followed by the Anti-bilious purge. These may be repeated as the strength of the patient is able to endure them. In the interval between their repetition, or without them, give Infusion of Clivers, Pellatory, Parsley Root, and Boneset, or Cohosh, one ounce each, to one quart of boiling water; strain, and sweeten with syrup. *Dose*, for an adult—a wine-glassful three times a-day, with two Alterative pills night and morning. Fox-glove (*Digitalis purpurea*) pulverized, one teaspoonful, prepared in half a pint of boiling water. *Dose*—half to a tablespoonful every two hours; if it produces nausea, or giddiness in the head, reduce the dose half. Dr. Beach says, this infusion has a powerful and sovereign effect in hydrothorax. He says it is powerfully aided by a strong infusion of the following, of which I think there can be no doubt:—Spearmint, Parsley, Elder Flowers, and Dandelion—say to one ounce of each a quart of boiling water. *Dose*—same as the first. I find Emetics of Lobelia of great service in this complaint.

## DROPSY OF THE ABDOMEN OR BELLY (ASCITIS).

The water in this variety is generally collected in the sac of the peritoneum, sometimes without this membrane, between it and the abdominal viscera; sometimes it is contained in sacs, and connected with some of the viscera, in which case it is called encysted dropsy.

*Causes.*—Diminished activity of the absorbents of the system,

and increased activity of the internal exhalents, which may arise from excess of serum in the blood; in other words, wateriness of that fluid, or from debility of the skin, or obstruction of the pores, or from bleeding, or salivation, or poverty of diet, or weakness of the digestive organs, or from organic disease of the liver.

*Symptoms.*—Loss of appetite, sluggishness, dryness of skin, scanty urine, costiveness, cough, and oppression at the chest. In short, the secretions and excretions are interrupted, and the matters which usually form these retained in the system. The water may be heard in the belly, or felt, and indentations made by pressure with the fingers, in various parts. The encysted form of this disease generally appears in a heavy tumour in one portion of the belly more than another. This form of the disease is the worst to cure.

*Treatment—To cure.*—Evacuate the water by exciting the skin, kidneys, liver, and bowels to increased activity, and prevent its re-accumulation by toning or strengthening the system.

*Means.*—Purgatives, diuretics, sudorifics, stimulants, emetics, alteratives, and tonics. As a purgative, Dr. Beach recommends the Compound Powder of Jalap, as superior to all other, in this and other forms of dropsy.

Jalap root, pulverized, best..... ½ oz.
Cream of Tartar..... 1 oz. } Mix.

*Dose*—from a tea-spoonful to a teaspoonful and a half, infused in hot water, once a-day.

I have always found the Mandrake, as in the Anti-bilious purge, equal to anything. (*See* PURGES.) Such diuretics as are prescribed in hydrothorax may be used; or, Burdock Seed, Prickly-ash Seed, Black Cohosh, and Dandelion Root, all pulverized one ounce each; Cayenne pulverized, half-ounce. *Dose*—a tea-spoonful infused in a cupful of boiling water thirty minutes, three times a-day. Either of the above purges, repeated once in two days, and a vapour bath every evening for a week. Begin with an Emetic, and follow the above treatment with Stomach Bitters, two or three times a-day. This rarely fails to cure.

Dropsy of the Ovaria and Dropsy of the Womb, are collections of water in these organs, or the membranes partly composing them, and require to be treated in a similar way as the two preceding varieties.

## CELLULAR DROPSY (ANASARCA).

This is a general dropsy of the body, the water being lodged in the cellular membrane, which is distributed everywhere throughout the body, surrounding and enveloping all the organs beneath the skin. It is naturally moistened by a fluid thrown out by the arterial exhalents: from similar causes as have been already mentioned in connection with other forms of dropsy, this fluid increases to such an extent as to constitute this form of disease.

*Causes.*—It frequently appears as the last symptom of pulmonary consumption; it follows scarlatina, measles, small-pox, and erysipelas. It occurs also as a symptom of uterine derangement, suppression of the menses, &c.

*Symptoms.*—Swelling all over, general enlargement of the body, pale, pasty-looking skin, indentations left on the body after the application of pressure with the fingers, with all the other symptoms of dropsy, more or less, exhibited.

Sometimes this form of dropsy is confined very much to the legs in which case it is called *Elephantiasis.*

*Treatment.*—The same as for dropsy of the belly, except that in Elephantiasis it is frequently necessary to bathe the feet and legs every evening before going to bed with warm water, salt and Cayenne, or mustard in it, for ten or fifteen minutes; dry them well, and then rub them with the following:—Simmer in one pint of malt vinegar one ounce of Cayenne pepper for fifteen minutes, add two ounces of common salt, strain through a fine cloth, or filter. After rubbing them for five or ten minutes, bandage them comfortably tight with warm dry flannel bandages, which wear constantly, and apply the hot bricks to the feet at night.

## DROPSY OF THE SCROTUM (HYDROCELE).

Similar treatment as the preceding is necessary to cure this form of disease, and a suspensory bandage may be worn during the day.

## JAUNDICE (ICTERUS).

This is a suffusion of the bile to the surface of the body. It appears to be absorbed into the vascular system, and carried by the circulation to every part.

*Causes.*—Diversion of the bile from its ordinary course, and an increased secretion of it, in consequence of some irritation in the stomach, or the inactivity of the kidneys and skin, or all.

*Symptoms.*—Listlessness, loss of appetite, dulness, oppression, and costiveness; yellowness of the white of the eyes, nails, tongue, and skin, which latter is also dry, itchy, and prickling.

*Treatment—To cure.*—Remove the obstruction to the flow of bile to the bowels, evacuate the stomach and general circulation of the bilious matters present in them by emesis, perspiration, and urination.

*Means.*—Anti-Bilious purge, Emetic, Vapour Bath, or sweat by other means, followed by the Anti-Bilious Powder three times a-day. By these means I have frequently cured severe cases in from four to seven days. They never failed with me.

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## ORGANIC AND CONSTITUTIONAL DISEASES.

THE diseases usually classed under this head are such as do not either locate upon any particular organ, or arise from obstructio or debility of any particular organ, but from obstruction or debility of the general circulating and purifying apparatus of the system, from constitutional disturbance, neglect of the general laws of health, and constitutional or hereditary predisposition, acted upon by general exciting causes.

### RICKETS (RACHITIS).

This disease is peculiar to children about the time they get their teeth, or begin to walk.

*Causes.*—Neglect to take children into the open air to exercise, indigestion in consequence of improper food, and irritation of the digestive organs from teething, are the principal causes acting upon nervo-lymphatic constitutions.

*Symptoms.*—Children cease to be as bodily active as usual, their flesh becomes soft and flabby, the belly enlarges, the flesh

wastes, there is slight feverishness, cough at nights, irritability of temper, and whining. The ends of the leg and arm bones at the knees, ankles, and wrists become enlarged, the ribs fall in, and the spine curves. The stools are clayey and unnatural.

*Treatment—To cure.*—Brace up the system, restore digestion, and excite the body to healthy action.

*Means.*—Sea air, or exercise in the open air, cold salt bath, sponge, or plunge, in the morning. Bread and milk and rice diet. Black powder, to cleanse and correct the bowels, once a-day. Rub the limbs and belly with cod-liver oil once a-day, and give the following to improve the circulation and correct digestion:—Clivers, Ground Ivy, Centaury, or Bogbean, half an ounce each, infused in one pint of boiling water, one hour; strain and sweeten with golden syrup or loaf sugar, or sugar-candy.—*Dose*—half a wine-glass at morning and night.

## GLANDULAR SWELLINGS.

Some children, whether they have rickets or not, are subject to glandular swellings of the neck and throat.

*Causes.*—The same as of rickets—whatever irritates and debilitates the circulating fluids.

*Treatment.*—The same as for rickets, and rub the glands of the neck, &c., with equal parts of No. 6. and Cod-Liver Oil.

## SCURVY, SCORBUTIC ERUPTION, &c. (SCORBUTUS).

This appears in scabs, pimples, scales, blotches and sores of various appearance upon the skin.

*Causes.*—Unwholesome air, exposure to cold and damp, insufficient food, or food of a poor quality, want of vegetable food, as fruits and herbs, salt meat, excessive eating, gross habit of body, stoppage of the menses or excess of them in females; bleeding piles, loss of blood from wounds, grief, indigestion, &c., &c. I read in the newspapers of the present time of this disease appearing among our gallant army before Sebastopol, and I read a few days ago, in a private letter from a sergeant, that he saw, during about twenty minutes, that he was engaged in putting up an hospital-tent which had blown down during a stormy night, nine poor fellows die of dysentery and diarrhœa. I believe it was the

Russians they were sent out to fight against, not the ignorance and neglect of an incompetent medical staff. God in his great bounty has not left one foot of earth, which man can dwell upon from the south to the north pole, from the beginning of the east to the end of the west, wherein is not to be found remedies for these decimating diseases. Beneath the camp-tents of the soldiers, or close around them, are to be found remedies for dysentery, diarrhœa and scurvy.

Where does not the Dandelion, the Nettle, the Cliver, the Ground Ivy, Burdock, Yellow Dock, Waterdock, Sorrel, Bog-bean, Brooklime, or Water Cresses grow? And any and all of these will keep away or cure the scurvy, and when the frost and snow cover the ground, their roots are still to be found preserved in the beneficent earth. Many of these, and others of their class, may be boiled and eaten as vegetables, or eaten raw, and the infusion or decoction of the others may be drank; and if none of these are to be found in a district, some others equally good are. Even so with the Astringent Roots and Barks which prevent and cure diarrhœa, dysentery, and cholera, with the assistance of some natural warming stimulant. If soldiers and sailors were only instructed in a few facts in regard to these things, they would do infinitely better without the medical staff than with it, except for the dressing of wounds, and cutting off of limbs. I sincerely regret, for the sake of our brave army, that the medical men attending it are not genuine Medical Botanists.

*Symptoms.*—Wearying, heaviness, difficulty of breathing and motion, ulceration of the gums and other parts, attended with bleeding; crackling of the joints, swelling or wasting of the legs, pains about the breast, dry scaly eruption all over the body; wasting of the body, hectic fever, dropsy, dysentery, diarrhœa, palsy, or mortification terminates the life of the wretched subject.

*Treatment—To cure.*—As I have previously stated, in the principles laid down in this work, disease is cured by the opposite of that which causes it; therefore to cure scurvy, purify and invigorate the system by every possible means. Fresh vegetables and the juices of fruits, good water, good air, cleanliness of person, and comfortable clothing and lodgings are amongst the most important means. Eat Dandelion Roots, and drink Dandelion Coffee. Eat Nettle Tops and drink Nettle Tea, use Brooklime

as Salad, Water Cresses, Mustard and Land Cress in the same way; avoid spirits and salt meat. Infusion of Clivers, Ground Ivy, Bogbean, and Agrimony, one ounce each to three pints of boiling water, steep for two hours, strain and sweeten with Syrup. *Dose*—a wine-glassful three times a-day: or decoction of Dandelion, Yellow Dock, Pinus, Prickly Ash Bark, one ounce each. Sarsaparilla, two ounces, five pints of water boiled down to three pints. *Dose*—a wine-glass three times a-day: or S. or Anti-scorbutic powder.

The above-mentioned treatment will cure any kind or form of this disease, in its worst stage, with perseverance. To the sores may be applied the Healing Salve, and before it is applied they may be washed with a warm decoction of Yellow Dock and Bayberry, If poultices are needed, use the common poultice of Elm, &c. (*See* POULTICES). Purge occasionally with the Anti-bilious purge.

### DOW-WORM, OR SCALD HEAD (TINEA CAPITIS).

This is an eruption of scorbutic matter on the scalp of the head; it is contagious; at first it is confined to a small portion of the head, but gradually it extends till it covers it like a cap of scab. It is mostly confined to children. It arises from similar causes as scurvy, and requires similar treatment. Ointment—simmer a decoction of Elder Bark and Cream together till a soft ointment is formed: apply daily.

### RINGWORM.

This is a cutaneous disease, appearing in small red pimples in a circular cluster, which contain a thin acrid fluid, which as it falls on other parts inoculates them, and spreads the disease from a spot the size of a sixpence to as large as the palm of the hand. When the person is warm from exercise, &c., it itches intolerably.

*Treatment.*—Take one ounce Barbadoes Tar, Mutton Tallow size of a nutmeg, half of an even tea-spoonful of fine ground pepper; simmer together a few minutes, let stand till nearly cold, then stir in sulphur sufficient to form a soft ointment. This is also good for Dow-worm, and Barber's Itch.—*Dr. S. Browne.* Apply three times a-day, and before applying wash with Castile

Soap Suds. Or infuse, Sanguinaria canadensis pulverised, one tea-spoonful to six ounces of water; dip a little soft rag or lint into it, and apply bound on; repeat as it becomes dry; or mix Flower of Sulphur with Burn salve, and apply twice a-day.

### ITCH (PSORA).

This loathsome disease is confined to the skin; it usually arises from infection, but since it must have an origin, it may be produced originally by bad air, unwholesome beds, and uncleanness of body.

*Symptoms.*—Small white watery-looking pimples appear about the fingers and between them, on the wrists, elbow-joints, arm-pits, hams, and waist, which are excessively itchy, causing the person affected to scratch the parts, which inflames them and spreads the disease. Take Flower of Sulphur two parts, Cream of Tartar one part—mix. *Dose*—a tea-spoonful in syrup night and morning. Externally apply an ointment made by simmering the fresh roots of Yellow Dock sliced, in as much Hog's Lard as will cover them when melted; or Sulphur Vivum (Native Sulphur) half ounce, Lard two ounces; melt the Lard and stir in the Sulphur till cold; anoint three times a-day.—*Dr. Beach.*

### SALT RHEUM-TETTER (HERPES-PSORIASIS).

This is an eruption which generally appears on the hands. It is either wet or dry. When wet, it appears in the form of small vesicles, containing a thin, ichorous, corrosive fluid, which discharges and causes intolerable itching and irritation. These vesicles die or disappear for a little while, and then reappear.

*Causes.*—Retention of morbid humours in the system.

*Treatment—To cure.*—Correct the secretions, and renew the blood, as for scurvy. Medicine and diet the same as for that complaint. Poultice with common poultice, or Slippery Elm. Wash with the following: Pulverized Yellow Dock Root, four ounces; Vinegar, one quart; let it stand twenty-four hours, then wash every two hours.

### FROST-BITE, OR CHILBLAIN (PERNIO).

This is a hot, itching, painful swelling of the feet and hands,

arising from exposure to cold. On approaching the fire, the itching and smarting become so intolerable as almost to drive the patient mad. Sometimes the skin remains whole, at other times it breaks, and there is discharged a thin watery fluid. Young and old people are more liable to be troubled with it than those in the prime of life.

*Treatment.*—Immerse the feet for half an hour in a Warm Salt Foot bath, with a tea-spoonful of pulverized Cayenne added. Keep them warm afterwards. If a limb be really frozen, it should be immersed in cold, or nearly cold, water, for fifteen to twenty minutes, then oiled, and wrapped up warm.

## BILE, OR BOIL (FURUNCULUS).

This is a very common complaint, and very painful. It appears in a hard, painful, circumscribed tumour, with a deep-seated base. It is generally slow in arriving at a condition of suppuration.

*Treatment.*—Poultice with common poultice, or, if much inflamed, with the Slippery Elm alone. When it is discharged, apply Healing Salve.

Take Composition two or three times a-day, or Anti-scorbutic powder to facilitate the suppuration, and cleanse the system from morbid humours. Some people say boils are healthy. It is a sign of vigour to see them appear outwardly, but they would not be formed if the blood was in a pure condition.

## INCOME, OR ABCESS.

This is a collection of matter beneath the skin, attended with great pain and local inflammation, which often extend up the whole length of the arm. It chiefly appears on the hands, often between the fingers, but sometimes on the legs. The patient seems otherwise in good health, but I always give a little medicine, generally Anti-scorbutic powder; and so successful has my treatment been, that many patients use my remedies, whilst they attend the regular doctors appointed to their Works.

Add to sufficient of common poultice to cover the part, one or two tea-spoonfuls of syrup, mix with warm water, and apply. Over it put a larger poultice of porridge, to keep it moist and warm. Repeat it every twelve hours, till it shows, it is ready to

burst, then nick it with a penknife or lancet, and press out the matter, often a cupful or more. Keep the poultice on another day, cleanse it, and apply Healing Salve.

Take Anti-scorbutic powder three times a-day.

## TUMOURS.

These are defined swellings and excrescences which protrude from the body, as, wens and encysted tumours, when matter is lodged within a cyst. They are attended with little or no pain, but are disfiguring and troublesome, some of them attaining a great size.

*Treatment.*—If small and narrow at the base, or attachment to the body, they may be removed by passing a ligature of strong thread or silk round them, and tying it tight, every day tightening it more, till the tumour drops off. If large and broad at the base, it will be necessary to produce an eschar upon it, with caustic, and then apply a poultice of Elm and Yeast till the contents of the tumour are dislodged. Keep up the system with Composition in the meantime, and apply Healing Salve to heal. This is a much superior process to cutting, and is not attended with the same danger.

## FELON, OR WHITLOW (PARONYCHIA).

This is an exceedingly painful, inflammatory swelling, occurring mostly on the fingers, sometimes on the toes. It begins with deep-seated throbbing and prickling, and comes very slowly to suppuration. There is always, both in connection with this and every other tumour, some constitutional disturbance which requires to be corrected.

*Treatment.*—Begin by soaking the part in a bath of water, made slightly slippery with Potash, as warm as it can be borne; then, if the skin be thick and tough, pare it down; now steam it over a decoction of Bitter Herbs, Horehound, Tansy, Wormwood, and Wood Sage. Add a hot brick to the decoction, to raise up steam; after that apply a common poultice of Elm, &c., mixed with warm water and syrup, or poultice with Blue Mallows, or, flour and syrup. When it appears ready to suppurate, open it with a probe or needle. The above may be repeated night and morning.

Take Composition or Anti-scorbutic powder at the same time, three times a-day; or a decoction of Yarrow and Yellow Dock. When it has suppurated, apply Healing Salve or Marshmallow ointment.

## PILES (HÆMORRHOIDS).

"The piles appear in two states: 1st, a varicose or preternaturally distended state of the veins in the vicinity of the anus; 2nd, in a state of tumour or excrescence, which apparently consists of a solid fleshy mass." The first is internal, and is frequently attended with bleeding. The second is external, and is exceedingly annoying and painful. These tumours are sometimes internal also.

*Causes.*—Purging with Aloes and Patent pills, or other drastic purges, costiveness, sedentary habits, a disordered condition of the liver, pregnancy, &c.

*Symptoms.*—Pain on going to stool, bleeding from the bowels whilst evacuating them. Sometimes a large quantity of blood is thus discharged, which causes great debility, and in some cases even death has occurred from it. In the state of tumour, small bunches of fleshy excrescences form on the edge of the anus or within its mouth, and on stooling descend, sometimes accompanied with a protrusion of the lower portion of the bowel.

*Treatment—To cure.*—Obviate costiveness, and restore the tone of the mucous membrane of the bowels.

*Means.*—Composition, one ounce; Common purge, one ounce; mix. *Dose*—a tea-spoonful infused, sweetened with syrup, night and morning. This has cured many cases of bleeding piles, and also of the tumourous, aided with Pile ointment, applied night and morning. When the piles are in a bunch externally, apply a common poultice at night. Pile decoction:

| | |
|---|---|
| Sarsaparilla, American | 1 oz. |
| Yellow Dock Root | 1 oz. |
| Yarrow | 1 oz. |

Bruise the roots, and boil in one quart of water down to one pint. *Dose*—a wine-glassful two or three times a-day, sufficient to keep the bowels gently open. Persevere and it will cure. In some cases of bleeding piles, to arrest the bleeding and astringe the debilitated vessels, it may be necessary to use an injection.

Make a decoction of one ounce of Pinus Bark in one pint of boiling water; strain, and whilst warm stir in a tea-spoonful of finely pulverized Slippery Elm Bark; inject once or twice a-day.

### HIVES.

Very young children are subject to this disease; it is characterized by red spots appearing on the skin, green relaxed stools, and restlessness. The Infusion, Syrup of Wallink (Brooklime), is a sure cure for it. So also is an Infusion of Pennyroyal and Rasp Leaves.

### WORMS.

These result from indigestion, or an accumulation of morbid mucous in the stomach and bowels, in the first instance. For *cure—see* WORM POWDER.

Tape-Worm is cured by a tea-spoonful of the Bark of the root of Pomegranate, in an Infusion of the Worm Powder, twice a-day on an empty stomach.

### SCROFULA, OR KING'S EVIL,

So called on account of swine being subject to the disease, and the custom of submitting patients affected with it to the *royal touch!*

It consists generally in hard indolent tumours of the glands of the neck and behind the ears, but I have had patients affected with them on the hands, arms, hips, and loins; these tumours, in course of time, suppurate and discharge more or less of matter, which very much resembles curds and whey. It is a very offensive disease, and the regular doctors know nothing of means to benefit, or cure it; they often thrust their lancets into the glands, and make larger sores, which never heal, or close with ugly red cicatrices, and repeatedly re-open.

I do not like mentioning cases, but I overcome my repugnance in this instance, partly to show what may be accomplished by proper means, and partly to do honour to the skill of an old friend. A boy of nine years, called M'Gibbon, Eglinton Street, Glasgow, being extensively affected with this disease, was taken to a doctor in this city, who on seeing him shook his head, and told the mother to take him home. She did so. The boy grew worse; some months afterwards, hearing of the botanic

treatment, she applied to our place of business, at that time in the possession of my old friend, Dr. R. Johnson, now of London. He visited the patient, whom he found in bed, literally covered with sores; he raised him up, and bade him not keep his bed any more than he could possibly help, and sent him some medicine, composed of some of the simplest herbs we use. The boy improved, and two months afterwards, when I came to Glasgow, he was transferred to me; he was then able to walk from the omnibus into the room. I examined him, and found two large ulcers on his right hip, and four on his spine; his hip joint was so far out that he limped up and down, barely touching the ground with his toes, and his spine was like an S; besides these he had other ulcers on his body. I was astonished that Johnson should have undertaken the case at all: he thought he would see what could be done. I pursued our ordinary treatment with the boy, and in two months he was able to walk two miles without fatigue. As he improved I made him exercise, swinging suspended by his hands, and so on, and in about twelve months from the time I came to Glasgow, he was as hardy and as straight, as strong and active a boy, for his size as any in the city; in fact, you could not tell that anything had ever ailed him. I could mention a score of cases of children, certainly not so bad as this mentioned, who in a few months have regained health and strength under the treatment we pursue. It generally attacks those of a delicate fair complexion, nervous lymphatic or nervous sanguine temperament; and when it attacks those with dark hair the temperament is almost invariably similar.

*Treatment—To cure.*—Purify the blood, and renew it with every means possible, to which end, first correct digestion and establish a healthy secretion.

*Means.*—Fresh air, salt bathing, rubbing with Cod-liver oil or Olive oil, and the No. 6, the parts affected which are not broken; poulticing those which are broken with the common poultice, with a little Golden Syrup added, and dressing them after they are discharged with the Healing Salve; and by giving the following —Ground Ivy or Agrimony, Centaury, Clivers, and Bogbean, one ounce each. Infuse for two hours in two pints and a half of boiling water; sweeten with Syrup. *Dose.*—For a boy of six to eight years half a wine-glass, three times a-day.

If the stomach be foul, give an emetic. Better prepare half the above at once. When the above quantity of medicine

has been taken, change it for the following:—Yarrow, Bayberry, Yellow Dock, and Sarsaparilla, one ounce each. Bruise and put them into two quarts of water, boil down to one quart. *Dose* as before. The Anti-scorbutic powder and the S. may be used for the same purpose; the latter should have one ounce of No. 6 added to fifteen ounces. *Dose* for adults—a wine-glass two or three times a-day on an empty stomach. This last-mentioned is one of the best medicines for scrofula and old venereal taints, and as a general purifier of the blood, ever used; it is far superior to anything sold as Extract of Sarsaparilla, &c.

### SECONDARY SYMPTOMS.

The constitutional affections arising from imperfectly cured venereal, from mercurial salivation for that disease, and liver complaint, and all the various ulcers arising from varicose veins, impurity of the blood, and general imperfect circulation, may be cured by similar treatment as that prescribed for scrofula, with the addition of general and local steam-bathing, poulticing with Elm or the common poultice, using the Healing Salve, salt water bathing, and friction to the skin.

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## BURNS AND SCALDS.

The readiest thing for these is cold water; the part should be immersed in it and held there for a time, and then wrapped up with wet, fine, old linen rags, or soft muslin, which should be kept constantly wet till the heat and inflammation subside; then apply Burn Salve. Equal parts of Lime Water and Linseed Oil shaken up in a bottle, make a good liniment for burns and scalds, to be applied with a feather. Sweet Oil is also good to be applied in a similar way. But the king of all cures for burns and scalds, is Slippery Elm, *Ulmus fulva.* Mix pulverized Slippery Elm bark in cold water or milk, and apply as a poultice; the surface of the poultice may be moistened with sweet oil or not, as convenience allows. It cannot be over-praised, for it beats everything. After the inflammation is quite out, and the sore looks white and cool, apply the Burn Salve.

## BRUISES.

These painful injuries, or contusions of the flesh, require the application of warmth and moisture, as soon as possible after they are suffered. Nothing is better than a decoction of Wormwood in water or vinegar, or Yarrow, or Hops used in the same way; or in the absence of these, fomentations of warm water. I have cured the most serious-looking bruises on the eyes and other parts, by fomenting with No. 6 and warm water, equal parts. Also by warm Cayenne tea; it bites a little but prevents blackness. Next to these is a poultice of Solomon's Seal Root; it is also good for inflammatory rheumatism. Pare and beat up the root with a little water, milk, or olive oil.

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## NERVOUS DISEASES.

All diseases are nervous, as well as vascular; but those specially called nervous, are exhibited more directly by nervous excitement or prostration.

### HEADACHE.

This is frequently symptomatic of other complaints, as costiveness, indigestion, and the suppression of important evacuations; in such cases attend to the cause, remove it, and the symptoms will no longer exist. Sometimes, however, headache arises from nervous excitement, which again may arise from various causes. In this case, take a warm foot bath, and a dose or two of Nerve Powder, and put a cold Compress round the head.

### FACEACHE (TIC DOULOUREUX).

Treat the same as headache, and in place of the cold Compress, rub the face with Anti-Spasmodic Drops, after having fomented it

with bitter herbs; or apply a warm poultice of porridge and Ginger, or of roasted onions.

## TOOTHACHE.

Keep it away by preserving the gums in a healthy state; wash them frequently with salt and water, or use Bayberry or Bethroot, pulverized, as tooth powder. To relieve the pain, dip a little lint or cotton into Anti-spasmodic Drops, or equal parts of Oil of Sassafras and Oil of Cloves, and apply it to the tooth.

## HYSTERICS (HYSTERIA).

*Causes.*—The immediate cause is irritability of a debilitated or morbidly irritable nervous system. The remote cause may be anything which vexes or unduly excites the passions and emotions.

*Symptoms.*—Grumbling in the bowels, a sensation of something rising in the throat that seems to suffocate, stupor, insensibility, convulsions, laughing and crying without apparent cause, sighing, groaning, and belching of wind, &c.

*Treatment.*—Give the patient room to breathe freely; loose the clothing, dash cold water in the face, lay her on her back, give her air, put a tea-spoonful or two of Anti-spasmodic Tincture into a little warm water, and pour it down her throat; this latter is best given when the feet are immersed in warm water.

To prevent these fits recurring, strengthen the system by tonics and nervines. Pulverized Horehound, Rue, and Valerian, one ounce each—mix. *Dose*—a tea-spoonful infused in a cup of boiling water for twenty minutes, sweetened, and drank night and morning. If the bowels have a tendency to costiveness, use Common purge once in two days.

## HYPOCHONDRIA (HYPOCHONDRIASIS).

This is a diseased state of the mind, arising from debility of the organic system of nerves; it is generally, though not always, connected with dyspepsia.

*Causes.*—Exhaustion of the nervous energy of the organic system, which may be produced by various remote causes, such as intemperance in eating and drinking, study or other pleasures, and more direct violation of the laws of the constitution.

*Symptoms.*—Fickleness of humour, changeable fancy, day-dreaming, mental picturing, concentrated attention on self, gloom, despondency, and fretting without sufficient cause, nervous tremors, palpitation of the heart, dread of death, or desire to die.

The patient imagines himself alternately troubled with every malady that flesh is heir to; I have known the most extraordinary symptoms manifested in connection with this complaint; I could fill a volume as large as this with the tales of suffering I have listened to, and the shameful impositions that have been practised upon the sufferers.

It is generally believed there is no cure for this complaint; this is erroneous, for I have perfectly cured it; but it requires such great and persevering efforts on the part of the afflicted, that it is seldom they have patience and resolution sufficient to accomplish a successful issue.

*Treatment.*—The remedies for this disease are of two kinds—medicines for the body, and medicines for the mind. The patient's attention must be constantly occupied with something that is capable of interesting him, and commanding his attention from himself. A long voyage to sea, with duty to perform, is a good means; daily exercise in a gymnasium, horse-riding, rowing on the water, and every other interesting physical occupation is good. Cheerful society, that will not let the patient mope and think, is of first-rate importance. If the stomach be morbid, which is frequently the case, give an Emetic; if the bowels are costive, give Common purge; and tone the system with Detergent, Alterative, and Tonic Medicines.

Stomach Bitters, and Nerve Powder..... 1 oz. Each. Mixed.

*Dose*—a tea-spoonful infused in a cup of boiling water for twenty or thirty minutes, sweetened, and drank night and morning. The Alterative Decoction or S. fourteen ounces, add one ounce each Nervine Tincture and Tincture of Myrrh. *Dose*—A wine-glassful twice or three times a-day.

Camomile Flowers..... 1 oz.
Wormwood Herb..... 1 oz. } All pulverized. Mix.
Rue Herb..... 1 oz.

*Dose*—same as of the Bitters and Nerve Powder. These may be used alternately.

# VEGETABLE MEDICINES.

## SIMPLES.

ALMOST all the vegetable productions found on the surface of the globe are more or less medicinal. It is, therefore, impossible for me to give, in a work like the present, a complete classified list of all the plants that may be used in medicine. Neither is it my intention to enter into an elaborate history of those I shall mention; brevity and utility being with me matters of greater consideration at present, than a display of knowledge.

Knowledge of the chief properties of medicinal plants, and a ready means of distinguishing them, are of the first importance to the medical botanist; and to this knowledge, experience is the only sure guide. The chief or predominant medicinal properties of plants as they grow, may be distinguished by the *taste* of their leaves, barks, and roots. This was the method which led Dr. S. Thomson, of America, to the discovery of some valuable herbal medicines. By his mode of tasting, he divided medicinal plants into three classes—viz., Hot, Rough, and Bitter. We now propose to divide sanative medicinal plants, by the same rule, into four great classes:—

| Hot. | Cold. | Rough. | Bitter. |
|---|---|---|---|
| Heating. | Cooling. | Roughening. | Strengthening. |
| Stimulating. | Relaxing. | Astringing. | Toning. |

1*st*, Stimulants; 2*d*, Relaxants; 3*d*, Astringents; 4*th*, Tonics.

These seem capable of producing all the effects upon the animal economy which may, without immediate danger to life, be produced —to stimulate and accelerate the circulation, and thereby the elimination of animal heat, and the performance of all the functions of the animal economy—to relax and reduce an over-excited or irritated condition of the circulating energies—to reduce constriction, and thereby remove obstruction—to astringe, or bind up, or cause a contraction of relaxed fibre, and unite with the impure matters in the blood-vessels and other passages, and carry them off—to tone, steady, corroborate, or strengthen the organs in

the performance of their respective functions, and supply the system with the elements of healthy bile, and prevent a too rapid waste or decay of the fluids and tissues of the body—seem to be the most important—nay, the only sanative offices which medicines can fulfil. All other properties, therefore, are but secondary, and may, under different circumstances, be or be not exhibited. A nervine, for instance, may be a stimulant in one case, or a relaxant in another; for whatever, under any circumstances, soothes and tranquillizes is, under those circumstances, a nervine; and what may soothe and tranquillize in one case, may not do so in another; but a pure stimulant, as Cayenne, will never fail, under any circumstances, to stimulate—and (in some instances) may prove the very best of nervines; and this portion of my argument will apply to any other of the primary and secondary properties of medicine. It is to be observed, however, that it is a very rare thing to find a natural medicine possessed of one property alone; almost invariably, each vegetable medicinal combines in itself a number of properties: for example, *Lobelia inflata* (which we may class at the head of Relaxants) is, by virtue of its great relaxant property, emetic, sudorific, and alterative; sometimes diuretic and cathartic, and almost invariably nervine; and this example may serve as a guide to the estimation of the properties of many other medicinal agents.

It may be said, then, that the members of each of the four great classes I have named possess—beside the common property which distinguishes the class—others, peculiar to themselves, which may be distinguished, in contradistinction to the common, as individual properties, which are necessary to be indicated and spoken of, to a proper understanding of their use.

## CLASS I.—STIMULANTS.

Pure stimulants are medicines which excite the general circulation and organic functions to increased and more energetic action, unattended with a corresponding depression or exhaustion after their effects have ceased. In connection with the common stimulant property possessed by this class of medicines, the best of them are also sudorific, sialogogue, and detergent; produce perspiration, saliva, and excite the system to the expulsion of morbid humours from the blood by secretion, &c. At the head

of this class stand Cayenne Pepper, Jamaica Ginger, Prickly Ash, Yarrow, Black Cohosh, and Pennyroyal.

### CLASS II.—RELAXANTS, OR ANTI-SPASMODICS.

The common property of this class of medicines tends to relax tension or constriction, and to cool and weaken, to open obstruction, promote saliva and other secretions. In connection with their common property, or by virtue of it, they also possess, in greater or less degree, the properties designated cathartic, aperient, emetic, stimulant, diuretic, anti-bilious, detergent, and anti-scorbutic; and occasionally mucilaginous, astringent, and tonic, &c. At the head of this class stand Lobelia, Boneset, Mandrake, Bitter-root, Clivers, Slippery Elm, Mallow, &c.

### CLASS III.—ASTRINGENTS.

The common property of this class of medicines tends to roughen the surface of the mucous membrane, astringe fibre, confine the bowels, brace up a relaxed habit of the system, carry off morbid matter from the intestinal canal, prevent putrefaction, and change the secretions from a morbid to a healthy state. Besides their common property, astringency, they individually possess such properties as are denominated alterative, detergent, diuretic, diaphoretic, anti-bilious, tonic, antiseptic, detergent, and occasionally cathartic or aperient.

### CLASS IV.—TONICS.

The common property of this class is a tendency to promote the secretion of the gastric juice, bile, and mucous, and thus to help the process of digestion; also to steady and recover nervous and vascular action, and establish healthy organic function. In connection with the common property of the class, they individually possess other properties, as anti-bilious, stimulant, aperient, diuretic, antiseptic, nervine, &c.

Regarding these facts, we are insensibly led to the conviction of the impossibility of chemistry discovering, by any analytical

process, the active principles of these vegetable medicines; each one being a combination of medicinal agents; each herb being in itself a vital chemical laboratory, producing, by its vegetative physiology, constituents and compounds which the art of chemical combination can never realize nor successfully imitate.

The secret medicinal principles of herbs are not to be plucked out of them by any burning chemical investigation; for the process of search either destroys the property searched for, or presents us with a compound which we in vain endeavour to resolve into known elements.

Observation of their operations on the human system, then, is the only means of discovering their true relations to our bodies and our diseases. This is a higher study than chemistry; for it is the study of *living* action, performed by vital organism.

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## A LIST OF SIMPLES USED IN THE BOTANIC PRACTICE.

In the following list of Simples, I have endeavoured to give at a glance the most common English and Botanical name of each plant, together with its chief properties indicated by abreviations (*which see*), and as brief and clear an account of its general uses as possible to be given in so much space.

*Inf.*, Infusion, is a simple preparation of an Herb or Bark, either in its *cr.*, crude, or *pulv.*, powdered state. Pulverizing, or powdering, is effected by simple grinding in a mill. To infuse, put one ounce of Herb, if crude, in a pint imperial of boiling water, cover it over, and let it stand to keep hot from fifteen minutes to two hours.

*Dose*—a wine-glassful from two to six times a-day.

If the Herb is pulverized, a tea-spoonful of the powder to a tea-cupful of boiling water is a proper quantity, the whole of which, except the sediment, is taken at a dose; drank warm or cold; if to produce perspiration, *warm*. Infusion may be sweetened with sugar or not.

*Dec.*, Decoction, is a stronger preparation of a vegetable medicine; it consists in boiling two ounces of Herb or Bark in a pint and a half, or two pints of water, down to one pint; strain, sweeten or not. *Dose*—from half a wine-glassful three times a-day to a wine-glassful two or three times; drank warm or cold; if to produce perspiration, as a decoction of Yarrow, &c., warm, and three wine-glassfuls of such may be drank within an hour before going to bed. As a general rule, Relaxants, Alteratives, Anti-scorbutics and Diuretics, &c., should be taken on an empty stomach. Tonics or Bitters, to promote digestion, may be taken about an hour after meals, or a little while before. Only violent cases of disease require medicine more than three times a-day.

The above proportions and rules refer to all the following Medicines, except where specially mentioned otherwise.

*Amer.* indicates that the plant is usually obtained from America, or that it is indigenous to that country. *Brit.*, that the plant is either found wild in Great Britain, or cultivated in our gardens.

*Ext.* implies that the medicine is occasionally used in the form of Extract, or inspissated juice, prepared by macerating the fresh plant in hot water, or water and spirit, or spirit alone, for a length of time, and then evaporating the juice obtained at a low temperature, till it becomes the consistence of treacle, or thicker. The best extracts are now prepared by a very superior method, termed, *in vacuo*, by approved machinery, at the Botanical Gardens, cultivated by, and belonging to the Society of Shaking Quakers, in America.

*Syr.*, Syrup, is a strong decoction, or infusion, or the juice of the plant simmered with an equal weight of sugar, or mixed with sufficient honey.

*Sub.* signifies that the substance of the powder should be taken in water; the dose, a tea-spoonful.

*Tinc.*, Tincture, is a spirituous infusion of the medicine ; two oz. of the powdered herb to one pint of spirit is the usual proportion, macerated from one to fourteen days, according to the nature of the plant.

## ABBREVIATIONS AND PROPERTIES EXPLAINED.

ALT.....Alterative—changing the morbid actions of the secretions.
ANO.....Anodyne—quieting, easing pain.
ANTH .....Anthelmintic—expelling or destroying worms.
A-BIL.....Anti-bilious—correcting the bile or bilious secretions.
A-SCOR.....Anti-scorbutic—useful in scurvy.
A-SEP .....Anti-septic—preventing mortification.
A-SPAS.....Anti-spasmodic—relieving spasms.
APE.....Aperient—opening.
AROM.....Aromatic—agreeable, spicy.
AST.....Astringent—contracting the fibres or solids.
BAL.....Balsamic—mild, healing, stimulant.
CAR.....Carminative—expelling wind.
CATH.....Cathartic—purgative, cleansing the bowels.
CEPH.....Cephalic—remedy for diseases of the head.
DEM .....Demulcent—softening, and sheathing from the action of acrid substances.
DEO.....Deobstruent—correcting the secretions, or removing obstructions.
DIA..... ...Diaphoretic—producing insensible perspiration.
DIU.....Diuretic—increasing the discharge of urine.
DIS.....Discutient—dissolving, discussing.
EME.....Emetic—causing vomiting.
EMOL.....Emollient—softening, causing warmth and moisture.
EMM.....Emmenagogue—promoting menstruation.
EXP .....Expectorant—producing discharge from the lungs.
FEB.....Febrifuge—dispelling fever, allaying fever heat.
HER .....Herpetic—curing diseases of the skin.
LAX .....Laxative—mild purgative.
MUC..... .....Mucilaginous—glutinous, lubricating.
NER .....Nervine—strengthening the nerves.
PEC.....Pectoral—useful in diseases of lungs and chest.
REF.....Refrigerent—cooling, mitigating heat.
RELAX .....Relaxant—relaxing constriction, reducing inflammation, allaying action, &c.
RUB .....Rubefacient—producing heat and redness of the skin.
SED.....Sedative—depressing the vital powers.
SIAL.....Sialogogue—promoting a flow of saliva.
STIM .....Stimulating—exciting action, giving strength.
STOM.....Stomachic—to excite the action of and strengthen the stomach.
STYP.....Styptic—stopping bleeding.
SUD.....Sudorific—causing sweat.
TON. .....Tonic—permanently strengthening.
VER.....Vermifuge—destroying worms.
VUL.....Vulnerary—medicines which heal wounds.

AGRIMONY, Herb *Agrimonia eupatoria.* Ast. Ton. Diu. Alt.
Used in Fevers, Coughs, Bowel Complaints, Asthma, Diseases of the Kidneys and Liver, and by some people instead of China Tea.
Cr.-Dec. Pulv.-Inf. Brit. Wild.

ALMONDS, Bitter *Amygdalus communis.* Ton.
Useful with other articles in a debilitated state of the Stomach and Bowels. Given in emulsion (bruised and beat up with liquid) half an ounce to a pint of Dec. or Inf. of Herbs.

ANGELICA, Leaves *Archangelica.* Stim. Arom. Ton.
For Colics, Colds, and for producing Perspiration. Inf. or Dec. Brit.

ANGELICA, Root and Seeds *Archangelica.* Stim. Arom. Ton.
For same purposes as Leaves, but more powerful in effect. Inf. or Dec.

ASSAFŒTIDA, Gum *Ferula asafœtida.* Ton. A-spas. Exp.
To quiet Nervous Irritability, relieve Spasms, Cramps, &c. Given in Pills ordinary size. Dose—two, two or three times a-day.

AVENS ROOT *Geum rivale* Ton. Ast. Stom.
Valuable in Debility, Dyspepsia, Internal Bleedings, Relax, &c.
Cr.-Dec. Pulv.-Inf. Brit. Wild.

BALM, Lemon, Herb *Melissa officinalis.* Relax. Diu. Ner.
Infusion, excellent as a drink in Fevers, and for allaying Headache. Used in country places in England, instead of tea. Cr. or Pulv.-Inf.

BALMONY, Herb *Chelone glabra.* A-bil. Ton. Ver. Ape.
For Indigestion, Affections of the Liver, and expelling Worms. And to restore the tone of the Stomach after Fevers, Dysentery, &c.
Cr. or Pulv.-Inf. Amer. Wild and Gardens. Thomson's No. 4.

BARBERRY BARK *Berberis vulgare.* A-scor. Ref. Ton. A-bil.
For correcting the Secretions of the Liver, Jaundice, Indigestion, &c.
Cr. or Pulv.-Inf. or Dec. Brit. Shrub. Amer. Wild.

BAYBERRY, Bark of Root *Myrica cerifera.* Ast. Stim. Deo.
Most effectual in removing Canker from the Stomach and Bowels, and unequalled in Scurvy, Scrofula, and Ulcers. Internal, and external as a wash, and in poultices. Cr.-Dec. Pulv.-Inf. Amer. Thomson's No. 3.

BETH ROOT *Trillium latifolium.* Ast. Ton. A-sep.
Beneficial for Bloody Urine, excessive Female Evacuations, and Female Debility. Pulv.-Inf., or Sub. Amer. and Brit. Wild.

BISTORT ROOT *Polygonum bistorta.* Ast.
Useful in Hemorrhages or Fluxes, externally or internally, Diarrhœa and Cholera, a powerful astringent. Cr. Bruised, Dec. Pulv.-Inf.

BITTER ROOT *Apocynum androsæmifolium.* Ton. Cath.
For Liver Complaints and Dropsy, to remove Costiveness, and correct Digestion. Pulv.-Inf. Amer. Wild.

BLACKBERRY, Bark of Root *Rubus occidentalis.* Ast. Ton.
Effectual in Diarrhœa, useful in Consumption and Wastings.
Cr.-Dec., or Syrup. Pulv.-Inf. Brit. and Amer. Wild.

BLACK SNAKE ROOT—(See COHOSH, Black.)

BLOOD ROOT *Sanguinaria canadensis.* Eme. Emm. Exp. Ast.
Used in Pulmonary Affections, Scarlet Fever, Jaundice, and for bleeding at the Lungs—powerful.
Pulv.-Inf. or Syrup, Tincture, or in Pills. One-sixth of the usual dose.

BOGBEAN, Herb *Menyanthes trifoliata.* Ton. Deo. A-scor. Anti-bil.
Used in Scurvy and Cutaneous Eruptions, and all diseases arising from Obstructions in the Liver.
Cr. or Pulv.-Inf. Brit. and Amer. Wild, in Bogs and Lochs.

BONESET, Herb *Eupatorium perfoliatum.* Sud. Ton. Eme. Cath.
Unequalled in Fevers of every description—good in Asthma, &c.
Cr.-Dec. or Syrup. Pulv.-Inf. Amer. Wild.

BOXWOOD BARK, *Cornus florida.* Ast. Ton. Emm.
To correct Morbid state of Stomach, and remove Female Weaknesses. Excellent for Whites and Gleets. Cr.-Dec. or Syrup. Pulv.-Inf.

BOXWOOD FLOWERS, *Cornus florida.* Ast. Ton. Stim.
Highly serviceable in removing Fluor Albus, or Whites.
A Shrub. Prep. as the Bark.

BUCKHORN BRAKE *Osmunda regalis.* Ast. Ton. Muc.
Good in Soreness of the Stomach and Bowels, Female Weakness, Dysentery, &c. Pulv.-Inf. or Syrup. Brit. and Amer. Wild.

BUGLE, Sweet Herb *Lycopus virginicus.* Ast. Ton. Deo.
Unequalled in Spitting of Blood, Coughs, and Diseases of the Lungs.
Cr.-Dec. or Syrup. Pulv.-Inf. Brit. Wild. Amer. Wild and Gardens.

BURDOCK ROOT *Arctium lappa.* Diu. Ton. A-scor.
In strong decoction for Scurvy and Eruptions, Diseases of the Kidneys, &c. A general purifier of the Blood. Cr. Bruised, Dec. Pulv.-Inf.

BURDOCK SEEDS *Arctium lappa.* Diu. Ner. Ton.
Good for inflammation of the Kidneys, Epilepsy, Spasmodic Convulsions, &c. The fresh leaves of this plant are used bruised, applied as cataplasms to the feet in Rheumatism, &c. Pulv.-Inf.

BUTTERNUT, Extract of *Juglans cineria.* Cath. Ton. Emm.
A good aperient, and a gentle cathartic for Worms. Dose—for a child of three or four years, half drachm once or twice a day. Amer. Wild.

CALAMUS, Sweet Flag (Root) *Acorus calamus.* Arom. Stom.
Excellent in Flatulence, Colic, and Wind in the Stomach. Cr. or Pulv.-Inf.

CAMOMILE FLOWERS *Anthemis nobilis.* Ton. Feb. Stom.
Good in Dyspepsia, Loss of Appetite, Colics, and General Debility.
Cr. or Pulv.-Inf. Brit. Gardens.

CARAWAY SEED *Carum carui.* Car. Arom.
A good ingredient in Stomachic compounds. Cr. or Pulv.-Inf.

CARDAMOM SEED *Alpinia cardamomum.* Arom. Stim.
Used as a corrector of Purgative and Tonic medicines. Inf. or Tinct.

CARROT SEED, Wild *Daucus carota.* Diu. Emm.
Given in Stranguary, Calculus, or Stone, and other Affections of the Kidneys, Bladder, and Urethra; and for Dropsy. Cr.-Dec. Pulv.-Inf.

CATNIP, Herb *Nepeta cataria.* Stim. Car. Sud.
For Colds, Suppressions, Fevers, and induce Perspiration; excellent for Headache. Inf. Brit. and Amer. Wild and in Gardens.

CAYENNE PEPPER, African *Capsicum annuum.* Stim. Car. Ton.
The strongest and purest stimulant known, and universal in its application where stimulants are required, being free from inflammatory action. This, of course, only applies to the unadulterated article—that sold as Cayenne in the apothecaries' shops generally consists of pepper, salt, logwood, red lead, and other ingredients. Used for Flatulence, Indigestion, Colic, Dysentery, Diarrhœa, and Cholera.
Pulv.-Inf. or Tincture, or in Golden Syrup in substance.

CELENDINE, Herb *Cheledonium Majus.* Acr. Ton. Her.
Excellent for Tetters, Ringworms, Warts, and the Itch; for sore eyes and blindness as a wash; also in ointment. Cr. or Pulv.-Inf. or Tinct.

CENTAURY, Herb *Chironia centaurium.* A-bil. Ton.
Good in Dyspepsia, Jaundice, Liver Complaints, Scurvy, and Scrofula, especially in children. Cr.-Dec. Pulv.-Inf. Brit. and Amer. Wild.

CHERRY-TREE BARK *Prunus virginiana.* Feb. A-scor. Ton.
Excellent in compounds for purifying the blood, and Affections of the Bladder. Cr.-Dec. Pulv.-Inf. Brit. and Amer. Wild.

CLIVERS, Herb *Galium aparine.* Relax. Diu. Sud.
Good in Gravel, Dropsy, Fevers, Obstructions, Eruptions, and Scurvy. Cr. or Pulv.-Inf. in cold or hot water—if in cold, for twelve hours. Brit. and Amer., wild, by every hedge-side.

CLOVER FLOWERS, Red *Trifolium pratense.* Acr. Deo.
The extract good for Cancers and Ulcers. Thomson's Cancer Plaster.

CLOVES, *Eugenia caryophyllata.* Stim. Arom. Car.
For Flatulency, Dyspepsia, and to correct the action of Purgatives, &c.
Inf. Half the usual Dose.

COHOSH, Black *Macrotis racemosa.* Deo. Emm. Stim.
Serviceable in Rheumatism, Female Obstructions, Glandular Swellings, Whooping-Cough, Fevers, and Scrofula. Cr.-Dec. Pulv.-Inf. Amer.

COLOMBO ROOT *Coculus palmatus.* A-bil. Ton.
Excellent for Weak Stomachs, for Jaundice, and Disordered Liver.
Pulv.-Inf. Cr.-Dec.

COLTSFOOT FLOWERS *Tussilago farfara.* Exp. Pec. Relax.
Esteemed in Coughs, Asthma, and Consumption. Cr.-Dec. Common.

COMFREY ROOT *Symphitum officinalis.* Pec. Dem. Ton.
Valuable in Dysentery, Gleets, Diseases of the Bladder, Kidneys, and Bowels. Cr.-Dec. and Syr.; or Pulv. in substance, in milk.

CORIANDER SEED *Coriandrum sativum.* Stim. Car. Stom.
An excellent carminative in Stomachic compounds. Inf. and Tinc.

CRANESBILL *Geranium maculatum.* Styp. Ast. Stom.
A well established remedy for Diarrhœa, Hemorrhage, and Fluor Albus.
Cr.-Dec. Pulv.-Inf. Brit. and Amer. Common.

CUBEBS *Piper Cubeba.* Arom. Car. Diu. Ton.
Good in compounds for Gonorrhœa, Gleet, Seminal Weakness, &c.
Pulv. in substance, in water.

CURCUMA *Curcuma Longa.* Feb. Diu. Ton.
Good for Debilitated Stomach and Liver, Fevers, &c. Pulv.-Inf.

DANDELION ROOT *Leontodon taraxacum.* Deo. Diu. Ton.
A favourite remedy in diseases of the Liver, Gravel, and Constipation.
Cr.-Dec. Pulv.-Inf. Ext. Brit. Common.

DEVIL'S BIT *Scabious, Scabiosa.* Stim. Dem. Feb.
Useful in Coughs, Fevers, and Inflammations. Cr.-Dec. Brit.

DOCK ROOT, Yellow *Rumex crispus.* Ton. Deo. Her.
Highly serviceable in diseases of the Skin, and Scrofulous Disorders.
Cr.-Dec. Pulv.-Inf. Brit. Common.

DOCK ROOT, Water *Rumex aquaticus.* Ast. Dia. Deo. Her.
Good in Scurvy, Cutaneous Eruptions, and Cancerous Tumours.
Cr.-Dec. Pulv.-Inf. Brit.

ELDER BARK *Sambucus nigra.* Diu. Deo. Sud. Stim.
Used in obstinate Gladular Obstructions, and Dropsy. Cr.-Dec. Pulv.-Inf.

ELDER FLOWERS *Sambucus nigra.* Alt. Sud. Stim.
Infusion popular for Erysipelas, Fevers, Rheumatism, Colds, &c.

ELECAMPANE ROOT *Inula helenium.* Exp. Ast. Stom.
Useful in Coughs, Colds, and Pulmonary Affections.
Cr.-Dec. in water or ale. Pulv.-Inf. Brit. Gardens.

ELM BARK, Slippery *Ulmus fulva.* Emol. Diu. Dem. Relax.
Used in Urinary and Bowel Complaints, Scurvy and Inveterate Eruptions, Inflammations, as a diet in Fevers, and externally in poultices.
The best of all poultices for Inflamed Sores, Burns, &c.
In substance, or mucilage by Dec. Amer.

FEATHERFEW (FEVERFEW) *Chrysanth. parthenium.* Ner. Stom. Stim.
Serviceable in Female Obstructions, and Hysteric Complaints.
Cr.-Inf. or Dec.-Pulv.-Inf. Brit. Gardens.

FERN, Female (Polypody) *Aspidium filix femina.* Pec. Dem. Relax.
Good in Lumbago, and in syrup for Coughs. Cr.-Dec. Pulv.-Inf.

FERN, Male *Aspidium filix mas.* Ver. Ton. Ast.
Considered a good remedy for Tape Worm. Cr.-Dec. Pulv. in Sub., or Inf.

FROSTWORT *Cistus canadensis.* Deo. Ast. Ton.
Of great value in Scrofulous Affections, as a poultice, and a tea.

GARLIC *Allium sativum.* Stim. Exp. Ton.
Beneficial in Feeble Digestion, Chronic Catärrh, Asthma, &c.
Cr.-Inf., or Syr., or Eaten. Brit. Gardens.

GENTIAN ROOT *Gentiana lutea.* Ton. Stom. Ast.
Of great celebrity in Dyspepsia, Hysterics, &c. Inf., or Tinc.

GINGER ROOT *Amomum zingiber.* Stim. Car. Stom.
Given in Dyspepsia, Flatulent Diseases, Tonic Compounds, &c.
Cr.-Dec., or Syr., or Chewed. Pulv.-Inf. Jamaica Best.

GOLDEN SEAL *Hydrastis canadensis.* Ton. A-bil. Stom.
An excellent tonic and corrective of Bile and Bilious Habits; a good wash for sores. Pulv.-Inf. or Sub. Amer.

GOLD THREAD *Coptis trifolia.* Stom. Ton. Ast.
Excellent to restore the appetite and strength after Fevers.
Cr. or Pulv.-Inf. Amer. Gardens.

GOOSEFOOT, (WORMSEED) *Chenopodium anthelminticum.* Ver. Ton.
Very successful in expelling Seat Worms. Cr. or Pulv.-Inf. Brit.

GOOSE GRASS—(See CLIVERS.) Called also *Airiff* and *Stickaback.*

GROUND IVY *Glechoma hederacea.* Ast. Diu. Ton.
Good for Coughs and Internal Ulcers, and for Purifying the Blood.
Cr. or Pulv.-Inf. Brit. Common.

GUAIACUM CHIPS *Guaiacum officinalis.* Stim. Dia. Det.
Strengthens the Stomach and cleanses the Blood. Gum. Tinc. and Dec.

HEMLOCK SPRUCE FIR, Bark *Pinus canadensis.* Ast. Ton. Din.
Good for Diseases of the Bladder and Kidneys, and as a wash for old Ulcers. Cr.-Dec. Pulv.-Inf. and Sub., also Ess. Oil. Amer.

HOLLYHOCK FLOWERS *Althea rosea.* Ast. Dem.
Useful in all cases where a Demulcent is requisite.
In Conserve or Cr.-Dec. Pulv.-Sub. Brit. Gardens.

HOREHOUND *Marrubium vulgare.* Exp. Stim. Ton.
A well-known remedy for Coughs, highly serviceable in Asthma.
Cr.-Dec. Pulv.-Inf. Tinc. or Syr. Brit. Gardens.

HYSSOP *Hyssopus officinalis.* Exp. Ceph. Relax.
Used in Humoral Asthma, Coughs, Headache, &c. Dec. or Inf. Brit.

ICELAND MOSS *Lichen Icelandicus.* Dem. Ton. Ast.
Used as medicine and diet in Consumption: Elm is better.

JUNIPER BERRIES *Juniperus communis.* Diu. Car. Stim.
The infusion excellent for Dropsies. Cr. or Pulv.

LIFE EVERLASTING *Gnaphaleum polycephalum.* Stom. Sud. Ast.
Excellent in Quinsey, Weak Lungs, Consumption, and Fluor Albus.
Cr.-Dec. Amer.

LILY, White Pond *Nymphæ odorato.* Pec. Emol. Ast. Ton.
Employed in Scrofulous Tumours, Gleet, Whites, &c. Cr.-Dec. Pulv.-Inf.

LILY. Yellow Water *Nuphar advena.* Pec. Emol. Ast. Ton.
Use same as White Pond Lily

LIQUORICE ROOT *Glycyrrhiza glabra.* Dem. Exp. Relax.
Useful in compounds for Coughs, Hoarseness, Asthma, &c. Cr.-Dec.

LIVERWORT *Hepatica triloba.* Ast. Dem. Pec. Deo.
Celebrated in Bleeding at the Lungs, Consumption, Coughs, and Liver Complaints. Cr.-Dec. Pulv.-Inf. Brit and Amer. Wild.

LOBELIA, Herb *Lobelia inflata.* Eme. Relax. Exp.
A most valuable emetic, and highly esteemed in Asthma and other affections of the Lungs. Dr. Thomson's No. 1. Cr. or Pulv. in Tinc. or Acid. Pulv.-Inf. in lukewarm water, or in Sub. (See COMPOUNDS.)

LOBELIA SEED, *Lobelia inflata.* Eme. Relax. Exp.
Properties same as Herb, but much stronger. *Not used alone.*

LUNGWORT *Variolaria faginea.* Pec. Ton. Dem.
Used with much benefit in Consumptions, Coughs, and Defluxion of the Lungs. Cr.-Dec. Pulv.-Inf. Brit. and Amer., on rocks by the shore.

MAIDENHAIR *Adianthum pedatum.* Exp. Ast. Stom.
Much esteemed in Coughs, Asthma, and Disorders of the Chest.
Cr.-Dec. and Syr.

MANDRAKE ROOT *Podophyllum peltatum.* Relax. Cath. A-bil.
Powerful in Dropsies, Liver Complaints, Venereal and Scrofulous affections. N.B.—This is not the British Mandrake—*Atrossa Mandragora.* Ext., Pulv.-Inf., or Sub.; one-fourth of an ordinary dose with an aro.

MARSH MALLOW, Herb *Althæa officinalis.* Emol. Dem. Relax.
Serviceable in Asthma, Dysentery, and Affections of the Kidneys; also as fomentation and poultice to allay Swellings, &c. Cr.-Dec., or Syr.

MARSH MALLOW, Root *Althæa officinalis.* Emol. Dem. Relax.
Properties same as Herb; used the same.

MARSH ROSEMARY ROOT *Statice limonium.* Ast. A-sep.
Beneficial in Gleet, Whites, Canker, and Sore Throat.
Cr.-Dec. Pulv.-Inf. Amer.

MILFOIL—(See YARROW.)—Called also *Thousand Leaf.*

MOUNTAIN FLAX *Linum catharticum.* Dem. Cath. Relax.
An excellent purge for children and adults. Cr.-Inf. or Dec. with Ginger.

MUGWORT *Artemesia vulgaris.* Deo. A-bil. Ton. Emm.
The infusion promotes Perspiration, Urine, and the Menses.

MULLEIN LEAVES & FLOWERS *Verbascum thapsos.* A-spas. Pec. Relax.
Useful in Dysentery, Hemorrhage, and the Piles. Cr.-Dec.

MUSTARD SEED, White *Sinapis alba.* A-scor. Stim. Rub.
Used in compounds for Dyspepsia, obstinate Costiveness, Dropsies, &c. Cr.-Inf.

NETTLE ROOT, or SEED *Urtica dioica.* Ast. Ton.
Useful in incipient stages of Consumption and Bloody Urine. Cr.-Dec.

NUTGALLS *Quercus Tinctoria.* Ast.
A good ingredient in astringent Ointments, and Gargles.

NUTMEGS *Myristica moschata.* Arom. Ast. Stom. Stim.
Powder good in violent Headaches, Diarrhœas, and Dysenteries.

OAK BARK, White *Quercus alba.* Ast. Ton. A-sep.
Beneficial as an astringent and antiseptic Gargle, and wash for Putrid Sore Throat and Offensive Ulcers, &c. Cr.-Dec. Pulv.-Inf.

PARSLEY, Root *Apium petroselinum.* Ape. Relax. Diu.
Highly esteemed in Nephritic and Dropsical Affections. Cr.-Dec.

PARSLEY, Pert *Percicier.* Relax. Diu.
Excellent in all obstructions of Urine, Jaundice, and affections of the Liver. Cr.-Inf.

PEACH PITS, or KERNELS *Amygdalis persica.* Ton. Stom.
In syrup or tincture, good for strengthening the Stomach and Digestion.

PELLITORY OF THE WALL *Parietaria officinalis.* Relax. Diu.
Excellent in Stone, Gravel, and Suppression of the Urine. Inf. or Dec.

PENNYROYAL *Mentha pulegium.* Car. Stim. Stom. Arom.
A strong infusion, good for suppressions of Urine, obstructed Menses, and the Gravel; also for Colics and Eruptive Diseases in children.

PEPPERMINT *Mentha piperita.* Stom. Stim. Sud.
Good in Nervous Affections of the Stomach, Flatulence, and to allay Vomiting. Inf.

PERUVIAN BARK *Cinchona officinalis.* Ton. Ast.
Highly esteemed for want of Appetite, General Debility, &c. Pulv.-Sub.

PINUS CANADENSIS—(See HEMLOCK SPRUCE FIR.)

PIPSISSEWAY *Chimaphila umbellata.* A-scor. Diu. Stim.
An excellent Purifier of the Blood, and for Rheumatism. Dec. Pulv.-Inf.

PLEURISY ROOT *Asclepias tuberosa.* Dia. Sud. Relax.
Beneficial in Pleurisy, Colic, and all Flatulent Disorders. Pulv.-Inf.

POKE ROOT *Phytolacea decandria.* Relax. Deo. Cath. Alt.
Valuable in Rheumatic Complaints, and for Indolent Tumours. Cr.-Dec. Pulv.-Inf. Amer.

POLYPODY—(See FERN, Female.)

POMEGRANATE BARK *Punica granatum.* Ver. Ast. Ton.
A specific for Tape Worm. Cr.-Dec., Pulv.-Inf., or Sub.

POPLAR BARK, White *Populus tremuloides.* Ton. Diu. Ast.
Excellent in Diarrhœa, Debility, and Digestive Complaints.
Cr.-Dec. Pulv.-Inf.

POPLAR BARK, Black *Populus balsamifera.* Ton. Arom. Ast.
One of the best articles in use for Debility of the Stomach and Bowels.
Cr.-Dec. Pulv.-Inf.

PRICKLY ASH BARK *Xanthoxylum fraxineum.* A-scor. Stim. Diu.
Powerful in Rheumatism, Scurvy, Paralysis, &c. Cr.-Dec. Pulv.-Inf.

PRICKLY ASH SEEDS *Xanthoxylum fraxineum.* A-scor. Stim. Dia.
Properties same as Bark, but more powerful. Pulv.-Inf.

PRINCESS PINE—(See PIPSISSEWAY.)

QUASSIA CHIPS *Quassia excelsor.* Ton. Feb.
Useful in Dyspeptic Cases and Debilitated Digestive Organs. Inf.

QUEEN OF THE MEADOW *Eupatoreum purpureum.* Diu. Ast.
Most valuable in all Cases of Stranguary, Gravel, Stone, Dropsy, and Impurities. Inf. of the leaves is a good substitute for China Tea.

QUEEN'S DELIGHT, Root *Stillingia sylvatica.* Relax. Alt. Cath.
Valuable in Ulcers, Leprosy, and Syphilis. Dec., Pulv.-Inf., or Tinc.

RASPBERRY LEAVES *Rubus strigosus.* Ast. Ton.
Good for Bowel Complaints and Canker, Invaluable during Childbirth.
Inf.

RHUBARB ROOT, East India *Rheum undulatum.* Carm. Ast. Ape.
,, ,, Turkey ,, ,, ,, ,, ,,
A well known useful Tonic and Aperient. Inf.-Syr., or Sub.

ROSEMARY LEAVES *Rosemarinus officinalis.* Ast. Ton.
Good in Nervous and Hysterical Affections. Cr.-Inf.

RUE *Ruta Gravolens.* Ver. Ton. Diu. Stom.
Useful in Epilepsy, Hysterics, Female Obstructions, and as a Stomachic.
Cr. or Pulv.-Inf.

SAGE, Garden *Salvia Officinalis.* Ast. Stim. Ner.
Excellent to allay griping pains in children, and to quiet nervous excitement. Inf.

SAGE, Wood or Mountain *Teucrium scorodonia.* Ton. Diu. Deo.
Excellent in removing Obstructions from the Kidneys and Liver.
Cr.-Dec. Pulv.-Inf.

SARSAPARILLA, Jamaica *Smilax Sarsaparilla.* Alt. Ton. Deo.
Good for Scrofulous, Venereal, and Eruptive Diseases. Ext. or Dec.

SARSAPARILLA, American *Aralia nudicaulis.* Alt. Ton. Deo.
Properties same as Jamaica Sarsaparilla, and by some of the American botanists considered equally as good. Ext. or Dec.

SASSAFRAS CHIPS *Laurus sassafras.* Stim. Ape. Ton. Alt.
Very good in Rheumatic Complaints and Eruptive Diseases. Dec.

SASSAFRAS, Bark of Root *Laurus sassafras.* Stim. Ape. Ton. Alt.
Properties same as Chips, but much more powerful. Cr.-Dec. Pulv.-Inf.

SELF HEAL *Prunella vulgaris.* Ast. Vul.
Good in Hemorrhage, Diarrhœa, and as a Gargle for sore throats. Dec.

SCULLCAP *Scutellaria laterifolia* Ton. Sud. Ner.
Remarkably efficacious in St. Vitus' dance, Convulsions, Lockjaw. It is also said to be a specific for Hydrophobia. Pulv.-Inf. Amer.

SENNA LEAVES *Cassia acutifolia.* Relax. Cath.
A valuable Cathartic, operating mildly. Inf.

SKUNK CABBAGE ROOT *Ictodes fœtida.* A-spas. Relax. Stim.
Good for bleeding at the Lungs, Coughs, Asthma, and Obstructed Menses. Pulv.-Inf.

SNAKEHEAD—(See BALMONY.)

SNAKE ROOT, Virginia *Aristolochia serpentaria.* Ton. Dia. Sud.
Promotes Perspiration, and strengthens the Stomach. Pulv.-Inf.

SOLOMON'S SEAL ROOT *Convallaria multiflora.* Ast. Dem. Bal.
Good in Fluor Albus and female weakness, and as a Poultice for bruises, and rheumatism. Cr.-Dec.

SPEARMINT *Mentha viridis.* Feb. Diu. Stim.
Inf. allays Nausea, and an excellent remedy in Flatulence, Gravel, and Suppressions.

SPIKENARD *Aralia racemosa.* Pec. Ton. Stom.
Good in Coughs, Colds, and Gout in the Stomach. Cr.-Dec. Pulv.-Inf.

SUMACH BERRIES *Rhus glabra.* Ast. Ref. Diu.
Good in Putrid Fevers, and as a Gargle in Sore Throat. Inf. or Dec.

SUMACH LEAVES *Rhus glabra.* Ast. Ton. Diu.
An excellent addition to Astringent Compounds. Cr.-Inf., or Dec.

TANSY *Tanacetum vulgare.* Diu. Emm. Ton. Stom.
Good in feminine weaknesses, Pains in the back and kidneys. Inf.

THOROUGHWORT—(See BONESET.)

TORMENTIL ROOT *Tormentilla erecta.* Ast. Styp.
A favourite remedy in Looseness and Bowel Complaints.
Cr.-Dec., Pulv.-Inf., or Sub. in boiled milk.

TURNIP, Wild—(See WAKE ROBIN.)

UNICORN ROOT *Helonias dioica.* Ton. Exp. Stom.
Highly serviceable in weakness of the generative organs, pains in the back and chest. Pulv. in Sub. in hot water. Amer.

UVA URSI *Arbutus uva ursi.* Diu. Ast. Ton.
Efficacious in Ulcerations of the Kidneys and Bladder. Dec. or Inf.

VALERIAN ROOT, American *Cypripedium pubescens.* Relax. Ton. Ano.
Applicable in all cases of Nervous, Hysteric, and Spasmodic Affections; considered by some writers as being much superior to the English Valerian. Pulv.-Inf.

VALERIAN ROOT, English *Valeriana officinalis.* Relax. Ton. Ano.
Useful in all Nervous and Paralytic Diseases. Pulv.-Inf.

VERVAIN *Verbena hastata.* Sud. Ton. Eme. Diu.
Good in Fevers, Colds, Scrofula, Gravel, &c., and as an Emetic. Inf.

VIRGINIA SNAKE ROOT *Aristolochia serpentaria.* Ton. Dia. Sud.
Promotes Perspiration and strengthens the Stomach. Pulv.-Inf.

WAKE ROBIN, Root *Arum tryphyllum.* Stim. Exp.
Valuable in Coughs, Colds, Cramps, and Consumptive Affections. Sub.

WILLOW BARK *Salix alba.* Ton. Ast.
Superior to Peruvian Bark in Intermittents, and as a general Tonic. Pulv.-Inf.

WITCH HAZEL LEAVES *Hamamellis virginica.* Ton. Ast. Her.
Useful in Bowel Complaints, Hemorrhage, and Painful Tumours. Inf.

WORMWOOD *Artemisia absynthium.* Ton. Stim. Her.
Promotes the Appetite and Digestion; good in Dyspepsia, &c. Inf.

YARROW *Achillea millefolium.* Stim. Sud. Ton. Ast.
An herb of universal application in the first stages of disease: it equalises the circulation, opens the pores, and removes obstructions. Cr.-Dec. Pulv.-Inf.

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## COMPOUNDS.

### POULTICES.

THESE applications are not only "to draw to a head," but also to soothe, soften, and relax inflamed, irritated, and constricted tissue, in other cases to stimulate the cecernant vessels to greater activity in the accumulation and ejection of the morbific matter, constituting the source of irritation. "The intentions to be answered by poultices are two—relaxation and stimulation." "The ingredients necessary to fulfil them are these—warmth, lubrication, and irritation." In a proper poultice these agencies are kept constantly at work. Warmth may be secured by placing over the poultice some non-conducting body, to prevent the natural heat imparted to it by the body from flying off, or by

the application of some irritating article, as Cayenne, &c. It is also necessary that the poultice should be able to absorb whatever morbific matter is given off to it by exhalation. As a means of lubrication, Slippery Elm stands unrivalled; and as a means of relaxing the pores, Lobelia and its class are of first-rate importance; any softening oil will also answer a similar purpose. Golden Syrup I have also found to be of great service for the same purpose.

*Poultice for Inflammation.*—Slippery Elm Bark, coarsely powdered, one ounce ; Lobelia Herb, pulverized, half ounce—mix. Make up sufficient to form a moderately thin poultice for the part, with warm water, or milk and water, adding at the same time a little sweet oil.

*Stimulating or Common Poultice.*—Slippery Elm, coarsely pulverized, two ounce; Bayberry or Lily, powdered, one ounce; Ginger, powdered, one ounce ; Lobelia Herb, powdered, half ounce—mix. Prepare as before with warm water, or to make it more stimulating, mix it up with Cayenne Tea, and add a little Golden Syrup in place of the oil; if still not active enough, add a little common salt.

To keep these poultices moist and warm for a length of time, which is of great importance, make a poultice of porridge, and put over them, or put on the outside of them a piece of sheet gutta percha, or oil silk.

Marsh Mallows, Blue Mallows, Linseed, Soapwort, &c., may take the place of Slippery Elm in poultices, but there is nothing equal to it.

## FOMENTATIONS.

These are for the purpose of relaxing and soothing inflamed, painful, and constricted parts; among the best are decoctions of Hops, Wormwood, Tansy, Yarrow, Marshmallows, and Woodsage. In some cases these may be simmered in vinegar with advantage, especially in subcutaneous inflammation. The herbs may be mashed up and inclosed in flannel, or the flannels may be saturated with the decoction, and applied over the affected part as warm as they can be borne. For deeply-seated inflammation, perhaps there is no fomentations superior to a Tea of Cayenne, or Cayenne laid on hot wet flannels.

## GARGLES.

THESE are of great importance in sore throat, scarlatina, &c.

### FEVER GARGLE.

One tea-spoonful of common Emetic powder, one table-spoonful of Sugar, a half pint of *real* white wine Vinegar, or malt Vinegar, and a half pint of hot water; stir up, and let stand to settle. Gargle with a tablespoonful or two, four or five times a-day. For a child, as it cannot gargle, dip a bit of soft sponge or muslin into the liquid, and apply it tied at the end of a stick.

### COOLING GARGLE.

Infuse Sage and Hyssop, half an ounce each, in one pint of boiling water for half an hour, add two table-spoonfuls of the mucilage of Elm. Used in acute inflammation of the throat.

### YEAST GARGLE.

Equal parts of Brewer's Barm and Milk, sweetened with treacle, or Syrup. Excellent for sore throat.

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## INJECTIONS, OR CLYSTERS.

THERE is a very strong prejudice among the generality of people against the use of these, on some occasions, most important remedies. They should be given blood-warm, with a large syringe, or with an Enema.

### STIMULATING AND RELAXING INJECTION.

Composition, half a tea-spoonful infused in half a pint of boiling water; when it has stood a few minutes, add half-a-tea-spoonful of Lobelia Herb or of the Emetic powder, when blood-warm pour off the clear, and add three tea-spoonfuls of Olive-oil. Inject the whole with a large syringe or enema.

This is excellent in dysentery, pain at the stomach, arising from obstinate costiveness, colic, &c.

### COMMON INJECTION.

An infusion of Common purge, half a pint, sweetened with Golden Syrup, and add a tea-spoonful of finely powdered Elm, or three tea-spoonfuls of Olive-oil. Excellent for piles, costiveness, and in fever.

### ASTRINGENT INJECTION.

Infusion of Anti-Cholera powder, or Composition, a tea-spoonful to half a pint, add half a tea-spoonful of powdered Elm Bark; inject after every stool in cholera or severe diarrhœa. Tormentil and Ginger, or any other astringent, with a little Cayenne, or Ginger, may be used for the same purpose.

### A READY INJECTION.

Half a pint of strong Soap-suds, used for costiveness, &c.

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## POWDERS.

POWDERS are either simple or compound. (For simple powders, *see* LIST OF SIMPLES). Compound powders consist of a number of simple powders mixed together, with a due regard to their individual and relative properties, with the design of producing a compound medicine, different and superior to any single one known for the purpose in view. As a general rule, powders are best prepared by infusion; some of them, however, may be taken in substance in Golden Syrup, Honey, or water. Powders waste quickly unless they are kept in tin canisters, close drawers, or dark glass vessels.

### COMMON PURGE POWDER.

Jalap Root, pulverized, 1 lb. ; best Senna Leaves, pulverized, 2 lbs.; best Cloves and Ginger, 2 oz. each;—mix. *Dose*—an ordinary sized tea-spoonful infused in a large tea-cupful of boiling water, sweetened, and drank cold, fasting, in the morning. It is universally applicable, and should be in the possession of every family.

Common purge, with Mandrake, is one-eighth of a tea-spoonful of powdered Mandrake, added to a dose of the Common purge, by which it is made sharper. It cleanses the whole alimentary canal, and produces the happiest results in obstinate costiveness, fever, dysentery, diarrhœa, and cholera, where it is necessary to cleanse the intestinal tube of whatever morbific matters are lodged within it.

### ANTI-BILIOUS PURGE POWDER.

Dandelion Roots, pulverized, 8 oz.; Yellow Dock Roots, pulverized, 8 oz.; American Mandrake Roots, pulverized, 6 oz.; Cayenne, pulverized, ½ oz.; Cloves, pulverized, 1½ oz.—Mix well.

*Dose*—a tea-spoonful infused in a cupful of boiling water one hour, sweetened, and drank cold on an empty stomach, once a-day. Those who try this in liver complaint, jaundice, bilious-

ness, chronic dyspepsia, dropsy, or in any case of impurity of the blood, or irritability of the nervous system, will have great reason to be thankful for the prescription.

### BLACK POWDER.

Purified Charcoal, made from the Lignum Vitæ, 1 oz.; Bayberry, Bark of Root, pulverized, 1 oz.—mix.

*Dose*—A large tea-spoonful stirred into a cupful of warm water, sweet milk, or infusion of herbs, once to three times a-day. In cholera or diarrhœa, it may be put into a cupful of Cayenne or Cohosh Tea, with advantage; it combines with acidous and other morbid matters contained in the alimentary canal, and carries them off. It may be sweetened with loaf-sugar.

### COMPOSITION POWDER.

Bayberry, Poplar, Pinus, and Ginger, 1 lb. each; Cayenne and Cloves, 3 oz. each. All pulverized, and well mixed and sifted.

*Dose*—a tea-spoonful infused in a cupful of boiling water from ten to thirty minutes, sweetened and drank warm, one to six times a-day. There is no medicine so universally applicable as Composition; it equalizes the circulation, stimulates and strengthens the conservative organic power; removes obstructions, and promotes secretion.

### STOMACH-BITTERS POWDER.

Poplar Bark, 5 lbs.; Balmony, 2 lbs.; Bayberry, 2 lbs.; Golden Seal, 2 lbs.; Ginger, 1 lb.; Cloves, 6 oz.; Cayenne, 3 oz.; all finely pulverized, and well mixed. Dose and preparation the same as Composition, taken two or three times a-day, before or after meals. For indigestion, weakness of the stomach, and water-brash, it is excellent.

### POWDER FOR HABITUAL COSTIVENESS.

Stomach Bitters, 2 oz.; Bitter-root, pulverized, 1 oz.; mix well. *Dose*—a tea-spoonful, infused as above, twice a-day. This overcomes habitual costiveness, strengthens the digestive organs, and corrects the bile.

### WOMAN'S FRIEND.

Poplar Bark, 3 lbs.; Unicorn, 1 lb.; Prickly Ash Bark, 1 lb.; Golden Seal, ½ lb.; Ginger, ½ lb.; Cinnamon and Cloves, 4 oz. each; Cayenne, 1 oz.; Loaf Sugar, 2½ lbs.; all powdered and well mixed. *Dose*—a tea-spoonful infused, two or three times a-day. This is an invaluable medicine for women at the change of life; also to check an immoderate flow of the menses, for whites, and as a tonic during pregnancy.

### WORM POWDER.

Wormwood, Tansy, Wormseed, Rue, Male Fern, Bayberry, and Bogbean, 1 lb. each; best Senna, 2 lbs.; Ginger, ¾ lb.; all pulverized, and well mixed. *Dose*—a tea-spoonful, either in water or syrup, twice a-day. An injection of an infusion of the same, with a little common salt added, may be given in obstinate cases. It soon removes them, and leaves the system in every respect healthier.

### FEVER POWDER,

Cohosh, Boneset, Bitter Root, and Bayberry, all pulverized, 1 oz. each. *Dose*—a tea-spoonful infused in a cupful of boiling water, sweetened or not, drank warm, three times a-day. This opens the pores, cleanses the bowels and stomach, allays feverish heat, and sometimes entirely removes the fever in a day or two. Given in any kind of fever.

### THOMSON'S COUGH POWDER.

Skunk Cabbage, 4 oz.; Horehound, 2 oz.; Wake Robin, Bayberry, Bitter Root, Valerian, Cayenne, and Lobelia herb, 1 oz. each; all powdered fine, and well mixed. *Dose*—half to a tea-spoonful, three or four times a-day. This is one of the best prescriptions known for a deep-seated, obstinate cough, and the cause of it.

### NERVE POWDER.

Valerian and Skullcap, 1 lb. each; Skunk Cabbage, Gentian, Rue, and Ginger, ¾ lb. each; Cloves, 2 oz.; all mixed. *Dose*—a tea-spoonful infused, from one to three times a-day. This is a good medicine for nervous debility, irritability, hysterics, headache, flatulence, &c., &c.

### ANTI-BILIOUS POWDER.

Barberry Bark, Bogbean, and Centaury, 1 lb. each; Dandelion, 1½ lb.; Mandrake, ½ lb.; Ginger, ½ lb.; Cloves, 4 oz.; Cayenne, 2 oz.; all well mixed. *Dose*—a tea-spoonful infused, two or three times a-day. For biliousness, liver complaint, jaundice, &c.

### ANTI-SCORBUTIC OR ALTERATIVE POWDER.

Burdock Root, Yellow Dock, Pinus, and Bogbean, 1½ lb. each; Bayberry, Sassafras, and Guaiacum, 1 lb. each; Mandrake and Ginger, ½ lb. each; Cayenne, 4 oz.; all well mixed. This cannot be excelled for scurvy, scrofula, and every kind of impurity; it has effected the most surprising cures in such cases. *Dose*—a tea-spoonful infused, two or three times a-day.

### DIURETIC POWDER.

Clivers, Burdock Seed, Pellitory, Junipers, and Ginger, equal parts, mixed. *Dose*—a tea-spoonful infused, three times a-day. This evacuates water, relieves scalding of urine, allays inflammation in the kidneys or bladder, and removes the obstructions caused by gravel, stone, &c.

### ANTI-CHOLERA POWDER.

Bayberry Bark of Root, Golden Seal Root, Pinus Canadensis Bark, Tormentil Root, British Oak Bark, Turkey Gum Myrrh, Jamaica Ginger Root, American Valerian Root, American Skullcap Herb, 1 lb. each; Cayenne, ½ lb.; Cloves, 6 oz.; Cinnamon, ½ lb.; Allspice, 6 oz. All finely pulverized, thoroughly mixed, and sifted. *Dose*—a tea-spoonful in a cup of hot water, hot gruel, Peppermint tea, or Raspberry leaf tea, sweetened; the same by injection, if necessary. Before drinking this, a tea-spoonful or two of best brandy may be added by those who prefer it. Whoever tries this in case of cholera or diarrhœa, or general debility, with looseness of the bowels, will have reason to be satisfied with it.

### DIAPHORETIC OR ANODYNE POWDER.

Valerian and Skullcap, pulverized, 1 oz. each; Camphor, pulverized, ½ oz.; Lobelia herb, pulverized, ¼ oz.; mix. *Dose*—from half to a tea-spoonful, stirred into a cup of warm Sage or Catnip tea. To be given to allay restlessness and irritation, and to induce sleep.

### EMETIC POWDER.

Lobelia herb and seed, 2 oz. each; Skunk Cabbage and Bitter Root, 1 oz. each; Blood Root, ½ oz.; Cayenne, ¼ oz.; all pulverized, and well mixed. *Dose*—half to a tea-spoonful in a cup of Composition or Pennyroyal tea. Before giving the Emetic powders, two or three doses of Composition, Pennyroyal, or Vervain tea should be given to raise a gentle perspiration. Keep well wrapped up whilst taking it. If it causes much distress, and does not operate freely, give a dose of infusion of Cayenne; or if it is wished to arrest its action, give a cupful of sweet milk, or an ounce of sweet oil. It will then pass through the bowels. Never give Lobelia if the patient's pulse be very *weak*, quick, and irregular, or other signs indicate that the patient has little power of reaction left in the system. Remember that Lobelia relaxes and lessens vital action for a time, but does *not* poison.

A MILD EMETIC.

Boneset, 1 oz.; Bitter Root, ½ oz.; Lobelia herb, ¼ oz.; Cayenne, 1 drachm; all pulverized; mix. *Dose*—same as the above.

ACID LOBELIA, EMETIC AND EXPECTORANT.

Lobelia herb, 3 oz.; Lobelia seed, 1 oz.; Valerian, ½ oz.; Cayenne, 1 tea-spoonful, all pulverized; add to 1 quart of good malt vinegar. Macerate, shaking every day for fourteen days. *Dose*—for an emetic, from half to a tea-spoonful in syrup, after Pennyroyal tea, as before. As an expectorant for whooping cough, &c., from 6 drops to half a tea-spoonful, three or four times a-day, according to the age of the child.

SP. SPANISH JUICE.

Fluid-Sp. is 4 oz. of finest Spanish juice, dissolved in 12 oz. of water, by simmering.

S. OR COMPOUND DECOCTION OF SARSAPARILLA.

Bayberry, Burdock Root, Yellow Dock, Sassafras Bark, and Sumach Berries, 1 oz. each; Sarsaparilla, 3 oz.; bruise them. Add 1 gallon of water, and boil in a well-tinned or glass-lined pan, down to half a gallon. Add Sp. 4 oz., and Rheumatic Drops, 4 oz. *Dose*—a wine-glassful two or three times a-day. A fine purifying medicine; it contains in itself all the active principles that medicine can exert.

OY. ORDINARY BITTER DECOCTION.

Agrimony, Hyssop, Horehound, Woodsage, and Yarrow, 1 oz. each; add 4 pints of water, boil 15 minutes, let stand for an hour; strain. *Dose*—a wine-glassful two or three times a-day. This may also be made a medium for giving other medicines, such as Tinctures, Syrups, Extracts, or Powders in substance. This is an excellent medicine for coughs, colds, and indigestion, when a little Cayenne is added to it. By adding Cough syrup, or No. 6, it makes one of the best of medicines for asthma. It is a good tonic, diuretic, and diaphoretic, and therefore very good in fever, after emetics, &c., have been given.

NO. 6. RHEUMATIC DROPS.

Gum Myrrh, 6 oz.; Bayberry, Prickly Ash seeds, Golden Seal, and Lobelia herb, 2 oz. each; Cayenne, 1½ oz.; all pulverized. Add them to 1 gallon of proof spirit, shake well every day, and digest for twelve days or longer; filter. This is an excellent general liniment and medicine for rheumatism, painful swellings, tumours, glandular enlargements, poisoned bites or stabs, bruises, and sprains; bathe or rub the parts. Take inwardly one tea-

spoonful in warm water, sweetened, or in herb tea. For pimples on the face, &c., add one-fourth of Camphorated oil, made as follows :—1 pint of best olive oil; 2 oz. Camphor dissolved in it. Dr. Thomson's No. 6 is Tincture of Myrrh. It is used for similar purposes.

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### COUGH SYRUP.

2 oz. each Hyssop, Horehound, Boneset, Elecampane, and Comfrey; Liquorice Root, 4 oz.; add six pints of water, boil gently down to 4 pints; strain, and when blood-warm, add 1 lb. fine honey, and 3 oz. Tincture of Lobelia; 4 oz. Nervine Tincture; 4 oz. Tincture of Tolu, and 1 oz. Tincture of Cayenne. Mix well; when cold, bottle. *Dose*—for a child of one year, half to a tea-spoonful, two or three times a-day. For an adult, two or three tea-spoonfuls, from two to five times a-day. For any kind of a hard, dry, or irritating cough, asthma, or consumption.

### NEUTRALIZING CORDIAL.

1 oz. each Peppermint plant, Turkey Rhubarb, pulverized, and Bicarbonate of Potash. Pour on the whole 1¼ pint boiling water. Let stand a while. Add ½ lb. of loaf-sugar, and ½ pint of French brandy; when cold, strain through a fine cloth. *Dose*—from two tea-spoonfuls for a child of one year, to half a wine-glass for an adult, from three to six times a-day. This is a valuable medicine for dysentery, diarrhœa, and cholera.

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### PILLS. TONIC APERIENT.

Turkey Rhubarb, 2 oz.; Socotrine Aloes, 2 oz.; Golden Seal, 2 oz.; Cayenne, ¼ oz.; all pulverized and mixed. Ext. Dandelion, 2 oz.; Ext. Gentian, 2 oz.; Oil of Camomile, and Essence of Peppermint, 60 drops each. Thoroughly incorporate with sufficient mucilage of Gum Arabic, to form pill mass. Divide into ordinary sized pills. *Dose*—two night and morning. This pill corrects digestion, the liver and bowels, and never leaves any debilitated effects. Those who try it will speak of its good qualities.

### LOBELIA PILLS.

1 oz. each Lobelia herb and seed; ½ oz. of Valerian, and ½ oz. of Cayenne, all pulverized, mixed, and made up with mucilage of Gum Arabic. *Dose*—two, one, two, or three times a-day. These pills are of service in chronic liver complaints, dropsy, and dyspepsia.

### ALTERATIVE PILLS.

Mandrake, 1 oz.; Lobelia seed, ½ oz.; Cayenne, 1 drachm; mix, and form into pills with mucilage of Gum Arabic. *Dose*—from one to three, three times a-day. Used in dropsy, liver complaint, dyspepsia, and old venereal taints.

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### HEALING SALVE.

Palm Oil, 2 lbs.; Mutton Tallow, 1 lb.; Burgundy Pix, 8 oz.; Bayberry or Bees'-wax, 6 oz.; Canada Balsam, 4 oz. Simmer together till melted; strain and stir till cold. Used for healing all kinds of sores.

### BURN SALVE.

Burgundy Pix and Palm Oil, equal parts; Bees'-wax, one-third. Dissolve by heat, and mix. Strain and stir till cold. Used for burns and other sores.

### PILE OINTMENT.

Hog's Lard, finest, 2 lbs.; Mutton Tallow, 1 lb.; Camphor, Bayberry wax, and Canada Balsam, ¼ lb. each. Melt all together in a covered pot, immersed in a hot water bath. Strain and stir till cold. Used for piles and glandular swellings, and any other sores.

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## WATER AND BATHS.

THERE is no medicinal agent of greater value than pure water. As a medium for conveying other medicinal agents to the system, it is unequalled; as a means of reducing fever and inflammation, whether internally or externally applied, nothing superior is known; and as a means of allaying thirst, cooling and preserving the integrity of the blood, it is indispensable. How strange it is that poor people study so little the valuable uses of this universal and indispensable fluid, and, when they are directed to the use of it as a medicinal agent, almost despise it, because it is so cheap and common. It is a vulgar notion that leads people to suppose that nothing is of great value that is not dear and scarce.

### PLUNGE OR LOUNGE BATH.

To plunge into cold water, whether fresh or salt, first thing in the morning, is a powerful means of toning the system, and therefore good for nervousness, debility, relaxed habit of body, indigestion, disease of the liver, inactivity of the skin, or a relaxed condition of it. Salt water, or salted water, is in general the best.

### COLD SHOWER BATH.

To stand under a shower bath for a half, to two minutes, on

rising from bed, is as good for similar complaints as the plunge, and especially for determination of blood to the head, and may be taken at night for sleeplessness; or for this latter the hands and face, neck, and head may be washed well with cold water. A temporary shower bath may be contrived by one person holding a cullender or large strainer over the head, whilst another pours into it a jug of water. Stand in a tub to catch it.

### COLD SPONGE BATH.

I usually order this to be either natural or artificial salt water. It should be done quickly, with a sponge or flannel cloth all over the body, followed with a brisk rub with a dry towel. Very delicate persons in winter may raise the temperature of the water to that of the surrounding air. I have found this of immense service in raising the tone of the system in general, and especially in nervous debility, debility of the womb, dyspepsia, &c.

### WARM BATH.

This, as a general rule, should be taken in the evening; for, as it relaxes the energies of the system, if it be taken in the morning the person is very liable to take cold after it, or feel unfit for the daily occupation. To make a warm bath for children, obtain a large washing-tub. Pour in hot and cold water sufficient. The warmth should be comfortable to an ordinarily warm hand. If a salt bath, add sufficient coarse salt to make it taste as salt as sea water. Then lay, or sit the child in it, and rub him all over for three, to seven minutes. Take him out, dry him well, and wrap up warm. This is of great service in fevers, dysentery, diarrhœa, and cholera. For the latter the temperature of the bath should be as high as it can be borne; for fevers not so warm. Adults should take warm baths for from ten to twenty minutes.

### DIRECTIONS FOR MAKING A VAPOUR BATH.

Obtain two common bricks, heat them on the fire; a chair (cane or open-bottomed, if you have it); let the patient sit upon it, divested of his clothes; a pair of blankets; inclose him and the chair in them, from his neck over his feet; a shallow tub or pan; place it under the chair, put into it a hot brick, pour around it hot water till it is half covered; drop the blanket corners, and keep in the steam; have some tea made of Composition Powder and Yarrow; give the patient a small tea-cupful every ten minutes; and let him remain in the bath from twenty to thirty

minutes. If the steam raised by the first brick be not enough to produce *free perspiration*, add the other; if that be insufficient, pour on the dry sides of the brick a little vinegar. If the patient feels faint, bathe his forehead with a little vinegar and water, equal parts; and on all occasions, when he comes out of the bath, sponge him all over quickly with vinegar and water, or salt water, and rub briskly with a towel, dress quickly, and go to bed. If an emetic is to follow, either take it in bed or well wrapped up by the fireside. For a severe cold or a fever, the Vapour Bath and Herb Tea are invaluable. Our Domestic Vapour Bath-Boiler is much more convenient than the bricks and pan.

### COLD COMPRESS.

This consists of a piece of linen or cotton of the proper size for the purpose, folded four or six ply, dipped into cold water, wrung out tightly, and applied to the part affected. Over it should be bound a similarly folded dry cloth, to keep in the moisture and steam that is generated by the heat of the body. It is still better if a piece of oilskin, or sheet gutta percha of suitable size, be put betwixt the wet bandage and the dry one. To allay heat and reduce inflammation and swelling it is excellent, also to relax contracted sinews. For the head in fever, or any other part much inflamed, the heat of which it is desirable to reduce quickly, the wet bandage may be applied alone, uncovered.

### HOT STIMULATING COMPRESS.

This consists of a flannel bandage, prepared in the same way as the above-mentioned cotton one, dipped into hot water, and Cayenne pulverized sprinkled on the surface, to be applied next the skin, covered over with a dry flannel bandage, in the same way as for the cold compress. This is of great service as an external stimulant and counter-excitant for relieving inflammation and irritation seated in parts below where it is applied.

### FOOT BATH AND HIP BATH.

*See* WARM BATH. Apply it to the feet, or as high as the hips. Salt, Mustard, or Cayenne are usually prescribed in the warm foot and hip baths. In hysterics, headache, faceache, nervous and general debility, the warm foot bath is very valuable; also whenever there is a determination of blood to the head, inflammation in the throat, or other parts adjacent. The foot baths should be continued for ten or fifteen minutes; the hip bath about the same time. This latter is more particularly applicable to female complaints.

### SHEET BATH.

Obtain a light sheet, or table-cloth, or towel if for a child. Let it be suitable to the size of the patient. Dip it into cold or lukewarm water, wring it tightly out, spread it on a double blanket, and then lay the patient naked in it. Roll it quickly round him, and inclose it completely with the external blanket, tucking it well in at the neck and feet, so that no part of the moist sheet is protruding out. Cover over with other blankets, &c., tucking them well in to keep out the air. As the patient gets warm and begins to perspire, sponge the face with a little cold water from time to time. Medicine to help to produce perspiration, or cold water for the same purpose, may be given whilst the patient is in the sheet. This application is second only to the vapour bath for producing perspiration and allaying fever. For children it is superior, because so much more readily applied. The patient should remain in it for two, four, or six hours, until a free moisture is produced upon the skin. The hotter the skin of the patient when the sheet is applied, the happier will be the effect produced by it. When the patient is taken out of the sheet, he should be sponged over with cold salt water, or vinegar and water, and rubbed dry briskly with a towel, the same as when taken out of the vapour bath.

### A COURSE OF MEDICINE.

The Thomsonian course consists of—1st, two or three cupfuls of Cayenne or Composition Tea; 2d, an Injection of a strong Infusion of Bayberry, Lobelia, Valerian, and Cayenne, one tea-spoonful each—quantity one pint; 3d, a Vapour Bath, continued till profuse perspiration is educed; 4th, an Emetic, of a tea-spoonful of Lobelia in a cupful of Cayenne or Composition Tea, repeated every ten minutes, if necessary, to produce free emesis. After which a dose of Stomach Bitters.

### THE BOTANIC COURSE OF MEDICINE.

1st, A dose of Common Purge, if necessary to open the bowels or cleanse them; 2d, three or four doses of Composition or Bayberry Tea; 3d, and, at the same time the tea is drank, a Vapour Bath; after it, 4th, an Emetic; then 5th, a dose of Bitters, and some gruel. The purge may be taken in the morning or at noon, and the others at night. When there is no time to wait for the purge to operate, use an injection suited to the nature of the case.

# INDEX.